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Voice and Person Marking - A Typological Study

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Glossary

1	first person
2	second person
3	third person
A	agent (more agentive argument of a two-place predicate)
ABL	ablative
ABS	absolutive
ACAUS	anticausative
ACC	accusative
ACCD.PASS	accidental passive
ACT	active voice
ACTL	actual
AD	adessive
AFF	affirmative
AN	animate
AP	antipassive
ART	article
ASSERT	assertive
AST	achieved state
AUG	augmented
AUX	auxiliary
BM	boundary marker
C	common gender
CAUS	causative
CERT	certainty marker
CL.CONVEX	classifier for convex objects
CL.OVAL	classifier for oval objects
COM	comitative
COMP	complementary number
COMPL	completive
CONN	connective
CONT	continuous
CONTR	contrastive
COP	copula
COPART	coparticipation
COPY	suffix copy
DAT	dative
DBT	doubt
DECL	declarative
DEF	definite
DEIX	deictic element
DEM	demonstrative
DET	determiner
DETR	detransitivizer
DIR	directional marker
DIST	distal deictic
DISTR	distributive
DS	different subject
DU	dual
E	exclusive
EMPH	emphasis
ENIM	disjunct discourse marker, roughly translates to ‘as you know’
EP	epenthetic schwa
ERG	ergative
F	feminine gender
FIN	finiteness marker
FM	formative
FOC	focus
FUT	future
GEN	genitive
H	human
HAB	habitual
HORI	horizon of interest
HORT	hortative
I	inclusive
ILL	illative
IM.PAST	immediate past
IMPF	imperfective aspect
IMPS	impersonal
INAC	inaccomplished aspect
INAN	inanimate
INF	infinitive
INFD	inferred (evidentiality)
INSTR	instrumental
INT	intentional
INTJ	interjection
ITER	iterative
ITR	intransitive
KSS	Koyraboro Senni Songhay
KT	Kiowa-Tanoan
LAT	lative
LIG	ligature
LNK	linker
LOC	locative
LR	logophoric-reflexive pronoun
LST	starting point of linguistic AF
M	masculine gender
M-P	Malayo-Polynesian
MANR	manner
MIN	minimal
MP	Malayo-Polynesian
MPROP	modal proprietive
NCERT	non-certainty

NCL noun class
NEG negation
NEM new event marker
NFUT non-future
NH non-human
NMLZ nominalizer
NOM nominative
NPFX noun prefix
NPIV non-pivot (core) argument in symmetric voice system
NPN Non-Pama-Nyungan
NPST non-past
NSG non-singular
NST starting point of natural AF

OBJ object
OBL oblique

P patient (less agentive argument of a two-place predicate)
PA paucal
PAN Proto-Austronesian
PART partitive
PASS passive
PASSCFT passive counterfactual
PASSPFV passive perfective
PASSPOT passive potential
PAST past tense
PERM permissive
PF perfect
PFV perfective aspect
PHF phrase final suffix
PIV pivot argument in symmetric voice system
PL plural
PLR plurality of relations
PMP Proto-Malayo-Polynesian
PN Pama-Nyungan
PN proper name
PNG Papua New Guinea
POC Proto-Oceanic
POSS possessive
POT potential
PRED predication marker
PRES present tense
PRET preterite
PROP proprietive
PTCP participle
PUA Proto-Uto-Aztecan

QU question marker

REAL realis
REC reciprocal
REC.PAST resent past
RED reduplication
REFL reflexive
REL relative clause marker
REM.PAST remote past
REP repetitive
RES resultative

S sole argument of a one-place predicate
SAP speech act participant, i.e. first and second person
SBJT subjunctive
SEQ sequential
SG singular
SS same subject
SUB subordinator
SUBJ subject
SUP supine

TAM tense-aspect-mood marker
TBN Tukang Besi North
TH thematic suffix
TOP topic
TR transitive
TSK Tondi Songway Kiini

UNM unmarked
UNR unrealized
UTIL utilitive

VALL verbal allative
VF verb focus
VN verbal noun
VP viewpoint
VPM verbal person marker

1 Introduction

This thesis is an attempt at the first cross-linguistic study of the diachronic relationship between voice and person marking. To my best knowledge, such a study has not been conducted before. Person and voice are linguistic concepts that each have received a lot of scholarly attention, both from theoretical and typological points of view. The category of person manifests itself in all languages in some way or an other, while voice alternations are not present in every language – in fact they may be absent in a majority of cases (see Siewierska 2013 and Polinsky 2013). The interest in this category, especially in passive constructions, is most probably due to its presence in the well-studied Indo-European languages.

Voice generally refers to passives and antipassives, although some scholars include causatives and applicatives as well, using voice as an equivalent for 'valency-changing operation'. In the present study, the term is restricted to detransitivizing operations. Passives and antipassives are basically verbal categories (Haspelmath 1990:25) and as such are marked on the verb or by a construction involving a verbal component. The former will be investigated in more detail in this study, while the latter lies outside the scope of it. Voice alternations do not only affect the verb, but also – or even foremost – its arguments: they change the alignment of semantic roles and grammatical relations. Arguments can be expressed by full noun phrases, but most commonly pronouns and agreement forms are used, which provide the link to person, the other notion mentioned above. This is typically expressed by independent personal pronouns or verbal agreement or both, depending on the language. Strictly speaking, person only refers to the three-way distinction between the speaker (first person), the addressee (second person) and what is talked about (third person) (Siewierska 2004:1). Most languages exhibit more distinctions than that in their personal pronouns and agreement forms and also encode other information about the referents: their number, grammatical relation, semantic role, social status, gender, animacy and so on.

The diachronic association of voice and person marking, however, has not featured prominently in linguistic research so far. The best known connection is that between third person plural forms and the passive, with the former developing into the latter via an impersonal stage (Siewierska 2010). My impression is that this is often taken as a natural or functional development that does not need further explanation. Quite recently, two reports about a default first person interpretation of demoted patients in antipassives (Fleck 2006 and Bickel & Gaenszle 2015) suggest that such connections are not exclusive to passives. These diachronic scenarios are mostly taken as reflecting the grammaticalization of discourse patterns (see e.g. Bresnan et al. 2001). It is often observed that passives are very common with first person patients and third person agents and preferred to their active counterparts. For example, one would rather say *I was hit by the falling branch* than the *the falling branch hit me*, because the passive clause emphasizes the first person. In other words, the passive is a way of expressing an event from the perspective of the speaker (or addressee), if he or she is the patient. The antipassive is usually used when the patient is unknown or unimportant, thus emphasizing the agent. The connection of voice and person markers is generally believed to derive from such patterns in actual discourse, i.e. the diachronic scenario is envisaged as the manifestation of discourse patterns in grammar.

In general, the sources of voice markers and their subsequent development have not attracted a lot of attention. There are some pathways that are well attested and often cited, e.g. the reflexive to passive development and the passive to ergative development (Haspelmath 1990), but even these are not well understood and there are no systematic typological surveys telling us how frequent they really are. The present study cannot offer such a comprehensive overview, as it is limited to voice markers that overlap with person markers. It is a first step in this direction, though. Its goal is not provide an in-depth and conclusive analysis of the subject, but to collect and present what is actually found in the languages of the world and attempt at a preliminary explanation of these findings.

The study is guided by the following questions:

1. How frequently do voice markers develop out of person markers and vice versa? - Is it a functional tendency or tied to local histories or to both?
2. Are there areal patterns, i.e. are languages in some macro-areas more prone to undergo such a development or not?
3. Are passives indeed primarily associated with third person plural forms and antipassives with first person plural forms?

The tentative answers to these questions are based on a sample of 59 languages from 28 families, which were selected to cover a wide geographical space. There are obstacles in conducting such a study: many languages are not described at all, or only insufficiently so and historical materials and reconstructions are even less available. But that applies to any typological study and thus should not keep us from attempting. After all, one can either work with what is there - or leave it altogether. And the latter cannot be an option.

Perhaps, that is the real purpose of the study: not to explain anything, but to demonstrate that having an impression – however subjective it may be – of the probability of a historical connection actually adds to our

knowledge and understanding of linguistic phenomena.

Section 2 provides the necessary theoretical foundations of the study, introducing the definitions and terminology used in the subsequent sections (Section 2.1.1), presenting previous research on the subject (Section 2.2) and summarizing other sources of voice markers (Section 2.3). The section will be concluded by a summary and predictions of what is expected to occur in the languages of the world and what not Section 2.4. Section 3 presents an account of the methodology employed for collecting and analyzing the data. It explains the sampling procedure (Section 3.1) and provides an overview of the sample (Section 3.2).

In Sections 4 to 9, the languages of the sample are examined and discussed in detail. They are organized according to the macro-area they are spoken in: Section 4 presents the languages of Africa, Section 5 those of Eurasia, Section 6 languages spoken in the Pacific, Section 7 those of Australia and Sections 8 and 9 present the languages of North and South America, respectively. Each of these sections is concluded by a summary.

Each of the language description is structured in a similar way: first of all, person markers are presented and discussed, followed by a description of the voice markers and their functions. Reflexive and reciprocal expressions will be mentioned along the way if they are important to the discussion or overlap with a voice marker. Finally, the historic evidence is reviewed and the situation in related languages is considered to estimate how likely a diachronic connection is. Section 10 provides an analysis and interpretation of the findings of the previous sections and Section 11 summarizes everything and points to questions for further research brought up by the current study.

2 Theoretical Background

In the following, I will first introduce the terminology and definitions of relevant concepts (Section 2.1), before summarizing previous research (Section 2.2). After reviewing other diachronic accounts of voice markers (Section 2.3), I will formulate some predictions.

2.1 Definitions and Terminology

2.1.1 Voice and related phenomena

One could probably fill a whole book with the pages dedicated to the definition of passives and to the discussions about whether structure X in language Y should be labeled as passive or not. In case of the antipassive, my impression is that the definition issue is less prevalent, but this is probably due to the wide array of labels used for this construction. For the current study, a definition is important in two ways: first of all, to collect morphological voice markers one must know what one considers voice and what not and secondly, the reader must be informed about what is meant when one is speaking of a passive or antipassive (or any other term). The discussion about the proper labeling, on the other hand, is not important. As will become clear below, my working definitions are quite openly formulated and I am interested in the language data and not the labels given to these.

As far as passives are concerned, I will briefly summarize some of the most well-known proposals, before moving on to the definition employed here. In case of the antipassive, a comprehensive overview over definitions is presented in Janic 2013:18-21. For exemplification, three definitions will be discussed very briefly.

The passive prototype, adapted from Shibatani (1985:837):
- primary pragmatic function: defocusing of agent
- semantic properties: subject is affected
- syntactic properties: a) syntactic encoding: agent = not encoded / patient = subject, b) valence of predicate: -1 in the passive
- morphological properties: predicate+passive

Cooreman (1994:50)'s definition of the antipassive:
- the antipassive is a construction typical for ergative languages and occurs along with ergative constructions as a morphosyntactic alternative for the same transitive proposition
- while the A and P in an ergative clause are marked as ergative and absolutive respectively, the A in an antipassive is typically encoded as an absolutive NP, and the P (if present) appears in a case other than the absolutive
- the verb phrase may or may not be explicitly marked as intransitive

Definition of the passive and antipassive according to Dixon & Aikhenvald (2000:7, 9):
- applies to an underlying transitive clause and forms a derived intransitive
- the underlying P becomes S of the passive / the underlying A becomes S of the antipassive
- the underlying A (in case of the passive) or P (in case of the antipassive) argument goes into a peripheral function (...); this argument can be omitted, although there is always the option of including it
- there is explicit formal marking of the passive/antipassive construction

Definition of a passive construction in WALS (Siewierska 2013):
- it contrasts with another construction, the active
- the subject of the active corresponds to a non-obligatory oblique phrase of the passive or is not overtly expressed
- the subject of the passive, if there is one, corresponds to the direct object of the active
- the construction is pragmatically restricted relative to the active
- the construction displays some special morphological marking of the verb

Definition of an antipassive construction in WALS (Polinsky 2013):
- derived detransitivized construction with a two-place predicate, related to a corresponding transitive construction whose predicate is the same lexical item
- the patient-like argument is either suppressed (left implicit) or realized as an oblique complement

The main controversy in the passive definitions boils down to whether the overt encoding of the demoted agent is obligatory, optional or disfavored. In Dixon & Aikhenvald (2000:7)'s definition, the possibility to overtly express an agent is an integral part of the passive construction, while in Shibatani (1985:837)'s prototype the agent is dropped completely. Haspelmath (1990:27) finally, allows for both, which is also what I will include in my definition. As will be explained below (Section 2.2), passives most frequently occur without overt agents even in languages which in principle allow it. Therefore, a restriction like Dixon & Aikhenvald (2000:7)'s seems unnecessary. Otherwise, there is much agreement across these authors in terms of the formal properties. Siewierska (2013), however, does not explicitly say that the passive must be intransitive - it just needs to contrast in any way with the active.

The main difference between the two antipassive definitions lies in whether there should be explicit marking on the verb and whether the antipassive is associated with certain alignment systems or not. The first issue is easily solved for the present purpose: I am interested in antipassive morphology, i.e. unmarked antipassives are not of primary interest for this study. The second issue has been thoroughly addressed and disproven by Janic (2013), who demonstrates that the antipassive is also found in accusatively aligned languages.

The working definitions employed in this study are most similar to the passive definition of WALS. There are four criteria that have to be met so that a structure in a given language is called passive, antipassive or detransitive, respectively. Criteria 3 and 4, see Table 2.1, apply to all three: the construction must be applicable to transitive verbs and there must be some special morphological marking on the verb that is absent in the corresponding active clause. Criteria 1 and 2 concern the semantic roles of the arguments in question and thus differ across the three voices. In the passive, the agent is demoted and the patient is the new sole argument, while in the antipassive, the opposite applies. The demoted argument is either omitted completely or expressed as an oblique, but there is no requirement that one or the option must be available.

Detransitive is used here as term to refer to markers that have both a passive and an antipassive function. In the literature it is sometimes applied to markers that have either a passive or antipassive function and also express reflexivity, reciprocality or the like, but I will not use in this way. If any of the markers in question also has other functions, this will always be explicitly stated.

The notion of intransitivity is absent from my definition for practical reasons: in principle, these operations are valency-decreasing, which means that the transitive verb they apply to should become intransitive. It is often the case, though, that the transitivity of a verb or clause is not immediately clear - either to the expert of the language in question or to the typologist collecting the data, or to both. What has also been omitted from the definitions in Table 2.1, is that S argument of the passive clause should be marked accordingly. First of all, arguments can be expressed and marked in different ways: they can appear as full noun phrases, pronouns, agreement on the verb or a combination of these. Full noun phrases are case marked in some languages, but not in others and so are pronouns. Considering agreement, the variation is even more complex, as three parameters are included: which arguments trigger agreement, what forms are used and their position respective to the verb. Does something then only count as 'marked as sole argument' if it is the same as the sole argument in all of these parameters? Or does one suffice, and if so, which? - In order to avoid such discussions and because that information will not always be available, it is not part of the definition either.

		passive	antipassive	detransitive
1	S corresponds to _ of the active clause	P	A	A or P
2	_ of the active clause is demoted to an oblique or omitted	A	P	P or A
3	the verb carries segmental morphological marking that is absent in the active clause			
4	applies to transitive verbs			

Table 2.1: Definitions of the passive, antipassive and detransitive voice

Three other phenomena, which will also be important in the following, are defined below. These are the anticausative, the impersonal construction and resultatives. The first is very similar to a passive construction, with two important differences: a) no agent is implied and b) the event occurs spontaneously. An anticausative is thus defined as a construction in which:

1 S corresponds to P of the active clause
2 there is no implication of an agent
3 the verb carries morphological marking that is absent in the active clause
4 applies to transitive verbs
5 denotes a spontaneously occurring event

We see that criteria 1,3 and 4 are identical to those of the passive. The main differences have already been pointed out above and concern the status of the agent (criterion 2) and the nature of the event denoted by the verb. Such constructions have also been called 'pseudo-passive', 'mediopassive' and 'inchoative' (Haspelmath 1990:33).
Resultatives share with passives that the patient of the active clause is promoted to subject. However, unlike passive markers, they also apply to intransitive verbs, in which case the sole argument remains unchanged. The focus on a state resulting from a previous action (Haspelmath 1990:33). This is summarized below:

1 S corresponds to P of the active clause or remains unchanged
2 the agent is not overtly expressed
3 the verb carries morphological marking that is absent in the active clause
4 applies to transitive and intransitive verbs
5 denotes a state resulting from a preceding action

Impersonal constructions have until recently mostly been studied in Indo-European languages. The collection of Malchukov & Siewierska 2011 has added a cross-linguist perspective to the subject. There are two approaches to the delineation of the phenomenon: the agent defocusing/backgrounding and the subject-centered approach. The former is broader and basically includes all structures that have a non-prototypical subject and as such also includes passives and locative subjects (Malchukov & Siewierska 2011:2). As I want the terminology to be as clear as possible, I will follow the latter approach, in which impersonals are more narrowly defined. An impersonal construction has one of the following properties (adapted from Malchukov & Siewierska 2011:2):

- the subject is not fully referential
- the subject does not display properties generally associated with subjects
- the subject is not an argument of the verb at all, but merely a place-filler
- the subject is not overt

The verb is not part of the definition at all, i.e. it need not be marked in a special way and it is either transitive or intransitive. The main difference to a passive construction is that the subject does not correspond to the patient of a basic transitive clause.

2.1.2 Personal pronouns and agreement

I will not attempt to define what a personal pronoun is, or even more what constitutes agreement. But as I have collected both, I should at least describe how I assigned the data to either of the categories. Typically, personal pronouns are independent words, while agreement is bound either as a clitic or as an affix. However, this need not be and it is often difficult to assign a particular form or set of forms to one of these categories. Wordhood can then not be the decisive criterion. Instead, obligatoriness and co-occurrence with full NPs separates the two: agreement is obligatory and co-occurs with full noun phrases referring to the same argument, while personal pronouns are optional and occur instead of full noun phrases.

In some cases, these criteria may fail: the forms in question may be obligatory in some environments, but not in others or they are always optional, but co-occur with full noun phrases. This is expected for systems in which the person forms that are to become agreement markers have not (yet) fully grammaticalized. I have done my best to be consistent in the assignment to one or the other category, but what was mentioned above (Section 2.1.1)

for voice marking, certainly applies here, too: the label is not important, the distribution and use of the form is. And this distribution is briefly presented for each language discussed in the following, so the reader may decide for themselves, whether they agree with my classification or not.

2.1.3 Reflexives and reciprocals

As will become clear in Sections 2.2 and 2.3, reflexives and reciprocals cannot be left out of the discussion. I will thus briefly define these notions and summarize how they are typically expressed in the languages of the world. Reflexivity and recently also reciprocity have received a fair amount of attention, both from a theoretical and typological point of view. The constructions that languages use to express those concepts are varied and several attempts at classification have been made (see König & Gast 2008 for an overview). Of most interest for the current study are reflexives and reciprocals that are marked on the verb. Other strategies include specialized pronouns (common in Europe), nominals meaning 'head' or the like and, in case of reciprocals, biclausal structures (König & Gast 2008:10f.).

Both concepts will be defined quite openly following Maslova (2008:227-228): A reflexive construction involves a transitive predicate of which the A and P argument are identical. A reciprocal construction involves a transitive predicate in which the two arguments mutually engage in the action denoted by the predicate. There are of course many more parameters relevant for the study of reflexives and reciprocals, but a discussion of those lies outside the scope of the study.

It is well known that in many languages, reflexivity and reciprocality are expressed by identical means. Usually this is explained by a diachronic scenario, in which the reflexive construction has been extended to also cover reciprocity. Some scholars have even claimed that this is the only possible direction, but this has been challenged recently, e.g. by Moyse-Faurie (2008). The explanation for this overlap is seen in the (nearly) complementary distribution of the two phenomena: in context, the number of participants and category of the verb usually only allow for one reading or the other, which means that even though the construction is the same, ambiguity is not a problem. The reflexive to reciprocal scenario explains a finding that is otherwise difficult to motivate: in reciprocal constructions there is often only one slot to be filled by an argument, even though by definition at least two participants are involved. Reflexives, on the other hand, only have one participant and thus it makes sense, that there is only one argument slot (König & Gast 2008:19-20).

2.2 Previous research

The idea that the overlap between person and voice is something worth investigating originated from previous research. In the past years, there have been several studies and reports of various kinds of connections between the two, which inadvertently leads to the question of whether there is pattern behind them.

The best known connection, already mentioned by Haspelmath (1990), is that between impersonal and passive constructions. I will thus present it before all the other reports. After that, the discussion is chronologically structured from the oldest to the most recent work. Impersonal constructions typically involve a non-referential pronominal subject (Siewierska 2010:74). Most frequently this is the third person plural, as in Example 2.1 from Modern Greek, and I will focus on this case for the first part.

(1) *Su tilefoni-s-an.*
2SG.DAT phone-AOR-3PL
'Someone called you.' (Haspelmath 1990:49)

Impersonals are associated with the defocusing of the agent and non-canonical subjects, which to a certain extent also applies to passives (see Section 2.1.1). Indeed, in languages lacking passives an impersonal construction is often used to translate passive sentences from European languages. The third person plural impersonal subject is mostly interpreted as a human collective (Siewierska 2010:75).

Over time then, the impersonal subject marker may loose its participant status and develop a passive meaning. According to Siewierska (2010:103), this only happens if there is a specific 3PL impersonal construction. When such a construction is used with a patient-centered verb, a passive interpretation follows quite naturally, cf. Example 2.2 from Ewe (Siewierska 2010:103).

(2) *Wo-dzi Kofi.*
3PL-bear Kofi
'They bore Kofi/Kofi was born.' (Siewierska 2010:103, from Heine & Reh 1984:99)

A similar approach is taken by Givón (2006:340) to explain the rise of the passive construction in Kimbundu, a Bantu language spoken in Angola. His scenario combines the impersonal construction with left-dislocation

(see Example 2.3). As is convincingly argued by Siewierska (2010), left-dislocation is not a necessary factor, but rather a language specific aspect.

(3) *Nzua, a-mu-mono.*
John 3PL-3SG-see
'John, they saw him / John, he was seen.' (Givón 2006:340)

Such developments are also attested with 1PL markers: in Ainu the first person inclusive affixes (*-an* and *a-*) have been extended to mark impersonals and passives (Haspelmath 1990:50). I will now move on to the discussion of the other reports.

One could probably say that it all started with DeLancey's (1981)'s seminal article on the interpretation of split ergativity, where he presents a unified analysis of splits in alignment systems and voice marking. More specifically, the author wants to explain the association of ergative morphology – which in the definition employed in the paper also includes passives (DeLancey 1981:627) – with the perfective aspect and lower position of the agent on the empathy hierarchy [1] and of accusative morphology with the imperfective aspect and higher position of the agent on the empathy hierarchy (DeLancey 1981:630).

His line of reasoning is based on two psychological notions: attention flow and viewpoint. Attention flow (AF) concerns the linear order of NPs in a sentence, i.e. they "are presented in the order in which the speaker wishes the hearer to attend to them." (DeLancey 1981:632). Events also have a natural AF, which is based on the temporal order and usually, the order of NPs in a sentence will reflect exactly that. In transitive sentences, the natural AF is from agent to patient and this is also the unmarked linguistic AF. This is reflected in that agentless passives are much more common than agentive ones, even in languages which allow both, because agentive passives reverse the natural AF whereas agentless passives only present one end of the event structure (DeLancey 1981:633-634).

As indicated above, in certain circumstances, speakers do not adhere to the natural AF. This is where the category of viewpoint comes into play: it provides the motivation for mechanisms that reverse natural AF. An event can be described from three viewpoints: that of the observer, that of the addressee and that of the speaker (DeLancey 1981:635). This means that in a transitive sentence involving an SAP, the most natural viewpoint is with the SAP, which also explains why passive sentences with a third person patient and an SAP agent (e.g. *Patrick was seen by me*) feel quite unnatural. Passives with an SAP patient and a third person agent (e.g. *I was seen by Patrick*) are much more common. The reason to deviate from natural AF is "to place the viewpoint NP first, making it the starting-point of linguistic AF" (DeLancey 1981:638).

These two notions are invoked to explain phenomena of different kinds in a comprehensive manner: If one considers position in the clause, case marking and verbal agreement, the first is associated with the starting point of natural AF, while the latter two are associated with viewpoint. In English, all of these properties are combined on one NP, the subject: it occurs in left-most position, it is unmarked for case and it triggers agreement. In a language with an SAP (accusative) vs. third person (ergative) split, ergative case marks the starting point when it does not coincide with the viewpoint, i.e. the properties are distributed across two NPs (DeLancey 1981:639-640). Direct-inverse systems also code the identity (direct) or non-identity (inverse) of natural viewpoint and natural starting point of event on the verb: SAPs are always the natural viewpoint and so is the agent in a transitive clause, which means that a third person agent creates a case of non-identity and is marked accordingly (DeLancey 1981:641). The aspectual split (perfective-ergative vs. imperfective-accusative) is also explained in that way. Aspect, too, is a linguistic device to code viewpoint and perfective aspect in particular views an event from its endpoint. As has been mentioned above, the patient in a transitive event is also seen as the endpoint, which means that it coincides with the viewpoint. The agent then receives special marking because it is the starting point, but not the viewpoint (DeLancey 1981:647). In active-stative languages, the S argument of an intransitive clause is marked either like the agent or like the patient of a transitive, usually depending on whether the action carried out is under the control of S. This can also be explained in terms of coincidence of the starting point of the AF and the viewpoint: in S arguments marked like agents they coincide, while in S arguments marked like patients, the starting point is believed to be external (DeLancey 1981:652-653).

A passive construction, in this view, is a way of aligning the starting point of the linguistic AF with the viewpoint, when it is not the starting point of the natural AF. In the transitive clause in Example (4-a), the natural and linguistic starting point are the same, but the viewpoint is associated with the SAP. In the passive construction in Example (4-b), the viewpoint and linguistic starting point now coincide.

[1] This is also known as the 'animacy hierarchy' and ranks arguments with respect to each other: SAPs > 3rd pronouns > human > animate > natural forces > inanimate (DeLancey 1981:644).

active		passive		antipassive	
A	P	P	(A)	A	(P)
1/2	3	3	1/2	1/2	3
VP, NST, LST		LST (VP)	(VP) NST	VP, LST, NST	
I pushed her.		*She was pushed (by me).*		*I pushed (at her).*	
3	1/2	1/2	3	3	1/2
NST, LST	VP	VP, LST	NST	LST, NST (VP)	(VP)
She pushed me.		*I was pushed (by her).*		*She pushed (at me).*	

Table 2.2: Voice oppositions in DeLancey's (1981) theory

(4) a. *[The woman behind me] pushed [me].*
NST/LST event VP
b. *[I] was pushed [by the woman behind me].*
LST/VP event NST

Table 2.2 presents a schematic overview over the distribution of linguistic and natural starting point and viewpoint in active, passive and antipassive clauses. Note that DeLancey's (1981)'s theory cannot make any statements about events with two SAPs or two third persons, as it is language-specific, which participant is then seen as the most natural viewpoint. Also, the author did not mention antipassives at all, so this is my interpretation of the theory only.

When the agent is an SAP and the patient a third person all three properties are associated with the agent in the active clause as well as the antipassive clause. In the corresponding passive clause (*She was pushed by me*), the linguistic starting point is associated with the patient, which means that the three properties are now split across two NPs. However, as was mentioned above, passives are usually agentless and in that case, the viewpoint would be associated with the third person patient. In the reverse situation, the starting points are both associated with the third person agent, but the viewpoint is on the patient SAP. In the passive clause, however, the linguistic starting point now coincides with the viewpoint. The antipassive clause is the same as the active clause if the demoted object is still present, but if it is not, the viewpoint will then also be associated with the third person agent.

To sum up, it seems that the most unmarked situation is that all of the properties are attributed to one NP. The next best thing - if one wants to put it like that - is that linguistic starting point and viewpoint coincidence and the least desirable seems to be that the linguistic starting point is not associated with either of the two.

The observation that passives are common with SAP patients but not with third person was also made by Bresnan et al. (2001) from a very different perspective. The article is written within the optimality theory, which will not be introduced or discussed here, but its insights are valid beyond promoting the framework. The main claim of the paper is that what are categorical constraints on the interaction of person and voice in one language, is reflected as a statistical tendency in other languages. This illustrated by Lummi (a dialect of Straits Salish spoken in British Columbia) and English.

In Lummi, the active construction is obligatory with with an SAP acting on third person (cf. Example (5-a)), while the passive construction is obligatory with third persons acting on SAPs (cf. Example (5-b)). In both cases, the reverse is ungrammatical and a choice only exists when both A and P are SAPs or non-SAPs, as in Examples (6-a) and (6-b). This is attested in other languages as well, e.g. in Picurís (Tanoan, Mexico) and Nootka (Southern Wakashan, British Columbia) (Bresnan et al. 2001).

(5) a. *x̣či-t=sən cə swəy̓qəʔ.*
know-TR=1SG.NOM the man
'I know the man.'
b. *x̣či-t-ŋ=sən ə cə swəy̓qəʔ.*
know-TR-PASS=1SG.NOM by the man
'The man knows me/ I am known by the man.' (Bresnan et al. 2001, from Jelinek & Demers 1983, 1994)

(6) a. *x̣či-t-s cə swəy̓qəʔ cə swiʔoʔəɬ.*
know-TR-3ERG the man the boy
'The man knows the boy.'
b. *x̣či-t-ŋ cə swiʔoʔəɬ ə cə swəy̓qəʔ.*
know-TR-PASS the boy by the man
'The boy is known by the man.' (Bresnan et al. 2001, from Jelinek & Demers 1983, 1994)

(11) English person/role by voice (full passives)

action:			# Act:	# Pass:	% Act:	% Pass:
1,2	→	1,2	179	0	100.0	0.0
1,2	→	3	6246	0	100.0	0.0
3	→	3	3110	39	98.8	1.2
3	→	1,2	472	14	97.1	2.9

Figure 2.1: Number of active and passive constructions in English by type of action (Bresnan et al. 2001)

A corpus study of English revealed that while there is no such constraint in the language, the statistical tendencies show a very similar picture (see Figure 2.1): in the corpus, passives did not occur at all with SAP agents and were more frequent with third person acting on third than on SAPs.[2] Even though the passive construction is infrequent altogether and the numbers are very small, the interaction between person and voice is statistically significant (p<.001).

Bresnan et al. (2001) remark that from a classical generative point of view it is difficult to see why person and voice should interact at all. However, optimality theory does provide an explanation. Put very briefly, active constructions are seen as the 'optimal' expression of semantically transitive events. But there are constraints that favor passives, namely avoiding or backgrounding the agent, ensuring topic continuity and avoiding subjects that are newer than non-subjects. In addition, there are person-specific constraints, i.e. that SAPs are more likely subjects than third person. Depending on the ranking of those constraints, passives are banned from SAP>3 situations altogether or just not as frequent (Bresnan et al. 2001). All of this can be implemented by the stochastic optimality theory framework.

We will now turn from passives to antipassives and to Matses, a Panoan language spoken in Peru. A detailed discussion of the language is provided in Section 9.6. This summary is primarily about the general development described by the author and its theoretical consequences. In Matses there is a morphologically marked antipassive construction that displays many of the properties typically associated with antipassives: it derives intransitives from transitives, the agent is marked as S and it backgrounds the patient, which is indefinite and either unknown or unimportant (Fleck 2006:558). The demoted patient cannot be expressed overtly, though. In addition to being interpreted as indefinite, the demoted patient can also have a first person reading. An antipassive construction like Example 2.7 is thus ambiguous (Fleck 2006:559). Furthermore, the first person interpretation is the default and is not constrained to certain tense-aspect configurations like the indefinite patient reading (Fleck 2006:560).

(7) *aid opa pe-an-e-k.*
that.one dog.ABS bite-AP-NPAST-IND
'That dog bites. *or* That dog always bites/is always biting me/us. ' (Fleck 2006:559)

Furthermore, transitive verbs in *-ka* have an intransitive counterpart in *-ke*, in which the S can correspond to A of the transitive. If this is the case, the interpretation of the now absent patient is exactly parallel to that in the antipassive: it is either indefinite or preferably first person (Fleck 2006:560-561). In Matses, only verbs with human patients can be used with the antipassive. At first sight, this is puzzling as it is cross-linguistically more common to peripheralize inanimate or unimportant patients. But the first person reading needs a human patient, simply because non-humans cannot be first persons. On the other hand, it is well known that first person plural forms often develop a generic meaning, as for example in Peruvian Amazonian Spanish, as illustrated in Example 2.8 (Fleck 2006:566).

(8) *El alacrán nos pic-a.*
DET scorpion 1PL.ACC sting-3SG
'Scorpions sting (lit. sting us).' (Fleck 2006:566)

The first person reading is explained by the fact that when the antipassive is used to refer to a generic patient, the speaker is always included in that subset. This means that Example 2.9 can either be said by a man as a warning to a man or by a woman as a warning to a woman, but not the other way around.

(9) *debi min di-n an-tsad-me-enda, dayun-an-e-k.*
Davy your hammock-LOC inside-sit-CAUS-PROH hug-AP-NPAST-IND
'Don't let Davy sit [with you] in your hammock. [Because] he hugs (us).' (Fleck 2006:566)

[2] 'Full passives' refers to passive with overtly expressed agents, i.e. agentless passives were excluded from the study because the person of the agent is not always clear.

To conclude, the basic function of the Matses antipassive seems to be the "backgrounding of the most important types of patients: first persons and affected human patients." (Fleck 2006:570). At present the suffix *-an* only refers to a first person patient in antipassive constructions. But it cannot be precluded that it extends to other contexts in the future and ultimately would mark first person patients in general. While this of course must not happen in Matses, the language still provides a starting point for the explanation how voice and person markers could be related to each other diachronically. In addition, it demonstrates that not only passives are associated with person, but antipassives as well.

Support for the diachronic connection between antipassives and first person patients comes from a very different region of the world, namely the Himalaya. Bickel & Gaenszle (2015) discuss parallel developments concerning voice and person marking in the Southern Kirant area in Nepal, dominated by Kiranti languages. Two of these languages, Puma and Yakkha, are discussed in more detail in Section 5.4. As with Matses, I will focus on the general developments and processes in this section.

It has been reported that in two Southern Kirant languages – Athpare and Maiwa-Mewa Limbu – first person patients were replaced by morphemes which etymologically go back to Proto-Kiranti **rak-mi* 'person, human being'. These forms both also have an indefinite meaning. As indefinite markers they attach to intransitive verb forms, which might be surprising at first. However, there is a wide-spread and productive construction whereby the agent is in the nominative rather than the ergative and the object is demoted in one way or another (Bickel & Gaenszle 2015:66-67). It is exactly in such contexts where 'people' was used in a generic sense that provide the interface for the further development. The relevant constructions are attested in Belhare. Example (10-a) is a basic transitive clause with the agent in ergative case and both participants indexed on the verb. The *maʔi* refers to a specific person in that construction. Example (10-b) illustrates a *ø*-antipassive with *maʔi* as demoted patient, which is no longer cross-referenced on the verb. Only an unspecific interpretation is possible. Finally, in Example (10-c), *maʔi* is bound to the verb and now refers to a first person exclusive, i.e. it cannot be interpreted as 'people' anymore.

(10) a. *un-na maʔi niu-t-u.*
3SG-ERG person[NOM.SG] [3SG.A-]see-NPAST-3O
'S/he sees a (specific) person. *or* S/he sees the person.'

b. *un maʔi ni-yu.*
3SG.NOM person[NOM.SG] [3SG.A-]see-NPAST
'S/he sees people. (*but not:* S/he sees the/a specific person.) '

c. *un-na maʔi-ni-yu.*
3SG-ERG 1PL.E.P-see-NPAST
'S/he sees us (excl).' (Bickel & Gaenszle 2015:68)

Indeed, very similar developments are found in Puma and Yakkha, two other Kiranti languages. In Puma, the form in question does not derive from a noun meaning 'people', but rather from Proto-Kiranti **khəl* 'all'. Just like Belhare, Puma has an antipassive construction in this case marked by *kha-*. If there are no overt NPs in the clause, the verb form is ambiguous, as in Examples (11-a) and (11-b). Interestingly, just like in Matses, the *kha-* antipassive is limited to human patients and the demoted patient can never be expressed overtly. This restriction does not hold for the ø-marked antipassive. The origin of the construction provides an explanation for these restrictions: **kha* was most probably used in a *ø*-antipassive as object and thus the slot for the object was already filled (compare Example (56-b) from Belhare). Even though *kha-* is no longer transparent as referring to 'all' this still holds (Bickel & Gaenszle 2015:69-70). Note that first person object forms with *kha-* are also attested in Chintang and Camling, even though it is not used as antipassive marker in those two languages (Bickel & Gaenszle 2015:71).

(11) a. *(kho-ci) som-kha-mʌ-tuk.*
(3-NSG[NOM]) love-AP-3PL.S-love.NPAST
'They love people.'

b. *(kho-ci-a) som-kha-mʌ-tuk.*
(3-NSG-ERG) love-1PL.E.P-3PL.A-love.NPAST
'They love people.' (Bickel & Gaenszle 2015:69)

As was mentioned above, antipassivization without morphological marking is common in Kiranti languages. And indeed, a similar development to those sketched above is found in Yakkha with the *ø*-antipassive (Bickel & Gaenszle 2015:71). Quite recently, all first person patient forms have been replaced by intransitive forms. Interestingly, intransitively inflected verbs are used both as passives and antipassives in Yakkha and such passives often have a first plural agent reading (Bickel & Gaenszle 2015:72-75).

The languages mentioned so far do not belong to one branch, but three, which suggests that we are dealing with parallel innovations (Bickel & Gaenszle 2015:75). They do, however, form a fairly contiguous geographical area, which points to areal diffusion as a likely scenario.

The authors' explanation combines natural trends with the local history of the Southern Kirant region. About the functional side they say: "Although we are not aware of systematic worldwide surveys to back this up, it seems reasonable to assume that it is a natural development for first person non-singular pronouns or agreement markers to be replaced by expressions for generic 'people', 'all' and similar notions" (Bickel & Gaenszle 2015:79). That there is a connection between first persons and generic expressions is confirmed by languages like English, in which the first person also has a generic meaning. The authors also noted the parallel to Matses and they also adduce Chukchi (discussed in Section 5.3), Comanche (discussed in Section 8.2) and Karen (Bickel & Gaenszle 2015:80). To explain the developments sketched above, an understanding of the local history of the region is important as well. All of the languages mentioned above have been in contact with speakers of Maithili, an Indo-Iranian language. In Maithili, first person reference is avoided for politeness reasons: verb agreement forms that refer to first persons are systematically conflated with those of the second person to avoid an unambiguous reference. The antipassive use for first person plural patients in the Southern Kirant has a similar effect: it replaces the unique reference with a generic or no reference (Bickel & Gaenszle 2015:80-81).

The parallel developments in the Southern Kirant languages is thus best explained as a combination of the functional trend to first person non-singular person forms to be replaced by generic expressions and the copying of Maithili politeness strategies.

The following report on Finnish is based on an abstract of a conference and is thus very brief. More details about the language are presented in Section 5.5. Ajanki (2010) reports that in Colloquial Finnish the first person plural object is in most cases not expressed via verbal agreement but by a impersonal/passive [3] construction with a free pronoun, compare the conservative construction in Example (12-a) to the innovative one in Example (12-b).

(12) a. *(me-ø) osta-mme auto-n.*
(1PL-NOM) buy-1PL car-GEN/ACC
'We will buy a car.'
b. *me-ø oste-taan auto-ø.*
1PL-NOM buy-IMPS car-NOM
'We will buy a car.' (Ajanki 2010)

With the new construction, a novel type of transitive sentence has arisen, namely one where both agent and patient are in nominative case. Interestingly, two other Finnic languages - Karelian and Veps - show a similar development but in that case with the third person plural (Ajanki 2010). Note that the interpretation of the agent is limited to humans (Helasvuo & Vilkuna 2008:229-230), which provides a 'bridge' for the interpretation as a first person plural. The whole situation is actually very parallel to that in Matses and Kiranti, except that the voice in question is a passive/impersonal (see Section 5.5 for a discussion of this issue) and not an antipassive and consequently, the first person plural is an agent and not a patient.

The opposite trajectory is attested in the Tacanan languages spoken in Bolivia and Peru. Guillaume (2011) discusses the synchronic function and diachronic source of the verbal suffix *-ta*, which in some languages marks third person plural S or A, and in one a passive. Details about Cavineña and Reyesano are presented in Section 9.2.

Four of the languages, Araona, Cavineña, Ese Ejja and Tacana, have ergative alignment of full NPs and pronouns and no person marking on the verb (apart from *-ta*). Only Cavineña has Wackernagel clitics, which are very similar to agreement markers. Reyesano, on the other hand, has no case marking at all and a full system of verbal person marking (Guillaume 2011:523-524). In Araona, Ese Ejja and Reyesano, the suffix *-ta* marks a third person plural S on intransitives and third person singular or plural A on transitives. In all these languages, *-ta* is placed directly after the verb stem and before TAM suffixes. In Reyesano and Tacana *-ta* seems to be obligatory, while in Ese Ejja only the A marker seems to be obligatory, while the S marker is rare. In Araona, it is not obligatory in any context, but it seems to be frequent on transitive verbs (cf. Example 2.13) (Guillaume 2011:526-528).

(13) *wada teje kwé-ta-ja.*
3SG.ERG garden.ABS cut-3A-PROG
'He is clearing the garden.' (Guillaume 2011:527)

In Cavineña, the suffix *-ta* is rare and it is used to mark a passive, not a third person. A verb marked by *-ta* is detransitivized, as it takes the intransitive versions of certain aspect markers and the agent cannot be expressed

[3] The marker in question is used in both impersonal and passive constructions according to the definition used in this study (cf. Section 5.5).

overtly, cf. Example 2.14. It seems, though, as that the patient is not fully promoted to subject, but due to lack of data the details remain unclear (Guillaume 2011:528-529).

(14) *dutya ekana iye-ta-tere-wa.*
all 3PL.ABS kill-PASS-COMPL.ITR-PF
'They were all killed.' (Guillaume 2011:529)

Guillaume (2011) suggests that the suffix **-ta* started out in Proto-Tacanan as a nominative (i.e. S and A) marker of the third person plural. It then took different paths of development, depending on the language and the transitivity of the verb. I will focus on the development to a passive marker in Cavineña here. First of all, it must be noted that the plural meaning disappeared in all languages with transitive verbs. The author hypothesizes that this happened in order to better disambiguate A and O, as there is no person marking nor obligatory pronouns in these languages. Extending the suffix to all third persons would then allow to properly distinguish A and P in configurations involving an SAP and a third person. In Cavineña *-ta* developed into a passive marker via a putative impersonal stage. The basis for this proposal is literature on the grammaticalization of passive markers: while the development from third person plural to passive is well attested, this is not so for the reverse situation (Guillaume 2011:530-533). There is a further piece of evidence for this scenario from within the Tacanan languages: Guillaume (2011:533f.) traces *-ta* back to a Pre-Proto-Tacanan third person independent pronoun ***tuna*. In Cavineña, Reyesano and Tacana this exact form is still used as a third person plural free pronoun. All other evidence, which is not discussed here, also looks quite conclusive. This free pronoun would then have become enclitic – possibly first in Wackernagel position and then on the verb – and then a suffix, being phonologically reduced to *-ta*. The author admits that this scenario is quite speculative and more work on the reconstruction of Tacanan is desperately needed. In addition, there is one problem with the proposal: as mentioned above, *-ta* appears between the verb stem and TAM suffixes, but it would be expected from the cliticization process that it comes last. Furthermore, the author wonders why only the third person should be morphologically marked on the verb and the other persons not (Guillaume 2011:534).

In light of the discussion of the statistical association of passives with third person agents (see above), it might well be worth considering the opposite development, i.e. that *-ta* was originally a passive marker that turned into a person marker in all languages except Cavineña. The position immediately after the verb stem and before inflectional suffixes is typical for derivational morphology and would thus have a better motivation in this scenario. However, I know too little about the Tacanan languages to judge whether this is even remotely possible. In addition, in the majority of the languages involved *-ta* marks third person and this also speaks against the passive as the source.

2.3 Sources and paths of development of voice markers

In the section above, I have reviewed reports and proposals concerning the synchronic and diachronic relationship of person and voice. Of course, voice markers can also have other sources, and this is what will be discussed below. Section 2.3.1 deals with passives and Section 2.3.2 with antipassives.

2.3.1 Passives

There is a vast literature on passives, but the discussion mainly focuses on its syntactic properties and its definition. It has already been remarked by Haspelmath (1990) that studies about the morphological marking of passives are quite rare. Some twenty years later, the situation does not seem to have improved very much, at least not concerning the diachronic aspects: "[T]he sources of passive constructions have received relatively little attention. Consequently many questions pertaining to the developmental pathways of passives still remain open." (Siewierska 2010:73). In the following, I will briefly present and discuss various sources of passive constructions. I will focus myself on the proposals that pertain to passive marking on the verb, leaving aside periphrastic constructions, as those are not directly relevant to the subject of the study.

Reflexive noun or pronoun to anticausative to passive: Probably the most frequently cited source of passives are reflexives, or, to be more precise, reflexive nouns and pronouns. According to Haspelmath (1990:44), this is a prototypical instance of grammaticalization including semantic bleaching.

Anticausatives differ from reflexives in that they do not have an actor. To get to an anticausative interpretation, one simply has to allow for a non-agentive reading. This can then lead to ambiguity as in *John hurt himself*, which can either mean that he acted on purpose (the reflexive reading) or that he is affected by the action (the anticausative reading). In many languages, anticausatives are expressed by reflexive constructions, e.g. in German

and Russian (Haspelmath 1990:45). The anticausative is considered less restrictive, because it allows non-agentive subjects.

If the restriction to spontaneously occurring events is canceled, a passive reading is obtained, i.e. a further generalization has taken place. Furthermore, there is now an agent implied, even if it is not expressed overtly.

Anticausative to passive: As a common source for anticausative markers are reflexives, so in most cases this is probably only a stage in the reflexive > passive development. Even so, it is rather probable that not all anticausative markers derive from reflexives, so I list it as a separate entry, like Heine & Kuteva (2002:44).

The development basically involves the introduction of an agent, be it implied or overt, and dropping the restriction to spontaneously occurring events, even though that may go hand in hand with the introduction of an agent. The examples are from the Northern dialect of Kung-Ekoka (K'xa; Namibia), with Example (15-a) illustrating the anticausative and Example (15-b) the passive use of */'é*, which is itself derived from a reflexive.

(15) a. *ma ke g‖éà mí /'é ke àngòlà.*
1SG PAST bear my self in Angola
'I was born in Angola.'

b. *g‖ú má ke tchŋ́ ká'ŋ /'é ke mí.*
water TOP PAST drink its self by 1SG
'The water has been drunk by me.' (Heine & Kuteva 2002:44, from Heine's fieldnotes)

Causative to reflexive-causative to passive: Causatives are also known to grammaticalize into passives. There is an intermediate step, in which the interpretation is reflexive-causative, e.g. *I have myself shaved by the barber.* The causative-reflexive and the passive have in common that there is only one argument not distinguishing agent and patient (Givón 2006:341). The next step is to drop the agency restriction on the subject and one arrives at a passive meaning (Haspelmath 1990:46).

Passives and causatives, however, also share a functional property, i.e. the backgrounding of the agent. The most prominent elements in causative constructions are usually the causer and patient, whereas the causee is either omitted or marked as an oblique. This is quite parallel to the treatment of the demoted agent in passive clauses. Furthermore, both constructions often imply high affectedness of the patient (Haspelmath 1990:47). It is thus unclear, whether the intermediate causative-reflexive state is assumed to be present in all cases.

Nominalization to passive: In some languages, passives arise from nominalizations and synchronically still resemble the latter (Givón 2006:339). The link between the two constructions is that in both there is no overt agent and the remaining argument is topicalized (Givón 2006:341).

(16) a. *múusa-paxá-ta ka-'áy-wa-t 'ura-'ay.*
cat-kill-NOM NEG-good-NEG-NOM be-IMM
'Cat-killing is bad.'

b. *múusa-chi paxá-ta-pʉga.*
cat-OBJ kill-PASS-REM
'The cat was killed.' (Givón 2006:339, from Givón 1980)

Comitative to passive: Heine & Kuteva (2002:88) have only come across two examples of this development and it has not been mentioned in any of my sources either. The languages in question are Baka (Atlantic-Congo, North-Volta-Congo; Cameroon) and Lamang (Afro-Asiatic, Chadic; Nigeria), both located in Africa. Baka has a comitative preposition *tɛ* 'with', which also marks passives, as in Example 2.17. The same is true for Lamang, but the form is *ndà*, cf. Example 2.18.

(17) *bèlà à mɛèlɛ tɛ.*
work ASP do.PAST PASS.3SG
'The job was done.' (Heine & Kuteva 2002:88, from Kilian-Hatz 1992:63)

(18) ndá ɗa zùwì.
'The rope is plaited.' [4] (Heine & Kuteva 2002:88, from Wolff 1983:171-2)

Zero-anaphora to passive: Givón (2006:340) notes that in many languages passives develop from clauses "with a highly-topical, referring and anaphoric agent; that is, from a clause with a zero anaphoric agent". The only example he gives is from Sherpa (Sino-Tibetan, Tibetic; Nepal), cf. Example 2.19.

[4] No glossing is provided, it is only mentioned that *ɗa* means 'plait'.

(19) *chenyi chaq-sung*
cup.ABS break-PAST.EVD
'S/he broke the cup. *or* The cup was broken. *or* Someone broke the cup.' (Givón 2006:340)

At first, it might seem puzzling that a construction with a highly referring and topical agent would be used as a passive, where the agent is demoted. Givón (2006:341) notes that a similar situation is found with antipassives: the demoted patient is either the topical patient of the active or unspecified, i.e. non-referring (see the discussion below in Section 2.3.2). This dichotomy is also attributable to the demoted agent in passive constructions, or more generally, to the motivation for not expressing certain arguments: predictability (with highly topical arguments) and irrelevance (with non-referring elements). However, as this cannot develop into a morphologically marked passive, it is only of minor relevance.

Serial verb constructions and auxiliaries: Such lexical sources are easiest to see in periphrastic passive constructions, but the elements involved can also become affixes, i.e. morphological passive markers over time. Haspelmath (1990:38f.) primarily distinguishes between intransitive and transitive auxiliaries/second verbs. Intransitive auxiliaries are often combined with resultative participles, though the passive function should not (only) be attributed to them in the first place. As will be seen from the lists below, passives with verbs meaning 'undergo' and 'receive' are most common but not limited to South East Asia (Haspelmath 1990:40). The functional overlap that they share with passives is that they usually topicalize the patient and sometimes also have a de-topicalized patient (Givón 2006:341). In the following, I will very briefly summarize the pathways and the languages in which they are attested.

fall > passive: attested in Korean with *ji- > -ji*, Tamil (Dravidian; Sri Lanka) with *paṭu > -paṭ* and Tonga (Austronesian, Oceanic; Tonga) with *gua > -igu* (Heine & Kuteva 2002:133, Haspelmath 1990:39).

eat > passive: attested in Chinese with *chi*, Kharia (Austroasiatic,Munda; India) with *jom > -jom*, Juang (Austroasiatic,Munda; India) with *jim > -jim* and Korean with *meg > -meg*, see Example 2.20 below (Haspelmath 1990:41). Heine & Kuteva (2002:122) mention that the development is not well understood and probably better interpretable in light of the other serial verb constructions.

(20) *I dosi-uy sijung-i simin-dul-eygey yog-meg-ess-da.*
this city-GEN mayor-NOM citizen-PL-by criticize-PASS-PAST.DECL
'The mayor of this city was criticized by the citizens.' (Haspelmath 1990:41)

suffer > passive: attested in Vietnamese with *bị* and Korean *dangha-* (Heine & Kuteva 2002:284).

get > passive: attested in Vietnamese (Austroasiatic; Vietnam) with *ðu'ọ'c* 'receive', Korean with *bad-* 'receive', and Chinese with *bei* 'to receive, to suffer,to be affected' (see Example 2.21), colloquial German, Welsh (Indo-European, Celtic; UK) and the Rodrigues dialect of Mauritian Creole and the Seychellois Creole (Heine & Kuteva 2002:145-144).

(21) *Ta bèi (tàitai) kànjiàn.*
he PASS (wife) see
'He is seen (by his wife).' (Haspelmath 1990:41, cited from Hashimoto 1988:330, 334)

Other sources: 'be' in Peruvian Quechua and 'go' in Equadorian Quechua, 'be' in Common Turkic, and probably in Japanese and Cupeño (Uto-Aztecan) (Haspelmath 1990:39).

Figure 2.2 summarizes all sources discussed by Haspelmath (1990). Starting in the top right, there is the 'inactive auxiliary' (corresponding to the paragraph Serial verbs and auxiliaries) to passive pathway, via an optional resultative state. To the left, the causative > reflexive-causative > passive development is depicted. In the middle, we find the reflexive > anticausative > passive pathway, originating in a reflexive noun or pronoun. Below that, the impersonal (generalized subject construction in Haspelmath's (1990)'s term) to passive pathway is illustrated, the ultimate source of which is a plural pronoun or a generic noun. The intermediate 'desubjective' stage is characterized by the loss of participant status of the generalized subject, or in other words, it refers to the stage in which the marker in question no longer refers to a person (Haspelmath 1990:49).

The graphic also includes the afterlife of passive markers: when passive clauses are reanalyzed as basic transitive clauses, the passive marker can be interpreted as a marker of ergativity.

2.3.2 Antipassives

Where the literature on the sources of passive markers is quite restricted, this is even more so for antipassives. As Jacques (2014:1) puts it: "The diachronic origin of antipassive markers (…) has only attracted a limited amount of scholarship". There are a few diachronic studies of antipassives in single languages (e.g. Segerer 2012 and

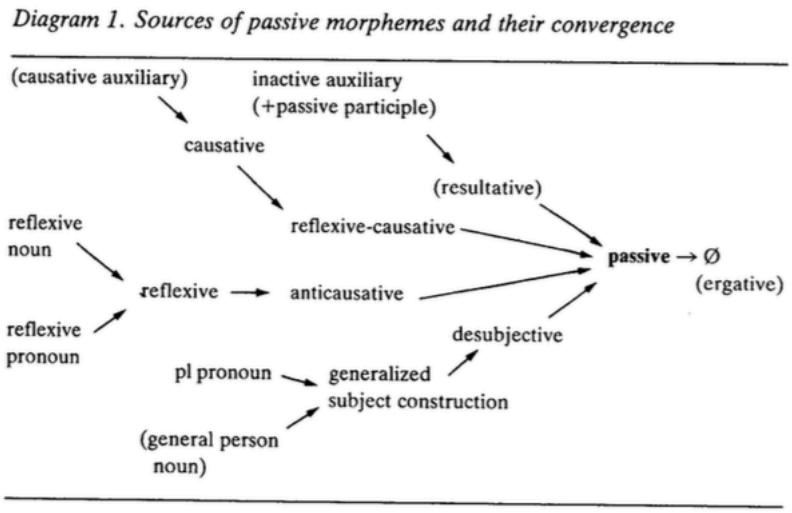


Figure 2.2: Sources of passive markers (Haspelmath 1990:54)

Jacques 2014, among others), but the only more comprehensive overviews I am aware of are Janic 2013 and Say 2008, which is unfortunately only available in Russian. Janic (2013)'s discussion is very valuable, but restricted to accusative languages and antipassive markers which are also used as reflexives or reciprocals (Janic 2013:235). I will first summarize the findings of Janic (2013) and then briefly present reports from individual languages or language families.

Reflexives, reciprocals and antipassives: It is well known that antipassive markers are often polysemous and also encode reflexive and/or reciprocal notions. It is generally assumed that the reflexive constitutes the source from which the antipassive has developed (Janic 2013:238). The reason for this assumption is twofold: first of all, there are attestations of reflexives becoming extended to antipassives (cf. Terrill 1997), but not vice versa and second, reflexives are cross-linguistically very common, but antipassives are not. It is thus not very plausible to assume a development from antipassive to reflexive (Janic 2013:239). The explanation of why reflexives can take on antipassive meanings at all has to do with the 'relative elaboration of events', a term introduced by Kemmer (1993) and defined as follows:

> *Relative elaboration of an event is the degree to which the participants and component subevents in a particular verbal event are distinguished.* (Kemmer 1993:121)

A high degree of elaboration is associated with prototypically transitive verbs like *hit*, while experiencer verbs like *see* exhibit a lower degree of elaboration and therefore are not prototypically transitive verbs (Janic 2013:240). In reflexives, the A and P argument are the same or in other words indistinguishable, which means that they, too, exhibit a lower degree of elaboration of the event (Janic 2013:241). This also applies to antipassives, as they usually depict generic or habitual actions and in addition often have a low degree of agentivity (Janic 2013:241). The similar status concerning the elaboration of an event is taken as the basis for the explanation of the development from reflexive to antipassive. It assumed that there is always an intermediate stage, where the interpretation of a sentence is ambiguous, like in Example 2.22 from Polish.

(22) *Nie chlap się!*
NEG splash.2SG.IMP REFL
'Stop splashing at yourself (or your clothes will get wet). *or* Stop splashing (or I will tell it to mother).' [5]
(Janic 2013:245)

With certain verbs, especially those that express a violent force, the antipassive interpretation is the preferred one and over time can become the only one available (Janic 2013:245-246).

As was mentioned above (Section 2.1.3), in many languages reflexive marking is also used to express reciprocality. This is not surprising, as reciprocals also have a low degree of transitivity: the participants in such events are not distinguished and in addition, the elaboration of sub-events is also low. Janic (2013:247) hypothesizes that in such cases – i.e. in languages with one marker covering reflexive, reciprocal and antipassive – the reflexive

[5] As the rest of Janic 2013, the glossing and translation are originally in French and translated to English by myself.

TABLE 1: ANTIPASSIVE AND REFLEXIVE MORPHOLOGY

Language	Antipassive	Reflexive
Guugu Yimidhirr	*-:dhi ~ -:yi ~ -:ya*	*-:dhi ~ -:yi ~ -:ya*
Kuku-Yalanji	*-dji*	*-dji*
Djabugay	*-yi*	*-yi*
Yidiny	*-:dji*	*-:dji*
Dyirbal	*-ŋay, -rri ~-yirri ~ -(m)barri ~ -marri*	*-rri ~-yirri ~ -(m)barri ~ -marri*
Nyawaygi	*-gi ~ -ygi*	*-gi ~ -ygi*
Warungu	*-li, -gali*	*-li, -gali*
Kalkatungu	*-yi*	*-ti*
Diyari	*-thadi*	*-thadi*
Banjdjalang	*-li*	*-li*
Ngandi	*-i ~ -yi*	*-i ~ -yi*
Nunggubuyu	*-i*	*-i*

Figure 2.3: Reflexive and antipassive markers in Australia (Terrill 1997:78)

constitutes the basic notion from which the other two are derived independently from each other. The extension to the reciprocal involves the extension of singular to plural participants, while for the antipassive, the patient becomes even less distinguishable. While this scenario sounds very plausible, it is not attested as such and thus speculative.

In other languages, the antipassive overlaps with the reciprocal, but not the reflexive. It is now tempting to envisage a similar path of development as with the reflexive, but as it turns out, the situation is quite different. Reciprocal markers are often not restricted to purely reciprocal functions or they developed from a source with a much wider meaning. The term often used to cover this wider meaning is 'plurality of relations', which could informally be defined as 'doing something with someone' (Janic 2013:250-251). When the plurality of relations refers to a plurality of participants (rather than actions), the notion of 'co-participation' was introduced. It describes events in which there are several acting participants with mutual engagement (Janic 2013:253). From there it is a small step to a reciprocal marker.

An antipassive can emerge from a co-participation expression, when certain criteria are met: the role of the participants involved in the construction must be distinguishable and the verb must have a special marking. Consider Example 2.23 from Tswana (Atlantic-Congo, Bantu; Botswana): The abstract meaning of this sentence is something like "The policeman and the thief refer to two persons participating in an event lexicalized as *look for*" (Janic 2013:257). The most natural interpretation is that given in the translation of the example. In theory, the sentence could also be interpreted as reciprocal (*The policeman and the thief are looking for each other*), but in this case this does not make a lot of sense. The antipassive interpretation is driven by pragmatics, but it is not difficult to imagine that over time this interpretation becomes routinized and the co-participation marker develops into an antipassive marker (Janic 2013:256-257).

(23) *Le-podisi le batlana le le-godu.*
NCL5-policeman 3NOM.NCL5 look.for.PLR with NCL5-thief
'The policeman is looking for the thief. ' (Janic 2013:257, from Creissels & Nouguier-Voisin 2008:294)

This means that the antipassive does not develop from the reciprocal, but rather both are independent developments of a source which indicates plurality of relations.

Reflexive to antipassive in Australian languages: Antipassives are not common in Australia, but when they occur, the same marker usually also expresses reflexivity. Terrill (1997) presents an overview of these overlaps and proposes a diachronic scenario, in which antipassives develop from reflexives via extension and reanalysis. Her sample includes 12 languages, about half of them located in Queensland in the Cairns region. Most of these languages are not closely related, which means that the explanation of genetic inheritance will not work - unless one wants to claim that the antipassive function was lost in an overwhelming majority of the languages (Terrill 1997:72-73). Four of the languages - Yidiny, Djabugay, Warungu and Bandjalang - are discussed in more detail in Section 7. A comprehensive overview of the sample is presented in Figure 2.3. In a footnote, (Terrill 1997:fn.2, p.77) mentions that many of these markers are also used as reciprocals, but that she will not discuss this relationship.

While the morphological overlap between antipassives and reflexives has often been noted, the functional overlap is less clear. For the characterization of the function of reflexive clauses, the author follows Givón's (1990)'s reasoning. He suggests that reflexives do not occur with prototypical high-transitivity verbs, but only with less transitive verbs that have dative, benefactive, associative or patient subjects. As a result, reflexive constructions are less transitive than their non-reflexive counterparts (Terrill 1997:80-81). Antipassives have a missing or indistinct object, their subjects are usually less agentive and the verb forms involved are usually less transitive than those of their active counterpart. All this results in lower over-all transitivity, just like in reflexive constructions (Terrill 1997:82). It is not surprising that speakers extend a reflexive construction to an antipassive one: the former marks co-reference of A and P, which means that P is less patientive and the verb less transitive, both of which apply also to the latter. Only the co-reference restriction has to be dropped. The reverse extension, i.e. from antipassive to reflexive, is logically just as plausible, but as reflexives are much more widespread, not very compelling (Terrill 1997:82-84).

Denominal affixes to antipassive in Japhug rGyalrong: Japhug is a Sino-Tibetan language of the Burmo-Qiangic branch spoken in the Sichuan region of China. The language has two productive antipassive prefixes, *rɤ-* to demote a non-human patient (cf. Example 2.24) and *sɤ-* to demote a human patient (cf. Example 2.25). The demoted patient cannot be expressed overtly with either of the prefixes (Jacques 2014:10-11).

(24) *tɤ-rʑaβ nɯ pjɤ-rɤ-ɕpʰɤt.*
INDEF.POSS-wife TOP EVD.IMPF-AP.NH-mend
'The wife was mending the clothes.' (Jacques 2014:11)

(25) *nɯnɯ wuma ʑo ɲɯ-sɤ-sat.*
this very EMPH CONST-AP.H-kill
'Its killing power is considerable (of a gun).' (Jacques 2014:11)

Japhug also has very many denominal prefixes, two of which are identical in form to the antipassive markers (Jacques 2014:14). The denominal *rɤ-*prefix derives intransitive verbs from nouns, with the event described referring to "the production of the entity designated by the base noun either by active building (...) or by spontaneous effect" (Jacques 2014:15). In addition, it also derives transitive and intransitive verbs referring to the performing of the activity denoted by the base noun. The prefix *sɤ-* derives transitive or intransitive verbs denoting the property, position, use of an instrument or body part or causation of the nominal basis. It also derives transitive verbs from ideophones. In addition, there is a homophonous prefix *sɤ-* that does not change word class: it is used to derive stative verbs from other verbs (Jacques 2014:16-17). Below, a few examples of the derivations are presented:

base noun/verb		derived verb	
zga	sauce	*rɤ-zga*	to make honey
pɕaʁ	prostration	*rɤ-pɕaʁ*	to prostrate oneself
(tɤ-)ndɤɣ	poison	*sɤ-ndɤɣ*	to be poisonous
(tɤ-)kʰɯ	smoke	*sɤ-kʰɯ*	to smoke
ŋgio	to slip	*sɤ-ŋgio*	to be slippery

Both prefixes have allophones in */ɯ/*. The distribution is tied to the form of the indefinite possessor in inalienably possessed nouns, which is either *tɯ-* or *tɤ-*. The vocalism of the denominal prefixes is the same as that of the indefinite possessor. All other nouns take either one (Jacques 2014:14). The author proposes that the denominal prefixes are the source of the antipassive markers. The first step is the same for both prefixes, involving the nominalization of a transitive verb by zero derivation. The derived noun is then verbalized again, in case of the non-human antipassive by *rɤ-*, into an intransitive verb. In case of the human antipassive, *sɤ-* is used and a stative verb results. Due to ambiguous contexts, this stative verb is then reanalyzed as an intransitive verb denoting an action (Jacques 2014:18-20). The distinction between human and hon-human directly follows from the semantics of the denominal suffixes: as mentioned above, *rɤ-* derives action and production verbs, whose patient is typically non-human, while *sɤ-* derives verbs denoting a property to which typically humans are susceptible (Jacques 2014:20). The two pathways are summarized below:

non-human antipassive:	
1. transitive verb > bare action nominal	*ɕpʰɤt* 'to patch' v.tr. > *ɕpʰɤt* 'patch' n.
2. bare action nominal > intransitive denominal verb	*ɕpʰɤt* 'patch' n. > *rɤ-ɕpʰɤt* 'to patch clothes' v.itr.
human antipassive:	
1. transitive verb > bare action nominal/infinitive	*sat* 'to kill' v.tr. > *-sat* 'killing'
2. bare action nominal/infinitive > stative property verb	**-sat* 'killing' > *sɤ-sat* 'to have a propensity to kill' v.stat.
3. stative property verb > action verb	*sɤ-sat* 'to have a propensity to kill' v.itr. > *sɤ-sat* 'to kill people' v.itr.

The origin of the antipassive markers in West Mande languages: Antipassives are found in three of four subgroups of West Mande: in Soninke-Bozo, Bobo-Samogo and the Central group. Two of the languages, Mandinka and Soninke are discussed in greater detail in Section 4.3. The following discussion is based on a handout for a conference (Creissels 2012). There are two types of antipassive markers in West Mande languages: a general detransitivizer *-i*, which is never productive and often fuses with the last segment of the verb stem and a specialized antipassive marker *-rí/-ndí*, which has similarities to the causative marker (Creissels 2012).

The detransitivizer is reconstructed as **-i* for Proto-West-Mande. As it also expresses reflexivity (but not reciprocality) and it is well known that antipassives can develop from reflexives, the suggested original meaning of **-i* is reflexive. This is supported by the fact that a reflexive pronoun *í* is attested in various West Mande languages, e.g. in Mandinka (see Section 4.3.1). There is, however, a problem with this hypothesis: all Mande languages are rigidly SOV, which means that we would expect a prefix and not a suffix. In addition a change from SVO to SOV in Proto-Mande is rather unlikely, which is why the author chooses to leave the question of a possible historical connection open (Creissels 2012).

The situation is quite different with the specialized antipassive markers of Soninke (*-ndí*) and Mandinka (*-rí*). As mentioned above, there is a formal similarity between the causative and the antipassive marker. Creissels (2012) proposes that both derive from a Proto-West-Mande verb root **tin* 'to do', which is attested as *tîŋ ~ tínnà ~ túnnà* 'to cause' in Mandinka and as *tîn ~ tînà* 'to do' in Bozo Jenaama, via periphrastic constructions. The details of the process remain unclear, because "we will probably never be able to reconstruct the details of the constructions in which they occurred and of the phonological processes responsible for the precise forms taken by the suffixes in question (...)" (Creissels 2012).

Plurality of relations and the antipassive in Bantu and Atlantic languages: The following lines are based on a two-page handout written by Segerer (2012) for a conference. It is thus very brief and not very detailed, but should suffice for a general impression. His proposal is also discussed by Janic (2013:80ff.), but she mainly recapitulates what is said by Segerer (2012).

There is a polysemous suffix *-an* in many Bantu languages which is also reconstructed for Proto-Bantu **-an*, presumably with an associative meaning. It is often called reciprocal, because this function seems to be present in all languages. Aside from this, the labels vary considerably across languages (Segerer 2012). The antipassive use of *-an* is frequent in Bantu languages, but only rarely has it been referred to by this label. The array of functions of *-an* are probably best summarized as expressing 'plurality of relations' (Janic 2013:82). An example of the reciprocal and antipassive function in Kirundi is presented in Example 2.26.

(26) *abanyéeshuúle ba-a-tuk-an-ye.*
students 3PL-PAST-insult-AN-ASP
'Students insulted each other. *or* Students insulted people.' (Segerer 2012)

Interestingly, Segerer (2012) notes a parallel in the Atlantic languages of the Jola subgroup. In Kerak, the suffix *-ɔɔr* marks both a reciprocal (cf. Example 2.27) and an antipassive (cf. Example 2.28).

(27) *ba-ɲɪɪl-ab bɔɔbʊ kɔɔ kʊ-bʊj-ɔɔr-ɛm.*
NCL-child-DET.NCL DEM.NCL PRON.NCL NCL-hit-REC-TAM
'These children are fighting (with each other, SA).' (Segerer 2012)

(28) *a-ɲɪɪl-aw ɔɔ a-bʊj-ɔɔr-ɛm.*
NCL-child-DET.NCL PRON.NCL NCL-hit-REC-TAM
'This child is fighting all the time.' (Segerer 2012)

Two other Jola languages – Jola Fonyi and Banjal – are discussed in Section 4.1. Kerak could not be included in the sample, because there is no grammar or grammar sketch. The examples presented above are from the authors own fieldwork. Note that neither in Jola-Fonyi nor in Banjal does the reciprocal marker (which is nearly identical in form to that of Kerak) carry out an antipassive function - or at least, this has not been recognized until now.

However, the reciprocal-antipassive polysemy occurs in unrelated languages and is seen by Segerer (2012) as "one of the possible results of the general function of the so-called reciprocal extension, which is to indicate a plurality of relations." While this statement is not explicitly formulated in diachronic terms, it suggests that the antipassive develops out of the reciprocal, when the latter is extended semantically.

2.3.3 On the connection between voice and alignment

Voice markers have long been associated with certain types of alignment, i.e. passives with nominative-accusative and antipassives with ergative-absolutive alignment. There has been a quite lively debate on whether antipassives even exist in accusative languages or not. This can be attributed to two facts: antipassives were first 'discovered' in

ergative languages and are easier to spot in such languages because the intransitive subject is marked differently than the transitive one, whereas in accusative systems the morphological marking is the same (Janic 2013:21-22).

Interestingly, Siewierska (2010) discusses characteristics of languages that facilitate the development from 3PL impersonal to passive, and finds that not to have a morphological distinction between S and P is an important factor (Siewierska 2010:96). As she only considers languages in which the 3PL impersonal marker is bound, i.e. that have a agreement, this means that such a development is favored in languages with ergative or active alignment in agreement (Siewierska 2010:104). Her observation suggests that the alignment of full NPs alone cannot be the determining factor. This makes sense insofar as languages cannot be classified as a whole as accusative or ergative. Rather, pronouns, agreement and full NPs are separate systems, which should be considered as such. As I had collected the person markers for the 59 languages anyway, I analyzed their alignment systems as well and a brief overview will be presented in each of the summary chapters of the macro-areas. The alignment of full NPs was taken from WALS (Comrie 2013) or from the grammars.

2.4 Summary and predictions

The sources of the passive and antipassive markers discussed in the previous sections (Sections 2.2 and 2.3) are summarized in Table 2.3. Reflexives and nominalizations develop into passives, as well as antipassives. Reflexives only have one argument, which has the semantic roles of agent and patient at the same time. It it thus not surprising, that one can emphasize either the agent component or the patient component, so that the marker takes on an antipassive or passive reading, respectively. In case of the development to a passive, an intermediate stage – the anticausative – is posited, which is absent in the antipassive. The pathways are thus quite different, even though the source is the same. In case of the antipassive Janic (2013:246) mentions that the bridge constructions, which are ambiguous between a reflexive and antipassive reading, involve verbs denoting events with a violent force. For verbs to develop an anticausative meaning, the events that they denote must be imaginable without an agent. It would be interesting to know, if one class of verbs is especially suited for such an interpretation, or in other words, whether the bridge construction in this case involves different verbs than that of the antipassive.

Reciprocals, or to be more precise their source construction, seem only to develop into antipassives and not to passives. The connection between the antipassive and 'plurality of relations' is attributable to the functions that antipassives usually have: they tend to denote habitual and/or generic events. In both cases, one could say, that there is a 'plurality of relations' involved. Habitual events occur over and over again and thus involve multiple events, while generic events always apply and in some sense also involve multiple events. Passives are usually associated with punctual events and thus would not be susceptible to an association with a plurality of relations.

Serial verb constructions or constructions involving an auxiliary are also attested for both voices. One meaning, namely 'to get' is even attested for both voices, but the rest of the sources are different. Moreover, while this pathway is quite frequent with passives, it seems to be less common with antipassives.

The last common source are nominalizations, which is not surprising as they themselves focus on either the patient or the agent (or an oblique), e.g. *story* = 'a thing that is told' versus *storyteller* 'a person telling a story', or any other aspect of the event denoted by the verb. It is thus not difficult to envisage that they can be associated with antipassives (agent-focus) or passives (patient-focus). The development in Japhug is unique in that it involves a verbalization of the nominalized forms.

Only one of the sources of each voice construction is associated with person marking: the impersonal in case of the passive and the indefinite/generic argument in case of the antipassive. Impersonals are often expressed by plural pronouns or verbal agreement forms, but a dedicated marker is also possible. Generic arguments, on the other hand, often have sources meaning 'people', 'all' or the like, but first person plural markers can also be used as such, e.g. in English *'we often take everything for granted'* referring to people in general. However, in Nahuatl, the generic argument marker already had that function in Proto-Uto-Aztecan, its ancestor language, and it cannot be traced back to a person marker (Langacker 1977:46). The development 1PL > generic argument > antipassive is thus only hypothetical. The reverse development, i.e. from antipassive to first person plural, is attested in several languages (see Section 2.2). The attested sources together with theoretical considerations and patterns of usage, allow us to formulate predictions about what patterns are expected to be frequent.

The association of passive and person seems to be tied to the notion of impersonality, which is either expressed by dedicated pronominalized forms, e.g. *man* in German, or person markers. As far as person markers are concerned, the most frequent choices are third person plural, second person singular and first person plural (Siewierska 2010:75). Second person singular forms are especially common when giving instructions, e.g. *'...and then you plug the red cable in here'*. Third person singular and second person plural are also attested, though less frequently. The source person markers are agents, i.e. if there is case marking, they are nominative in a nominative-accusative system or ergative in an ergative-absolutive system.

The link between antipassives and person marking is genericity. The direction of the development is exactly

passive		antipassive	
source	example	source	example
reflexive via anticausative	German, Polish	reflexive	Australian languages
comitative	Baka	plurality of relations (reciprocal)	Tswana, Kerak
nominalization	Ute	nominalization	Kalaallisut
causative via causative-reflexive	Tungusic	nominalization+verbalization	Japhug rGyalrong
serial verbs / auxiliaries ('be', 'go', 'fall', 'suffer', 'eat', 'get')	Korean, Kharia	serial verbs / auxiliaries ('make', 'get')	West Mande, Kalallisut
impersonal/3PL	Cavineña	indef., generic argument	Nahuatl
		benefactive / malefactive	Central Yupik

Table 2.3: Attested sources of passive and antipassive markers

opposite to that attested in passives: the voice marker develops into a person marker, i.e. a first person plural, in all attested cases. Considering the Nahuatl case mentioned above, the opposite should also be possible, but it is not attested so far. The semantic role of the resulting person marker is – quite obviously – the patient.

The attested and expected (in brackets) developments are schematically summarized below:

person marker		voice marker	voice marker		person marker
3PL, 1PL (2SG, 2PL, 3SG)	➔	passive	antipassive	➔	1PL.P (2P, 3P)

As already mentioned, the direction is reverse in the two scenarios. Moreover, neither pathway involves a first person singular, because it is difficult to imagine an impersonal or generic meaning expressed by a marker referring to the speaker. Third and first person plural are expected to be the most frequent sources or targets of the developments.

3 Methodology

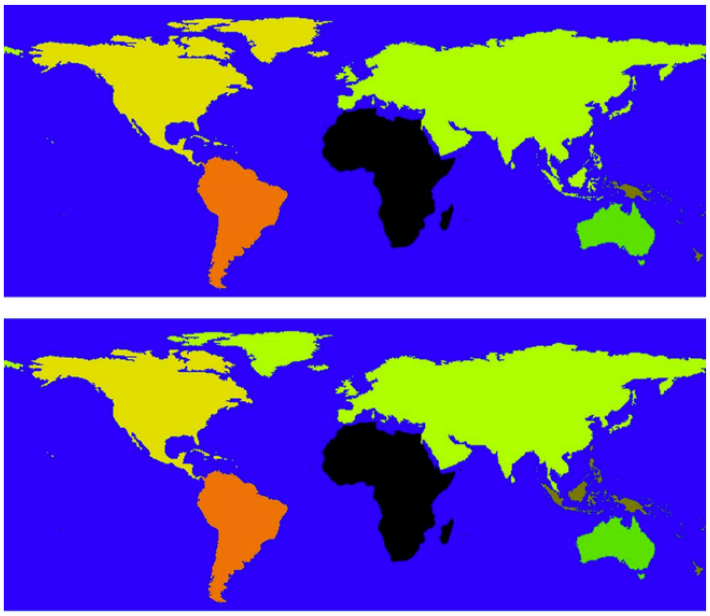
3.1 Sampling procedure

The starting for the selection of the languages was an informal survey conducted by Balthasar Bickel in 2008 about overlaps of verbal agreement with passives and antipassives. There were roughly 200 languages in the sample, of which eight - Albanian, Beja, Plains Cree, Evenki, Karitiana, Tukang Besi, Udihe and Chamorro - were reported to have an overlap, about a 130 to not have one and the rest were unclear cases. I then started to review the doubtful cases and complemented them with languages mentioned in relevant literature. The basic criteria for a language to be considered for the sample are twofold:

1. The language is reported to have a passive and/or antipassive construction. Ideally, this includes the information about whether it is morphologically marked on the verb, too. If not, a grammar had to be consulted.
2. There is a grammar, or at least a grammar sketch, available of that language (in a language I have some knowledge of).

There are other important factors to consider, such as the genealogical and geographical distribution of the languages in the sample, the basis of which will be discussed very briefly. Even though it was not possible to arrive at large sample size, I still wanted the sample to be as meaningful as possible in other aspects. I thus chose the languages so that there is about an equal number in each macro-area as defined by Hammarström & Donohue (2014). This is a widespread practice in typological research as some phenomena only occur in certain regions and one is usually interested in the world wide distribution. There have been many previous works on the issue of how to best split up the world into macro-areas, but here it is not the place to discuss this. It is worth mentioning though, that earlier suggestions often included linguistic aspects into the classification, such as that languages spreading over several macro-areas are assigned to just one (Hammarström & Donohue 2014:170-171). It is desirable, however, that the geographic regions are independent of any linguistic aspects, otherwise the classification is prone to suffer from circularity. Thus, Hammarström & Donohue (2014:178) propose a partition solely based on geophysical data. They arrive at a six-way split into the following macro-areas Hammarström & Donohue (2014:178-179): Africa (black), Australia (green), Eurasia (light green), Pacific (brown),[6] North America (yellow) and South America (orange), cf. Figure 3.1. Whether the top or the bottom map is more appropriate depends on the phenomenon in question: if it is thought to spread easily, the coast-distances are more important, if it is thought to be not very diffusible, the center-distances are.

[6]The authors' term is 'Multinesia', which they chose because 'Pacific' is sometimes used to include Australia as well. I am aware of this, but for the sake of simplicity will still use the latter label.



MAPS 9–10 *The optimal division into macro-areas where* n=6 *and* k=250*, using coast-distances (top) and center-distances (bottom). The maps are shown in Mercator projection but all distances used in the computations are the actual distances, i.e., with earth as a sphere.*

Figure 3.1: Macro-areas as proposed by Hammarström & Donohue (2014:183)

In my case, even though this just an assumption, it seems more reasonable to assume that the voice-person overlap is not very prone to diffusion, so the bottom map is taken as the basis for the areal classification of the languages. I aimed at sampling roughly the same number of languages for each macro-area to achieve a good coverage of all the worlds regions. Just as important as geographical diversity is genealogical diversity. Thus, I aimed at including languages from various families, within macro-areas but also in general. It goes without saying that the genealogical classification of the languages of the world is not at all a settled matter. I chose to follow the classification of `Glottolog` (Hammarström et al. 2014), because it is up to date, lists all the relevant sources and is openly accessible.

Given that the research question is of a diachronic nature and that for very many languages and language families neither historical data nor reconstruction is available, I chose to sample two languages from each family, as closely related as possible. This allows comparison within a family and a first impression of whether a given diachronic scenario is plausible or not. Due to lack of description and/or absence of voice markers, the languages sometimes do not belong to the same branch of the family and in other cases, it was impossible to add another member of the family altogether.

Starting from the eight languages mentioned above, I subsequently added more languages so that there were about ten languages of five families per macro-continent. This was achieved mainly by looking through very many grammars, although at this point only superficially. Where I had several options, I chose the language with the most comprehensive grammar.

To sum up, the sample is a positive convenience sample: it only contains languages that are reported to have morphological voice markers and the languages were chosen based on the availability of data. Thus, it is not suitable to make any statements about the distribution of voice marking in the languages of the world.

3.2 The structure of the sample

By applying the criteria described in Section 3.1, I collected data from 59 languages covering 6 macro-areas and 28 stocks.[7] The geographical distribution is presented in Figure 3.2 and some details will be added in the following. The full list of languages is presented in Table 3.2 and more information is included in the electronic appendix. In addition, Table 3.1 summarizes the number of languages per macro-area and indicates, how many languages have a passive marker, an antipassive or both. Note that number of languages with voice markers does not add

[7] In the following, stock will refer to the highest level and family and branch to the next lower ones, e.g. Indo-European will be called stock, Indo-Iranian a family and Iranian a branch.

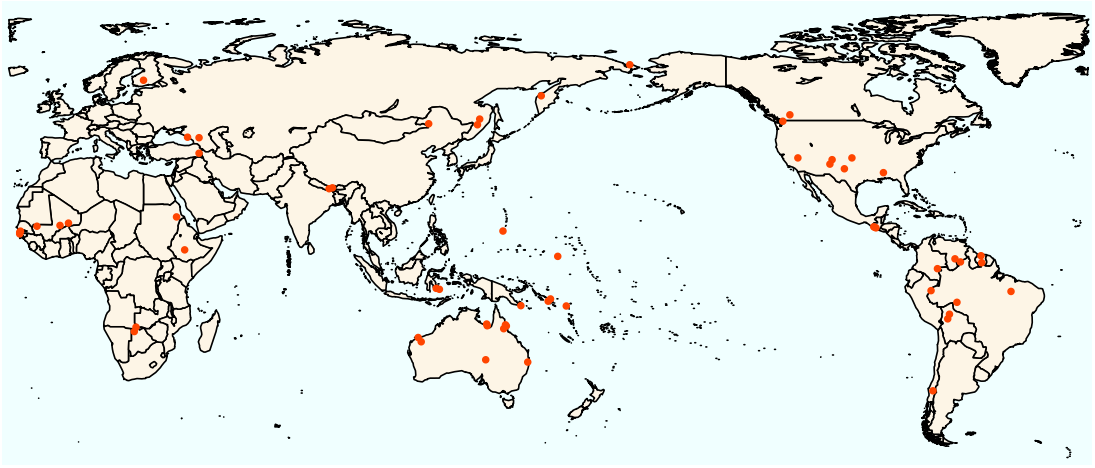


Figure 3.2: Map of the languages of the sample

Macroarea	No. of languages	Passive	Antipassive	Both
Africa	10	7	2	1
Eurasia	11	5	2	1
Pacific	8	3	1	4
Australia	9	4	4	1
North America	11	2	2	6
South America	10	3	0	4
Total	59	24	11	17

Table 3.1: Number of languages per macro-area and voice

up to the total 59 languages of the sample, because some of them were reanalyzed as not having morphological voice markers at all.

Africa: The subsample containing the languages spoken in Africa actually reflects my desiderata most closely: there are ten languages out of five stocks and two languages each of the same branch. In terms of voice marking, the picture is a bit different: only two languages have a dedicated antipassive marker. Indeed, it was already challenging to find those, which indicates that morphologically marked antipassives are not very common in Africa. Furthermore, there was only one language with both voices in that area.

Eurasia: There are eleven languages in the macro-area of Eurasia. Armenian was selected to illustrate the situation in Indo-European languages, where the history of the passive marker is well known and is not directly linked to person marking, and thus I desisted from sampling an other language of that family. Finnish is similar in that its main purpose is to illustrate a recent development. For Abhkaz-Adyghe and Chukotko-Kamchatkan it was not possible to select languages from the same branch. In addition, there are three Tungusic languages. Like in Africa, the passive is the most frequent voice marking although this is less pronounced here. There are two languages each with an antipassive and one with both, while another two - Kabardian and Ubykh - were re-analyzed as not having morphological voice marking.

Pacific: The Pacific subsample includes eight languages, seven of which are Austronesian. This does not correspond at all to the criteria set up above, but there is a simple explanation: Papuan languages in general do not have voice marking. I looked through several grammars of Papuan languages and had to find this statement confirmed. Luckily, I then came across Savosavo, an isolate spoken on the Solomon Islands, so there is at least one non-Austronesian language. Concerning voice marking, the distribution differs from both previous regions in that half of the languages have both.

Australia: Australian languages presented a similar problem, as Non-Pama-Nyungan languages are not fond of voice markers. Thus seven out of nine of the languages of that area are Pama-Nyungan. For two branches I was able to include two languages, but for the others that was not possible, mainly due to lack of data. In Australia, there are the same number of languages with passives and antipassives, but only one language with both.

North America: In the North American subsample there are eleven languages from five stocks. Kiowa-Tanoan and Mayan each contain three languages, the former because of great internal differences, the latter because each of the languages was mentioned in connection with the grammaticalization of passive markers. There are six languages with both voices, and two each with passives or antipassives.

South America: There are ten languages in South America, with two stocks having two languages each, for the others this was not possible due to lack of descriptions or absence of voice markers. South America is the only area in which languages with only an antipassive are completely absent. In addition, two of the languages do not have morphological voice marking and one language - Sanuma - was reanalyzed not have voice at all.

As this brief overview has shown, the languages in the sample are quite diverse both genealogically and geographically. The distribution of voice systems is not even across macro-areas, but neither of the categories are confined to only one or two macro-areas, i.e. the coverage is quite good also in this respect.

3.3 Data collection and analysis

For each language I collected personal pronouns, verbal agreement (if present) and voice markers, as well as reflexive and reciprocal markers. All the sources are grammars or grammar sketches. The working definitions of what constitutes a voice marker have been presented in Section 2.1.1. Orthography was generally taken over from the source. In a few cases I have made some very minor adaptions to improve comparability with related languages. The complete data collection is located in the electronic appendix, including further explanation of how the data is organized. In addition, there is a file consisting of all the meta information about the languages, e.g. the source literature and comments that may be helpful.

Voice marking: Voice markers were classified into wether they function as passives or antipassives or both. Generally, the decision about whether a given voice marker counts as such is based on a comparison of basic transitive clauses with alleged passive or antipassive clauses in the language in question. If such a comparison was impossible, because there were no examples with full clauses or the details are complex and poorly understood even by language experts, I decided according to my best knowledge and *in dubio pro reo*.

Person marking: Pronouns and agreement were distinguished by that the latter is obligatory and co-occurs with NPs in the same function, whereas the former does not. This means that whether or not the elements in question are bound or not is irrelevant to this distinction.

Reflexive and reciprocal: In this category, the main distinction is between a nominal and a verbal strategy. In the nominal strategy a noun or pronoun is used, while in the verbal strategy usually includes an affix. An element was included when it is used to mark reflexives and/or reciprocals, also if it has other functions as well. This information is lost in the data collection, but in the discussions of the individual languages it is always indicated if the marker in question is multifunctional.

Glossing, segmentation and translation of examples: In general, I followed the glossing of the grammar but adjusted the labels to be consistent. When there was no segmentation of the forms, I attempted to it myself in most cases. This is always indicated as a footnote to the examples in question. Translations other than in English were translated and this is also indicated in footnotes. Markers that have several functions which cannot be covered by a simple label, were glossed as they appear. For example, if there is a multifunctional suffix *-sen* in language X it will glossed as SEN.

In a second step, the person and voice markers were analyzed as to whether they synchronically overlap with each other not. This is also indicated in the data collection. After that, materials on the reconstruction of the forms in question were collected and analyzed in order to determine, whether a historical connection is possible or not. Given that information (if such was available at all) and a comparison with related languages (if possible), I then estimated, how unlikely or likely a diachronic relationship between the forms is. Of course, such an estimation is highly subjective and I do not want to deny that. But that is not necessarily a problem: first of all, I hope the discussions provided in the following chapters make my decisions comprehensible and secondly, such subjective estimations of probabilities are an integral part of Bayesian statistics, which are widely employed also in linguistics. The estimation of these prior probabilities is given by numbers between 0 and 1 and based on the following scale:

0.1	very unlikely
0.2	unlikely
0.3	implausible
0.4	slightly implausible
0.5	possible
0.6	quite plausible
0.7	plausible
0.8	likely
0.9	very likely

Language	Glottocode	Macroarea	Stock	Family
Alaba-K'abeena	alab1254	Africa	Afro-Asiatic	Cushitic
Beja	beja1238	Africa	Afro-Asiatic	Cushitic
Banjal	band1340	Africa	Atlantic-Congo	Central Atlantic
Jola-Fonyi	jola1263	Africa	Atlantic-Congo	Central Atlantic
ǁAni	anii1246	Africa	Khoe-Kwadi	Non-Khoekhoe
Kxoe	kxoe1243	Africa	Khoe-Kwadi	Non-Khoekhoe
Mandinka	mand1436	Africa	Mande	Western Mande
Soninke	soni1259	Africa	Mande	Western Mande
Koyraboro Senni	koyr1242	Africa	Songhay	Eastern Songhay
Tondi Songway Kiini	tond1249	Africa	Songhay	Eastern Songhay
Warungu	waru1264	Australia	Pama-Nyungan	Greater Maric
Dieri	dier1241	Australia	Pama-Nyungan	Karnic
Kurrama	kurr1243	Australia	Pama-Nyungan	South-West Pama-Nyungan
Martuthunira	mart1255	Australia	Pama-Nyungan	South-West Pama-Nyungan
Bandjalang	band1339	Australia	Pama-Nyungan	Southeastern Pama-Nyungan
Djabugay	dyaa1242	Australia	Pama-Nyungan	Yimidhirr-Yalanji-Yidinic
Yidiny	yidi1250	Australia	Pama-Nyungan	Yimidhirr-Yalanji-Yidinic
Kayardild	kaya1319	Australia	Tangkic	Kayardild-Yankaal
Lardil	lard1243	Australia	Tangkic	
Kabardian	kaba1278	Eurasia	Abkhaz-Adyge	
Ubykh	ubyk1235	Eurasia	Abkhaz-Adyge	
Chukchi	chuk1273	Eurasia	Chukotko-Kamchatkan	Chukotian
Itelmen	itel1242	Eurasia	Chukotko-Kamchatkan	
Armenian (Eastern)	nucl1235	Eurasia	Indo-European	Armenian
Puma	puma1239	Eurasia	Sino-Tibetan	Kiranti
Yakkha	yakk1236	Eurasia	Sino-Tibetan	Kiranti
Nanai (Kilen)	nana1257	Eurasia	Tungusic	East Tungus
Udihe	udih1248	Eurasia	Tungusic	East Tungus
Evenki	even1259	Eurasia	Tungusic	West Tungus
Finnish	finn1318	Eurasia	Uralic	Finnic
Kiowa	kiow1266	North America	Kiowa-Tanoan	Kiowa
Northern Tiwa	nort1550	North America	Kiowa-Tanoan	Tiwa-Piro
Southern Tiwa	sout2961	North America	Kiowa-Tanoan	Tiwa-Piro
Kaqchikel	kaqc1270	North America	Mayan	Quichean-Mamean
Mam	mamm1241	North America	Mayan	Quichean-Mamean
Tz'tutujil	tzut1248	North America	Mayan	Quichean-Mamean
Choctaw	choc1276	North America	Muskogean	Western Muskogean
Halkomelem	halk1245	North America	Salishan	Central Salish
Shuswap	shus1248	North America	Salishan	Interior Salish
Comanche	coma1245	North America	Uto-Aztecan	Numic
Timbisha	pana1305	North America	Uto-Aztecan	Numic
Chamorro	cham1312	Pacific	Austronesian	Malayo-Polynesian
Muna	muna1247	Pacific	Austronesian	Malayo-Polynesian, Celebic
Tukang Besi North	tuka1248	Pacific	Austronesian	Malayo-Polynesian, Celebic
Natügu	natu1246	Pacific	Austronesian	Malayo-Polynesian, Oceanic
Saliba (PNG)	sali1295	Pacific	Austronesian	Malayo-Polynesian, Oceanic
To'abaita	toab1237	Pacific	Austronesian	Malayo-Polynesian, Oceanic
Kosraean	kosr1238	Pacific	Austronesian	Malayo-Polynesian, Oceanic
Savosavo	savo1255	Pacific	Isolate	
Mapudungun	mapu1245	South America	Araucanian	
Trio	trio1238	South America	Cariban	Guianan
Galibi Carib	gali1262	South America	Cariban	Guianan
Canela-Kraho	cane1242	South America	Nuclear-Macro-Je	Je Setentrional
Matses	mats1244	South America	Panoan	Mayoruna
Reyesano	reye1240	South America	Tacanan	Takanik
Cavineña	cavi1250	South America	Tacanan	
Cubeo	cube1242	South America	Tucanoan	Eastern Tucanoan
Karitiana	kari1311	South America	Tupian	Arikemic
Sanuma	sanu1240	South America	Yanomam	

Table 3.2: Languages of the sample

This number is just a short cut for summarizing all the information I have about an overlap and processing it into an estimate of the likelihood of a diachronic connection. I will briefly illustrate what the two extremes and the middle of the scale mean.

A probability of 0.1 will be assigned to an overlap, if the two markers in question can be traced back to separate sources in the proto-language. This makes a diachronic connection highly unlikely, especially if the reflexes of the reconstructed languages are present in many related languages. For many languages, there will be no information about their prehistory and if the documentation and description of related languages is also scarce, one is left with the synchronic forms. In such cases, an overlap will often be given the probability of 0.5, indicating that a diachronic connection is entirely possible, but there is no evidence for or against it. In some languages that will be discussed in the following sections, the development of a voice marker to a person marker or vice versa has taken place quite recently, in which case there is often strong evidence for the development. In such or similar cases, a probability of 0.9 was assigned.

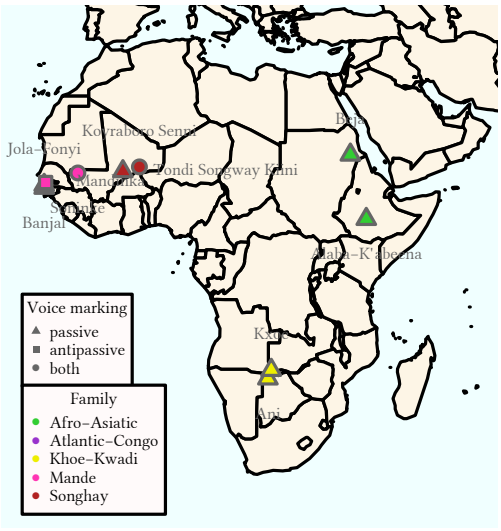


Figure 4.1: Language map of Africa

	Jola-Fonyi	Banjal
1SG	*injɛ*	*ìnje*
2SG	*aw*	*au*
1PL.I	*wala(l)*	*wolal*
1PL.E	*uli*	*wóli*
2PL	*muyu(l)*	*buru*
3	*NCL-ɔ*	*NCL-o*
Class 1	*ø- ~ a-*	*ø- ~ a-*
Class 2	*ku- ~ buka-*	*gu-*

Table 4.1: Pronouns and human noun class markers in Jola-Fonyi and Banjal (Sapir 1965:61,70, Bassène 2007:60,63)

4 Languages of Africa

4.1 Jola-Fonyi and Banjal (Atlantic-Congo, Central Atlantic)

Jola-Fonyi and Banjal are two quite closely related Atlantic languages mainly spoken in Senegal. The stock Atlantic-Congo differs from the traditionally assumed Niger-Congo in that it excludes the families Mande, Kordofanian, Ijoid and Dogon, because there is insufficient evidence for their inclusion (Hammarström et al. 2014).

4.1.1 Person marking

In Jola-Fonyi transitive clauses, both the A and P argument are co-referenced on the verb. For intransitive clauses, the A-prefixes are used, thus the system is nominative-accusative (see Table 4.2, Sapir 1965:90). The accusative forms are identical to the possessive suffixes (Sapir 1965:91). The variants of the markers for the singular nominative are morphologically conditioned. The forms consisting of the vowel only are used in more contexts and thus probably constitute the default. The distribution of the *nV*-forms is as follows (in all other environments, the *V-* forms appear Sapir 1965:90-91):

- initial verb of a simple sentence
- initial verb of a compound sentence, when the verb is neither potential nor negative and when it does not take a second position prefix or the verbal proclitic connectives *man* and *ban*

The suffixal part of the 1PL.E.NOM exhibits free variation between *-a* and *-al* (Sapir 1965:18). The variants of 1SG.ACC are partly phonologically and partly syntactically conditioned, those of the 1PL.E.ACC are regional. For all other persons and numbers, the variants are in free variation.

In Banjal, the cross-referencing system is much the same (Bassène 2007:75). The singular forms are identical to the Jola-Fonyi forms, but the distribution seems to be quite different. The *nV-* forms are again much more restricted in their distribution and are used only in the following contexts (Bassène 2007:76):

	Jola-Fonyi		Banjal	
	NOM	ACC	NOM	ACC
1SG	*ni- ~ i-*	*-ɔm ~-a:m ~-an*	*ni- ~ i-*	*-om*
2SG	*nu- ~ u-*	*-i*	*nu- ~ u-*	*-i*
3SG.H	*na- ~ a-*	*-ɔ ~-ɔl*	*na- ~ a-*	*-ol*
3SG.NH	*NCL-*	*-NCL-ɔ*	*NCL-*	*-NCL-o*
1PL.I	*(n)u-X-a(l)*	*-ɔla ~-ɔlal*	*(n)u-X-a(l)*	*-olal*
1PL.E	*nu- ~ a-*	*-uli ~ oli*	*ji-*	*-óli*
2PL	*ji-*	*-u ~-ul*	*ji-*	*-ul*
3PL	*NCL-*	*-NCL-ɔ*	*NCL-*	*-NCL-o*

Table 4.2: Verbal agreement in Jola-Fonyi (Sapir 1965:90) and Banjal (Bassène 2007:75, 92)

- with markers of accomplishment, when the object or an oblique is focalized and there is no overt subject
- in periphrastic verb constructions on the auxiliary

The most striking difference is the 1PL.E form, which is identical to the second person plural in Banjal. As this is quite common, this is probably the original state of affairs. The third person singular subject is only used for humans, all other animates or inanimates take the respective noun class marker (Bassène 2007:75). Whereas this is not mentioned explicitly for Jola-Fonyi, it also seems to apply (consider Example 4.4). In the neutrally aligned pronouns, Table 4.1 third person invariably expressed by the noun class marker and a suffix *-o*, which replaces the vowel of the noun class marker it attaches to. Class 1 (singular) and 2 (plural) are used for humans and the pronoun for class 1 is simply *o*, because there is a *ø*-allomorph (Bassène 2007:63).

4.1.2 Valency changing and related operations

The suffix *-i*:
Jola-Fonyi has a suffix *-i*, which appears after all other suffixes but before reduplication (Sapir 1965:94), see Example (1-c) and Example 4.4. Its function is to derive a passive from transitive verbs. The description in the grammar is very brief, but the author does mention very interesting characteristics of the construction.

It is used only infrequently and mostly with inanimate subjects. With first and second person, the use of this construction is restricted to certain verbs (Sapir 1965:33). After giving some examples of passive constructions, Sapir (1965:33) says: "However, 'I was hit' must be translated as *ku-tɛk-a:n-tɛk* ('they hit me')." The form *ku-tɛk-a:n-tɛk* (3PL.NOM-hit-1SG.ACC-RED) is active transitive with a person prefix for the agent and a person suffix indicating the patient. It seems that with 'to send' a passive construction with a first person subject is possible (see Example (1-b)), while this is not the case with 'to hit'. As this is the only information available, I do not know if the semantics of a verb determine whether a passive construction with first and second person is possible or if the distribution is completely random. It is not mentioned whether the agent can be expressed (as an oblique) or not. However, in the examples there is never an overt agent.

(1) a. *ni-bɔɲ-ɛ*
1SG.NOM-send-HAB
'I sent' [8] (Sapir 1965:97)

b. *ni-bɔɲ-i-bɔɲ*
1SG.NOM-send-PASS-RED
'I was sent' (Sapir 1965:97)

c. *ni-bɔɲ-ɛ-i-bɔɲ*
1SG.NOM-send-HAB-PASS-RED
'I am habitually sent' [9] (Sapir 1965:94)

Examples (1-a) and (1-b) illustrate the basic opposition between active and passive. The subject index remains the same, which is expected as the form covers both A and S. In Example (1-c), a habitual suffix is added, which appears before the passive suffix.

[8] Unfortunately, neither segmentation nor glossing is provided by the grammar, so I did it myself as best I could. Jola-Fonyi also has tones, but they are not indicated in the grammar and thus could not be included in the discussion.

[9] The reduplication indicates emphasis on the verb (Sapir 1965:94).

(2) *i-tamp-i=ja*
1SG.NOM-circumcise-PASS=PPT
'if I am to be circumcised' (Sapir 1965:33)

(3) *nan ɛ-pɔsit-ɛy ɛ-jumɛn-i*
when NCL3-post-DEF NCL3-stop-PASS
'when the post was constructed (caused to stop) [10]' (Sapir 1965:33)

(4) *waf wa-ri-ɛrit-i*
thing NCL-eat-HAB.NEG-PASS
'something uneatable (approx.: a thing (that) is habitually not eaten)' (Sapir 1965:94)

Together with the first three, Examples 4.2 to 4.4 constitute all the examples of passives I have been able to find in the grammar. In Example 4.3, we see that the passive construction remains the same when the subject is a full NP. Example 4.4 seems to suggest that the passive can also be interpreted as a resultative state, but as there are no other examples, this remains entirely speculative.

In Banjal, the same suffix *-i* also marks passives: it, too, attaches to transitive verbs to derive an intransitive with the patient as subject (Bassène 2007:166).

(5) a. *Atejo na-jug-e figen si-bé sasu.*
Atejo 3SG.H.NOM-see-TAM yesterday NCL4-cow NCL4.DEM
'Atejo has seen the cows yesterday.' (Bassène 2007:166)

b. *si-bé sasu su-jug-i figen*
NCL4-cow NCL4.DEM NCL4-see-PASS yesterday
'The cows have been seen yesterday.' (Bassène 2007:166)

Example (5-a) is an active transitive sentence and Example (5-b) its passive counterpart. Because the cows are now the subject, the agreement marker changes to the appropriate noun class marker (cf. Section 4.1.1). Interestingly, the TAM-marker is gone in the passive sentence. This is the case in all examples provided in the grammar, but the author does not state explicitly that they are mutually exclusive. The agent cannot be overtly expressed in a passive construction (Bassène 2007:167-168). As the similarities to Jola-Fonyi are quite striking, it is probably safe to assume, that it is not possible there either.

The suffixes *-o, -or* and *-oro*:
There are three verbal derivative suffixes in Banjal which cover reflexive, reciprocal, anticausative and possibly other functions (called 'middle voice' in the grammar Bassène 2007:162). All of them detransitivize the verb (Bassène 2007:159). Those three suffixes also exist in Jola-Fonyi and they seem to have roughly the same functions as in Banjal (Sapir 1965:51-52). Nevertheless, the description is very brief and only very few examples are given. Thus I will take Banjal as the starting point for the discussion and see, to what extent Jola-Fonyi confirms our conclusions. Where nothing else is said, the facts also apply to Jola-Fonyi, or at least nothing speaks against it.

The suffix *-or-o* [11] has only one function, i.e. to mark reflexivity in both Banjal (Bassène 2007:159-160) and Jola-Fonyi (Sapir 1965:52). The marker is composed of the reciprocal marker and the suffix *-o*, which will discussed below.

(6) *no ni-sómut-me ínje i-sótten-oro-e*
when 1SG.NOM-be.ill-SUB 1SG 1SG.NOM-tend-REFL-TAM
'When I was sick, I tended myself.' (Banjal) (Bassène 2007:160)

(7) *ni-pɔs-ɔrɔ-pɔsɔrɔ i-ban*
1SG.NOM-wash-REFL-RED 1SG.NOM-finish
'I have finished washing myself.' (Jola-Fonyi) (Sapir 1965:52)

The the suffix *-or* expresses co-participation, but also has other functions. In both languages is employed to derive reciprocals, as in Example 4.8 from Banjal and Example 4.9 from Jola-Fonyi.

(8) *Atejo ni Gáleto gu-ssaf-or-e*
Atejo and Galeto 3SG-greet-OR-TAM
'Atejo and Galeto greeted each other.' (Bassène 2007:161)

[10] The 3SG.NOM *a-* appears as *ɛ-* here because of vowel harmony (Sapir 1965:11)
[11] The suffixes in Jola-Fonyi are written as *-ɔ, -ɔr, -ɔr-ɔ*, but assuming that they are identical, I only write out the Banjal forms.

(9) *pa-nu-jim-ɔr-al*
INAC-1PL.I.NOM-forget-OR-1PL.I.NOM
'We will forget each other.' (Sapir 1965:52)

In Banjal, it expresses accompaniment, e.g. *e-ja-or* 'to go together' from *e-jow* 'to go', and actions that are carried out together, as in *e-cin-or* 'to live together' from *e-cin* 'to live' (Bassène 2007:68). It is furthermore described to have a 'middle voice function' with motion verbs (Example 4.10) and mental activities (Example 4.11). It is not clear to me, what is meant by this term and what the effect of the suffix really is in the examples.

(10) *a-ɲɲil aku u-m-u ni e-ffúl-or nettam*
NCL1-child NCL1.DEM COP-NCL1-DEM on NCL3-drag-OR on.the.ground
'The child is about to drag itself on the ground.' (Bassène 2007:164)

(11) *u-pin-or jon, pan u-osen*
2SG.NOM-count-OR well INAC 2SG.NOM-remember
'Think hard, you will remember.' (Bassène 2007:164)

For Jola-Fonyi, where the suffix is called 'reciprocal', it is mentioned that 'at other times, the idea of reciprocity is rather remote' (Sapir 1965:52) and the illustrating example consists of a motion verb, namely *ŋɔm* 'to turn a corner'(see Example 4.12 below). It thus seems that it covers the same function as its counterpart in Banjal.

(12) *(...) di ku-ŋɔm-ɔr dɛ-lampɛn-ɛy*
(...) CONN 3PL.NOM-turn.a.corner-OR NCL19-hut-DEF
'(...) and they walk around the hut.' (Sapir 1965:52)

The third, and in this context, most interesting suffix is *-o*. In Jola-Fonyi it is referred to as 'descriptive-reflexive' and in Banjal as 'middle voice', which both are not very telling.

(13) *a-ɲɲil aku na-wwu-o-e*
NCL1-child NCL1.DEM 3SG-wash-O-TAM
'The child washed itself.' (Bassène 2007:163)

(14) *s-ambun sasu su-fog-o-fogo*
NCL4-fire NCL4.DEM NCL4-extuinguish-O-RED
'The fire went out.' (Bassène 2007:165)

In Banjal the suffix *-o* appears in the following constructions (Bassène 2007:162-165):
- attached to verbs of grooming with an reflexive function (Example 4.13)
- attached to any verb with an anticausative function (Example 4.14)
- attached to the reciprocal marker forming a reflexive (see above)
- attached to a noun class marker forming a third person non-human object suffix (cf. Table 4.2)

In Jola-Fonyi, the same suffix *-ɔ* is said to derive a resultative or indicate that the subject is acting on itself. It is also described as having a detransitivizing effect and that the deletion of the object is obligatory (Sapir 1965:51-52). This description fits very well with the Banjal facts, the differences being (most probably) only of a terminological nature. Thus, the 'resultative' corresponds to the anticausative (Example 4.15) and the 'subject acting on itself' probably to the reflexive function, albeit without the restriction to verbs of grooming (see Example 4.16).

(15) *na-bɔl-ɔ-bɔlɔ*
3SG.NOM-burn-O-RED
'he is burnt; he burnt himself' (Sapir 1965:52)

(16) *lak-ɔ ta:t-ɛ*
sit-O DEM-here
'sit (yourself) here; be seated' (Sapir 1965:52)

As mentioned above, in Jola-Fonyi, too, this suffix is part of the general reflexive marker and it shows the same overlap with person marking. All the suffixes and their functions are summarized in Table 4.3.

4.1.3 Reconstruction and possible scenarios for the overlaps

There is not much work on the reconstruction of Atlantic languages. That presumably comes of the difficulties in establishing sound correspondences and semantic correspondences for Atlantic-Congo languages in general (Hyman 2007:151). For some grammatical aspects, namely person marking and verbal suffixes, some attempts at reconstructions have been undertaken, which I will now discuss very briefly. Quite recently Pozdniakov &

Form	Function
-i	agentless passive
-o	anticausative, (restricted) reflexive
-or	coparticipation, reciprocal, others
-or-o	reflexive

Table 4.3: Voice markers and related suffixes in Jola-Fonyi and Banjal

	NOM	NON-NOM
1SG	**mi*	**nɛ*
2SG	**mo*	**'i, *mV*
3SG	NCL 1	**mo*
1PL	?	=NOM
2PL	**nV*	=NOM
3PL	NCL 2	=NOM

Table 4.4: Proto-Atlantic person markers (Pozdniakov & Segerer 2004:152-153)

Segerer (2004) presented a reconstruction of the Proto-Atlantic verbal person markers (Table 4.4). The 2SG.ACC, which is *-i* in both languages, probably goes back to Proto-Atlantic **'i*. At least within the Jola subgroup, the vowel */i/* can only go back to **i* (Barry 1987:191).

For third person subject, the markers of noun classes 1 and 2 are reconstructed. These classes are used for humans, class 1 for singular and class 2 for plural, and indeed this is also what is found in Jola-Fonyi and Banjal (cf. Tables 4.1 and 4.2). However, the accusative agreement forms and the third person pronoun add a suffix *-o*, which is not reconstructed for Proto-Atlantic. As the two languages are closely related and the distribution of the is identical, it is safe to assume that this an innovation of their proto-language.

To attribute the 1SG.NOM form *ni- ~ i-*, which is also of interest here, to a protoform, one would have to establish the sound laws. To be a reflex of the nominative form, a change from Proto-Atlantic **m* to *n* would have to assumed. However, the whole systems seems to have been thoroughly reorganized and thus it is probably better not to engage in speculations. For the time being, the assumption of an innovation is probably the most uncontroversial.

A neat overview over the verbal suffixes in various subgroups of Niger-Congo languages is to be found in Hyman 2007 and over the Atlantic languages in Becher 2000. In the Atlantic subfamily, the verbal suffixes are widespread, but there is considerable variation regarding the forms (Hyman 2007:150, 153-154). Table 4.5 presents an overview of the suggestions for the reconstruction of the mediopassive and reciprocal in Proto-Niger-Congo and Proto-Atlantic, respectively. The first thing to be noticed is that the reconstructed mediopassive marker resembles the Jola-Fonyi and Banjal anticausative much more than the passive marker of those languages. It seems thus quite plausible that the anticausative *-o* is a reflex of the earlier mediopassive, especially as it is reconstructed for Proto-Atlantic, too (Becher 2000:29). The reciprocal has been reconstructed as **-ad* for the Atlantic languages, but Becher (2000:10) points out that this is based on the North Atlantic subfamily only and that this element is most probably not a reciprocal marker. Actually, many Atlantic languages use a suffix *-Vr*, which consists of the above mentioned mediopassive and earlier circumstantial marker **-r* (Becher 2000:20). This suggest that *-or* is segmentable into *-o-r* from a diachronic point of view. The reflexive suffix, which consists of *-or* in turn expanded by *-o*, indicates that synchronically *-or* is monomorphemic.
The 2SG.ACC *-i* seems to be old, dating back already to Proto-Atlantic, while the passive marker *-i* seems to be of more recent origin. That is, if there is a historical connection, the person marker was the source that develops into a passive marker. The problem is that the form is accusative. With a nominative form, a development via an impersonal construction could be assumed, but this is impossible with an accusative form. At the moment, I do not see a plausible scenario.

	Proto-Niger-Congo	Proto-Atlantic
Mediopassive	**-o*	**-V*[+back]
Reciprocal	**-na*	? (**-ad*)

Table 4.5: Passive and reciprocal in Proto-Niger-Congo and Proto-Atlantic (Hyman 2007:151, Becher 2000:20)

	Ani						Kxoe		
	pronouns			object markers					
	com.	masc.	fem.	com.	masc.	fem.	com.	masc.	fem.
1SG		*tí ~-rá*	*tí ~-rá*	*-tí*				*tí*	*tí*
2SG		*tsá*	*há*		*-tsì*	*-sì*		*tcá*	*hã́*
3SG		*(x)á-m(á)*	*(x)á-hɛ́*		*-m̀*	*-sì*		*(x)á-má*	*(x)á-hɛ́*
1DU	*khám*	*tsúm ~ tsóm*	*súm ~ sóm*	*-khám*	*-tsúm ~-tsóm*	*-súm ~-sóm*	*kháṁ*	*tcáṁ*	*cáṁ*
2DU	*khéú*	*tséú*	*hèú*	*-khèù*	*-tsèù*	*-sèù*	*kháò*	*tcáò*	*cáò*
3DU	*(x)á-kh(ù)à*	*(x)á-tsà*	*(x)á-sà*	*-khà*	*-tsà*	*-sà*	*(x)á-khà*	*(x)á-tcà*	*(x)á-cà*
1PL	*té*	*ǁé*	*sé*	*-tè*	*-ǁè*	*-sè*	*té*	*ǁé*	*cé*
2PL	*tó*	*ǁéú*	*séú*	*-tò*	*-ǁèù*	*-sèù*	*tó*	*ǁáò*	*có*
3PL	*(x)á-nà*	*(x)á-ǁà*	*(x)á-d(z)ì*	*-ǹ*	*-ǁù*	*-(d)zì*	*(x)á-nà*	*(x)á-ǁúà*	*(x)á-djì*

Table 4.6: Person markers in ǁAni and Kxoe (Heine 1999:27, Kilian-Hatz 2008:171)

The suffix *-o* is clearly inherited from Proto-Atlantic, the form it overlaps with, the *-o* that attaches to noun class markers in object function, seems to be an innovation. It is worth noting that it does not mark either person or number *per se*, as these categories are already covered by the noun class marker. In the agreement forms, it distinguishes accusative from nominative forms, so it could be an object marker (cf. Table 4.2). The starting point here is exactly reverse to the one described above: If there is a connection at all, it is much more likely that the voice marker developed into a person marker. This, to me, seems most likely via the reflexive function. One could imagine that in the appropriate context Example 4.13 comes to be interpreted as 'the child washed him', referring to an other person. With anticausative this seems impossible, as the subject is the patient, so one cannot add an other patient to the clause.

As there is no further information about the prehistory of the 1SG.NOM form *ni- ~ i-*, I will assume that its partial overlap with the passive marker is merely a coincidence. This leaves the 3SG.ACC marker in Jola-Fonyi, which has a variant *-ɔ* that overlaps with the suffix *-ɔ*. This variant is absent from Banjal, where only *-ol* is used. As already mentioned above, the alternation V ~ Vl is found in several suffixes in Jola-Fonyi. In non-final position, the rules are as follows: Vl + V > VlV, but Vl + C > V(:)C (Sapir 1965:18). It thus seems reasonable to assume that the variant *-ɔ* was earlier restricted to environments where the verb was followed by an element beginning with a consonant. This suggests that it has nothing to do with the suffix, but rather started its life as a phonologically conditioned variant of *-ɔl*.

4.2 ǁAni and Kxoe (Khoe-Kwadi, Non-Khoekhoe)

ǁAni and Kxoe are two closely related Khoe-Khwadi languages, the former spoken in Botswana, the latter in Namibia, Angola, Botswana and to a small extent in Zambia (Hammarström et al. 2014).

4.2.1 Person marking

Both languages have independent pronouns with neutral alignment and a three-way number distinction. There are three genders: masculine and feminine are semantically based, while common indicates that the referent has characteristics from both (for details about the classification see Kilian-Hatz 2008:40-41). From Table 4.6 we can see that the distinction does not apply in the first person singular and there is no common form in all of the singular. The element *á* that appears in the third person pronouns in both languages is a distal demonstrative, which has grammaticalized into a discourse marker of salience. The form *xá-* seems to be a variant of it, which is mostly used with non-topical participants. It is not used as a demonstrative by itself, though (Heine 1999:35-36, Kilian-Hatz 2008:171). There is no information about the other formal variations in ǁAni.

ǁAni differs from Kxoe in that it not only has personal pronouns, but also object suffixes, which attach to verbal bases. It is typologically not very common, to cross-reference the patient but not the agent on the verb. However, the object suffixes are not obligatory and are probably absent in as many cases as they are present (Heine 1999:28-29). In addition, they are formally quite similar to the pronouns, which suggests that the former are derived from the latter. In Kxoe, there is no person marking on the verb whatsoever (Kilian-Hatz 2008:97).

4.2.2 Voice markers, reflexives and reciprocals

The verbal suffixes relevant for the discussion of a possible overlap are reflexive, reciprocal and passive, summarized in Table 4.7. Both the reflexive and reciprocal are obviously cognate, so they will be treated together.

	REC/COLL	REFL/ACAUS/?	PASS/IMPS
ǁAni	*-kù*	*-sànn*	*-è ~-ĥè*
Kxoe	*-ku*	*-can*	*-i ~-yi ~-wi*

Table 4.7: Reflexive, reciprocal and passive in ǁAni and Kxoe (Heine 1999:49-51, Kilian-Hatz 2008:149-154)

The suffix *-ku*:
The derivative suffix *-ku* functions as a reciprocal in both ǁAni and Kxoe (Heine 1999:49, Kilian-Hatz 2008:149-150). In the latter, it is also used as a collective marker (Example (17-b)). This might also be the case for ǁAni, but the description is very limited with only one example sentence (Example 4.18).

(17) a. *Tama ú té cì-ǁ'áé-ku!*
but tomorrow 1PL.C NEM-meet-KU
'But tomorrow, we'll meet each other!' (Kilian-Hatz 2008:46)

b. *Xá-ǁúá kx'áà-ku kx'áà-ku*
DEM-3PL.M drink-KU drink-KU
'They all drink, each of them drinks.' (Kilian-Hatz 2008:150)

(18) *ǁ'ae-ku-tè ǁxúm̀ oanà*
meet-KU-PRES river LPC
'We meet each other at the river.' (ǁAni) (Heine 1999:49)

The suffix *-can/-sánn*:
In Kxoe, the marker *-can* derives reflexives, but also has other functions. A similar suffix exists in other Khoisan languages, but only as a marker of reflexivity (Kilian-Hatz 2008:154). The reflexive use in Kxoe as well as ǁAni is illustrated below in Examples (19-a) and (19-b). As is the case with derivative morphology in general, the suffix appears immediately after the verb stem, before all inflectional categories.

(19) a. *Xà-má ǁxa'áa-can-à-tè*
DEM-3SG.M wash-CAN-ACT-PRES
'He washed himself.' (Kxoe) (Kilian-Hatz 2008:149)

b. *!hóm-sànn-te dixà-mà*
cut-SANN-PRES self-M.SG
'He cuts himself.' (ǁAni) (Heine 1999:50)

In addition, there is also an anticausative function, which seems to be present in ǁAni as well (cf. Examples (20-a) and (20-b)). However, Heine (1999:50) only says that it "(...) is used for various middle and passive-like functions", so the details must remain unclear.

(20) a. *Áta hīī̀-can-e-tè?*
thus do-CAN-ACT-PRES
'Thus it happens.' (Kxoe) (Kilian-Hatz 2008:155)

b. *ní hĭn-sànn-à-tà?*
what do-SANN-ACT-PAST
'What has happened?' (ǁAni) (Heine 1999:51)

Thirdly, verbs derived by the suffix *-can* can also have the same meaning as the underived form, but "(...) the agent is slightly emphasized as the initiator of the action" (Kilian-Hatz 2008:156). Sentences like Example 4.21 are not very frequent because they compete with emphatic pronouns. There is no information about whether this construction is also possible in ǁAni or not.

(21) *Ti khùrií-ŋya-can-a-xu-a-hã.*
1SG end-NEG-CAN-ACT-COMPL-ACT-PAST
'I (myself) am not yet finished.' (Kxoe) (Kilian-Hatz 2008:156)

Most interestingly, the reflexive marker has also developed into a passive marker in Kxoe. The grammar states that there are two passive constructions: an agentless, marked by the suffix *-i* (Example (22-a)) and a 'prototypical' one, marked by *-can* (Example (22-b)). The main difference between them is that with the *i*-passive the agent cannot be expressed overtly while this is possible with the *can*-passive. The *i*-passive is more frequent than the *can*-passive, but the author suggests that this could change in the future (Kilian-Hatz 2008:156).

The suffixes also differ in their morphological status: while *-can* is clearly derivational, appearing immediately after the verb stem and requiring the active voice markers to link the TAM suffixes, *-i* is (becoming) more inflec-

Function	Kxoe	ǁAni
reciprocal, collective	*-ku*	*-kù*
reflexive	*-can*	*-sànn*
impersonal	*-i*	*?*
anticausative	*-can*	*-sànn?*
passive	*-can, -i?*	*-ĥè?*
agent emphasis	*-can*	-

Table 4.8: Summary of relevant functions and their markers in Kxoe and ǁAni

tional, i.e. it is located further from the verb stem and is complementary to the active voice markers. In all, this suggests that the *can*-passive developed quite recently, while the *i*-passive is considered to be older (Kilian-Hatz 2008:156).

(22) a. *ǂXóa-hɛ̀ ǁáó-can-a-xu-a-tà távà-m̀ kà.*
elephant-3SG.F shoot-CAN-ACT-COMPL-ACT-PAST uncle-3SG.M by
'The elephant was shot by my uncle.' (Kilian-Hatz 2008:157)

b. *ǂXóa-hɛ̀ ǁáó-á-xu-i-tà*
elephant-3SG.F shoot-ACT-COMPL-IMPS-PAST
'The elephant was shot. / One shot the elephant.' (Kilian-Hatz 2008:157)

The agentless passive also has an other function, namely an impersonal one with both intransitive and transitive verbs. This occurs frequently with motion verbs, as in Example 4.23.

(23) *ǁXóaca-m̀ ki ǂx'óá-í (...) Bùútara |'éè-ǂáò cií-o-i-ǁòè.*
Xoaca-3SG.M LOC go.outside-IMPS (...) Butara day-middle arrive-LOC-IMPS-HAB
'When one goes away from ǁXoaca, one arrives at Butara at midday.' (Kilian-Hatz 2008:151)

Indeed, aside from the translation, I do not see what motives a passive analysis. Furthermore, there are several indications that the patient is not promoted to subject. If one were to add a focus marker to 'the elephant' in Example (22-b), it would be *ɛ́* which is only used with objects (Kilian-Hatz 2008:152).

ǁAni knows only one passive construction with the suffix *-è ~-ĥè* (Heine 1999:48). Such a passive marker is attested in many languages of the region and in all of these, it is possible to express the agent overtly. However, this is only rarely the case in ǁAni (Kilian-Hatz 2008:151). The description in the grammar is very brief, though, and there is only Example 4.24 for illustration, which includes several other suffixes as well. All the markers and their function are summarized in Table 4.8.

(24) *ǂhɛ́-ku-kà-ĥè-gòè á ǁgɛ-|oan-si seù...*
meet-KU-CAUS-PASS-FUT DEM F-child-F.SG CPM
'The boy will be united with the girl...' (Heine 1999:48)

4.2.3 On the history of the passive suffix in ǁAni

Sections 4.2.1 and 4.2.2 suggest that the 1PL.M form *ǁé* has probably nothing to do with the passive marker *-e ~-ĥe*. This is confirmed by the reconstruction of the person markers of Khoe-Kwadi by Güldemann (2004:297), who proposes that *ǁé* goes back to **!a-e*. This means that the click in said is old. On the other hand, the passive marker probably comes from an earlier **-ĥe*, making the connection with the 1PL.M form quite unlikely. It is thus safe to say, the resemblance in this case is purely coincidental. Whereas there is no overlap between person and voice marking, Kxoe is a case in point for the well attested pathway from reflexive to passive.

4.3 Mandinka and Soninke (Mande, Western Mande)

Mandinka belongs to the Manding subgroup and is spoken mainly in Senegal, but also in Guinea, Guinea-Bissau and Gambia. Soninke is part of the Samogo-Soninke subgroup and is spoken in a similar area as Mandinka, but extends to Mali and Mauritania as well (Hammarström et al. 2014).

4.3.1 Pronouns, reflexives and reciprocals

There are two series of pronouns in Mandinka, emphatic and non-emphatic. The emphatic pronouns are characterized by a suffix *-te*. The distribution of the two sets is not predictable by discourse function, but the emphatic

	Mandinka	Soninke
1SG	*ŋ́= ~ ń-te*	*ń= ~ ń-ké*
2SG	*í= ~ í-te*	*ǎ= ~ ǎ-kè*
3SG	*a= ~ a-te*	*à= ~ à-ké*
1PL	*ŋ= ~ n-te-lu ~ n-to-lu*	*ò= ~ ò-kú*
2PL	*alí= ~ alú= ~ ali-te-lu ~ alu-to-lu*	*xá= ~ à-xá ~ xá-kù ~ à-xá-kù*
3PL	*i= ~ i-te-lu ~ i-to-lu*	*ì= ~ ì-kù*

Table 4.9: Pronouns in Mandinka and Soninke (Creissels & Sambou 2013:205, Diagana 1995:179)

	Mandinka		Soninke
REFL	1	*ŋ́*	*du*
	2, 3	*í*	
REC	*ñôo ~ ñôŋ*		*me*

Table 4.10: Reflexives and reciprocals in Mandinka and Soninke (Creissels & Sambou 2013:211, Diagana 1995:179)

pronouns are said to add a kind of insistence on the referent. The suffix *-lú* is a plural marker, which follows the emphatic suffix *-te*. In some cases, this influences the vowel of the preceding morphemes (Creissels & Sambou 2013:204). The elements *ké* and *kú* are described as demonstratives in Soninke, but the relation to the simple form seems to be same as in Mandinka. According to the grammar, the longer forms are independent and stressed, while the shorter forms are dependent and unstressed (Diagana 1995:179). [12] There is no further elaboration of this, but the situation in Mandinka suggests, that 'independent' relates to the wordhood of the forms in question and 'stressed' to their emphatic function.

In Mandinka, the use of the reflexive pronouns is very restricted and is probably best considered as part of the lexical entry of certain verbs. A more productive option of expressing co-reference will be discussed below. There is one form for first person, which is identical to the singular personal pronoun, and one for second and third person, which is identical to the 2SG personal pronoun (cf. Table 4.10 and Example 4.25).

The reciprocal pronoun is the same for all persons and is apparently derived from the nominal *ñóŋ* 'equivalent' (Creissels & Sambou 2013:213). It is not mentioned whether this strategy (see Example 4.26) competes with others.

(25) *A ye í muu túl-óo la.*
3SG PFV REFL smear oil-DET OBL
'She rubbed herself with oil.' (Creissels & Sambou 2013:211)

(26) *Ali ñôo máakóyi!*
2PL REC help
'Help each other.' (Creissels & Sambou 2013:213)

The situation is Soninke is quite similar: the reflexive element *du* has a more restricted distribution than its alternative expression with *yim'me* 'head', from which the reciprocal marker *me* is derived (Diagana 1995:189).

(27) *À dà dú 'kátú.*
3SG PRED REFL hit
'He hit himself.' (Diagana 1995:189)

(28) *ó dà mé 'xósó.*
1PL PRED REC break
'We competed with each other.' (Diagana 1995:193)

4.3.2 Detransitivization

Mandinka does have a passive construction, but it is morphologically unmarked (cf. Example 4.29). The overt expression of an agent is impossible (Creissels 2010:12).

(29) *Táayí-wáafilaa sorón-ta.*
narcotic-dealer lock-PFV
'A narcotic dealer was put in prison.' (Creissels 2010:14)

The second and third person reflexive can also be used in a 'middle voice construction'. With intransitive verbs, this has a slightly different meaning than the default construction, but cannot be interpreted as a reflexive (Creis-

[12] The grammar is in French as uses the terms "'(in-)dépendante" and "(a-)tonique".

sels & Sambou 2013:333). Given the examples, which are all very similar to Examples (30-a) and (30-b), I am not convinced by the authors description. In my opinion, it is still possible to translate Example (30-b) as reflexive, namely as "The man wound himself around the woman.". However, I have to leave this point for future research.

(30) a. *Nómb-ôo mínín-tá yír-óo la.*
liana-DET wind-PFV tree-DET OBL
'The liana wound itself around the tree.' (Creissels & Sambou 2013:334)

b. *Kew-ó ye í míníŋ mus-óo la.*
man-DET PFV I wind woman-DET OBL
'The man took the woman into his arms.' (Creissels & Sambou 2013:334)

With transitive verbs, *í* exhibits characteristics typical for antipassives: the object is usually omitted, but when it is expressed overtly, this is only possible as an oblique (compare Examples (31-a) and (31-b)).

(31) a. *Kew-ó ye jíy-o miŋ.*
man-DET PFV water-DET drink
'The man drank water.' (Creissels & Sambou 2013:335)

b. *Kew-ó ye í miŋ (jíy-o la).*
man-DET PFV I drink (water-DET OBL)
'The man drank (of the water).' (Creissels & Sambou 2013:335)

In addition, there is also a specialized antipassive suffix in Mandinka, namely *-rí* (or *-dirí* after nasals), which appears with transitive verbs only. [13] In such constructions, the patient is left unexpressed and non-specific, thus the interpretation as antipassive (Creissels 2012). However, the marker in question has a very limited distribution, i.e. a verb with this suffix can never function as predicate of a finite clause. The *rí*-form is possible only with nominalizations (Example (32-a)), in non-finite forms expressing temporal simultaneity (Example (32-b)) and in causative derivations of transitive verbs (Example (32-c)).

(32) a. *Mus-óo be tuu-r-óo la.*
woman-DEF COP pound-AP-DEF OBL
'The woman is pounding (lit.: The woman is at the pounding).'

b. *Ńɲ ŋá mus-óo tuu-ri-tôo jé.*
1SG COMPL woman-DEF pound-AP-SIM see
'I saw the woman pounding.'

c. *Mus-óo ye díndíŋ-o tuu-ri-ndi.*
woman-DEF COMPL.TR child-DEF pound-AP-CAUS
'The woman made the child pound.' (Creissels 2012)

Soninke exhibits a different system in its valency changing operations. First of all, there is a general detransitivizing suffix *-i* (Creissels 2012). With most verbs, it fuses with the final vowel: *-a* and *-o* become *-e*, *-u* becomes *-i* (Diagana 1995:298). Monosyllabic verbs need a supporting consonant which is followed by *-i* and thus confirms that the underlying form really is *-i* (Creissels 2012). The suffix is not productive and its interpretation depends on the semantics of the verbs it attaches to. The resulting construction can be passive (Example (33-a)), anticausative (Example (33-b)), antipassive (Example (33-d)) and reflexive (Example (33-c)).

(33) a. *Yìllê-n páté.*
millet-DEF cut.DETR
'The millet was harvested.'

b. *Kàdáarà-n kìñé.*
first.rains-DEF lead.DETR
'The first rains arrived.'

c. *Yúgò-n púutí.*
man-DEF stretch.DETR
'The man stretched (himself).'

d. *Yàxàrê-n còré.*
woman-DEF cook.DETR
'The woman did the cooking.' (Creissels 2012)

With the passive interpretation, overt expression of the agent as an oblique is rare, but possible, cf. Example 4.34 (Diagana 1995:302).

[13] This is probably a cognate of the prototypical antipassive marker *-ndi* in Soninke (Creissels 2012).

Mandinka	
í	2nd/3rd person reflexive, antipassive
-rí ~-dirí	nominalized antipassive

Soninke	
-i	detransitivization (refl., pass., anticaus., antip.)
-ndì	antipassive

Table 4.11: Voice marking in Mandinka and Soninke

(34) *À 'kútí tì làbó-n yà.*
3SG cut.DETR by knife-DEF EMPH
'This has been cut by the knife.' (Diagana 1995:302)

The antipassive suffix *-ndì* is fully productive. It attaches to transitive verbs only to render intransitives and is a specialized antipassive marker, as illustrated in Examples (35-a) and (35-b). An overview over the voice markers of both languages is presented in Table 4.11.

(35) a. *Yàxàré-n dà kómpè-n céllà.*
woman-DEF TR room-DEF sweep
'The woman swept out the room.'
b. *Yàxârê-n céllà-ndì.*
woman-DEF sweep-AP
'The woman did the sweeping.' (Creissels 2012)

4.3.3 On the history of the suffix *-i*

The reconstruction of the Mande languages is still mostly untouched land. One of the few exceptions deals with "the origin of antipassive markers in West Mande languages" (Creissels 2012) and provides us with a valuable discussion of the history of the suffix *-i*. In many West Mande languages, *-i* is nothing more than a reflexive marker. As is well known, reflexives often serve as a basis for passive and antipassive markers, so it seems sensible to propose a Proto-West-Mande reflexive suffix **-i* that developed into an antipassive marker in Mandinka and a general detransitivizer in Soninke (Creissels 2012).

There is, however, a problem with this approach, namely one of constituent order. All Mande languages have a rigid SOV order and there is no evidence that Proto-Mande was any different. We thus expect the reflexive pronoun **í*, which always stands before the verb, to grammaticalize into a prefix, not a suffix. In absence of conclusive evidence in one or the other direction, the author leaves the question open (Creissels 2012).

What has not been taken into consideration in the above discussion is that the 2SG/3SG simple pronoun in Mandinka and the 3SG simple pronoun in Soninke are also *i*. However, the problem of constituent order remains, as the clitic personal pronouns always appear before the verb. When subordinate clauses are involved, it may happen that the 2SG pronoun of the matrix clause comes immediately after the verb of the subordinate clause, as in Example 4.36. This seems to be quite frequent in Mandinka with second person generics with a discourse antecedent (Creissels 2011).

(36) *Níŋ míŋ ŋa ŋ́ soosoo, í sí táa jee í yé a juubee.*
if REL PFV 1SG contradict, 2SG POT go there 2SG NOM 3SG look
'Anyone who does not believe me should go there and have a look at it (lit.:Anyone who contradicts me, you should go there and look at it).' (Creissels 2011)

At the moment, I do not see what scenario leads from a construction like Example 4.36 to the grammaticalization of *í* as a detransitivizing suffix.

To sum up, in Soninke, there is a general detransitivizer *-i*, which also has a reflexive function and thus exhibits a complete overlap of the reflexive with the detransitivizer. It is possible that this suffix is related to the 3SG clitic pronoun *i=*, e.g. via an impersonal construction. In Mandinka, the reflexive pronoun also has an antipassive function. It is plausible that this is related to the 2SG clitic pronoun and maybe also to the 3SG clitic pronoun. However, without the reconstruction of the pronouns, it is difficult to say in which direction the development went, if it there is a connection at all.

4.4 Koyraboro Senni Songhay and Tondi Songway Kinii (Songhay, Eastern Songhay)

Koyraboro Senni Songhay (KSS) and Tondi Songway Kiini (TSK) are two closely related Songhay languages spoken in Mali. TSK has only recently been documented, while the literature on KSS is much more extensive and started in the 1950s (Hammarström et al. 2014).

	Koyraboro Senni			Tondi Kinii	
	NOM	ACC preverb.	ACC postverb.	independent pron.	clitics
1SG	*ay*	*ay ~ ey*	*agey*	*ày-î*	*ǎy=*
2SG	*ni*			*n-î*	*ŋ́=*
3SG	*a*		*-aa*	*áŋgà*	*à=*
1PL	*ir*		*iri*	*yé-rî*	*é=*
2PL	*war*			*wó-rî*	*ó=*
3PL	*i*		*-ey*	*áŋg-ěy*	*è=*
3SG.LR	*ŋga*			*ǹ-yî*	*ǹ=*
3PL.LR	*ŋgey ~ ŋgii*			*ǹ-yów*	*ǹ-yów=*

Table 4.12: Pronouns in KSS and TSK (Heath 1999:77, Heath 2005:87)

4.4.1 Pronouns

Koyraboro Senni does not have agreement, but only independent pronouns. These exhibit a split system concerning alignment: second and logophoric/reflexive third person have only one form for S, A and P. First and third person have one form for the nominative and preverbal accusative, but a different form for the postverbal accusative. Depending on the accusative form, their system is neutral or accusative (cf. Table 4.12). Note that the third person postverbal forms are suffixes and not independent words.

Prototypically transitive verbs take a preverbal object, while 'non-canonical' transitives take a postverbal object. This class includes verbs that require an object, but which denote rather abstract actions that do not directly affect the patient, like *dii* 'to see' or *haŋga* 'to follow' (Heath 1999:161-162).

In TSK, there are no such complications: there is one set of free pronouns and one set of clitics. The grammar does not explain their distribution respective to each other.

A note on reflexives and reciprocals:
Neither of the two languages employs verbal affixation in reflexive constructions. As can be seen from Table 4.12, the third person has separate logophoric/reflexive pronouns anyways.

In TSK, reflexives can also be expressed by the noun *bɔ̀ŋ* 'head' and a pronominal possessor (Heath 2005:247). The situation is parallel in KSS: reflexives are either expressed by the independent pronouns or a construction of a pronominal possessor and the noun *boŋ* 'head'. Reciprocals involve the noun *čere* 'friend' or are syntactically constructed (Heath 1999:351). Again, TSK is very similar: it has an invariant reciprocal pronoun *kèré* derived from the word for 'friend' (Heath 2005:251).

4.4.2 Voice marking in KSS

In KSS there are two so-called mediopassive suffix, which I will now examine in more detail. The suffix *-a* has two functions: with intransitive verbs, it denotes a self-initiated event or a resulting state, with transitives, it exhibits a prototypical antipassive meaning. That is, the agent remains the same as in the basic transitive construction, but the object is omitted and the verb now denotes the activity as such (Heath 1999:166). Example 4.37 is the only example to be found in the grammar.

(37) *I ga nee ŋgey mma nees-a tak-aa woo ha kaa ha kar-a.*
3PL IMPF say 3PL.LR IMPF measure-AP way-DEF.SG DEM INF come INF hit-AP
'They$_i$ were figuring they$_j$ would take aim in this way and then hit (the targets).' (Heath 1999:167)

It is not a common construction, though, as it is also possible to omit objects without any specific marking on the verb (Heath 1999:167)

The other suffix described as medipoassive is *-andi*, which is at the same time a productive factitive-causative marker. It attaches to transitive verbs to denote "(...) the undergoing of processes with external agents" (Heath 1999:168). However, the agent is left unidentified and thus the construction is not an example of a prototypical passive according to the author. Unfortunately, no example of a whole clause is provided, but from all that is said, this seems to be an anticausative. At least examples like *gar-andi* 'be found' from *gar* 'find' (Heath 1999:168) do not speak against such an analysis.

4.4.3 Summary

At present, there is no literature about the reconstruction of the Songhay pronouns or any other aspect of the language, so nothing can be said about the origins of the forms. We can only establish, that in KSS, the 3SG

	pronouns		agreement	
	NOM	ACC	NOM	ACC
1SG	*ʔanè*	*ʔaneè-b*	*ʔa-X-TMA ~ X-ø-TMA*	*-heèb*
1PL	*hinìn*	*hinìn*	*ni-X-TMA ~ X-n-TMA*	*-hoon*
2SG.M	*bar-uú-k*	*bar-oó-k*	*ti-X-TMA-̀a ~ X-t-TMA-̀a*	*-hook*
2SG.F	*ba(r)-t-uú-k*	*ba(r)-t-oó-k*	*ti-X-TMA-̀i ~ X-t-TMA-̀i*	
2PL.M	*bar-aá-k*	*bar-eé-k*	*ti-X-TMA-̀na ~ X-t-TMA-̀na*	*-hook-na*
2PL.F	*ba(r)-t-aá-k*	*ba(r)-t-eé-k*		
3SG.M	*bar-uú*	*bar-oó*	*ʔi-X-TMA ~ X-ø-TMA ~ X-y-TMA*	*-ø*
3SG.F	*ba(r)-t-uú*	*ba(r)-t-oó*	*ti-X-TMA ~ X-t-TMA*	
3PL.M	*bar-aá*	*bar-eé*	*ʔi-X-TMA-́na ~ X-ø-TMA-́n ~ X-y-TMA-́n*	
3PL.F	*ba(r)-t-aá*	*ba(r)-t-eé*		

Table 4.13: Person markers in Beja (Appleyard 2007:457, 459, 467-471)

	strong stem		weak stem	
	past	present	past	present
1SG	*ašbib*	*ašanbiib*	*yakan*	*yakani*
1PL	*nišbib*	*nišabib*	*yakna*	*yaknay*
2SG.M	*tišbiba*	*šanbiiba*	*yaktaa*	*yaktiniya*
2SG.F	*tišbibi*	*šanbiibi*	*yaktaayi*	*yaktinii*
2PL	*tišbibna*	*tišabibna*	*yaktaana*	*yakteena*
3SG.M	*išbib*	*šanbiib*	*yakiya*	*yakiini*
3SG.F	*tišbib*	*šanbiib*	*yakta*	*yaktini*
3PL	*išbibna*	*tišabibna*	*yakiyaan*	*yakeen*

Table 4.14: Example paradigms of Beja weak and strong stems (Wedekind & Musa 2006/07:73-74, 90, 92)

pronoun looks very similar to the antipassive suffix, although it takes a different position with respect to the verb. In TSK, such an overlap is absent, because the suffix *-a*, which is commonly found in Songhay languages, is not attested (Heath 2005:149).

4.5 Beja and Alaba-K'abeena (Afro-Asiatic, Cushitic)

Beja is spoken mainly in Sudan, but also in Egypt and Eritrea. Its place within the Cushitic family is somewhat controversial, so it is mostly seen as a direct daughter of Cushitic (Tosco 2000). Alaba-K'abeena belongs to the East Cushitic branch and is spoken in Ethiopia (Hammarström et al. 2014). The two languages are thus not closely related and spoken in the same area.

4.5.1 Person marking in Beja

The independent pronouns are accusatively aligned and have a gender distinction in second and third person. They are optionally present as subjects, while as objects they are alternatives to the agreement suffixes. The second and third person forms are innovated and not inherited from Proto-Cushitic. They are constructed on the nominal stem *bar-*, to which other elements are added: the feminine marker *-t-*, the number-case suffixes *-uu, -oo, -aa, -ee* and the second person marker *-'k* or the third person marker *-'*. [14] In some dialects, the third person formative is *-h*. The base is probably related to the verb root *b-r-y* 'have, possess' and means 'possession(s)' (Appleyard 2007:457-458). The whole construction then possibly expresses something along the lines of 'your owner', meaning 'yourself' (Appleyard 2004:185). The object agreement suffixes do not distinguish gender. They follow the subject suffixes and nothing can intervene between them. With inherently transitive verbs, a third person object is always implied and thus no marking is needed (Wedekind & Musa 2006/07:68-69).

The variants of the nominative agreement forms are for weak and strong stems respectively (see Section 4.5.2). They are presented in a rather schematic way. For better illustration, example paradigms of the past and present of the strong verb *šibiba* 'to look' and the weak stem *yak* 'to start' are presented in Table 4.14.

[14] The apostrophe indicates that the accent falls on the preceding vowel.

4.5.2 Beja's verb system and the passive

The Beja verbs fall into two classes, which differ mainly in the position of certain affixes: on 'weak stems', most categories are marked by suffixes, while 'strong stems' take prefixes for person and valency, but internal stem modification for TAM. There are, however, also many irregularly inflected verbs (Appleyard 2007:461). The prefixal paradigm is older and it is generally believed that the suffixal paradigm developed out of the former. In Alaba, as in other Cushitic languages, the prefixal paradigm was entirely lost (Hayward 1984:204). As in many other Cushitic languages, one marker functions both as reflexive and passive marker. The suffix has two different allomorphs, depending on the stem class of the verb (Appleyard 2007:464):

weak stems	*-am*
strong stems	*-t*

In the weak stem, the suffix is really identical in its reflexive and passive use, meaning that a given verb form is ambiguous, as in Example 4.38.

(38) *raat-am-eèn*
ask-AM-3PL.NOM.PRES
'They asked themselves. *or* They were asked.' [15] (Appleyard 2007:464)

The situation is different for strong stems. While the formative is the same, its position differs in the two functions and in some tenses it does not surface at all in the passive use, as in Example (40-b). In addition, its realizations vary quite a lot.

(39) a. *ʔi-too-miin-'na*
3PL.NOM-T-shave.PRES-3PL.NOM
'They are being shaved.'
b. *ʔ-eet-miin-'na*
3PL.NOM-T-shave.PRES-3PL.NOM
'They shave themselves.' (Appleyard 2007:464-465)

(40) a. *ʔi-too-maan-'na*
3PL.NOM-T-shave.PAST-3PL.NOM
'They have been shaved.'
b. *ʔi-man-'na*
3PL.NOM-shave.PAST-3PL.NOM
'They shave themselves.' (Appleyard 2007:464-465)

Unfortunately, all the sources concentrate themselves on morphology and do not present examples of full clauses. Thus, I cannot say anything about the syntactic properties of the construction, e.g. whether the valency of the verb or the marking of arguments is affected or not and the like.

At this juncture, a look at the system of Alaba-K'abeena (referred to as Alaba in the following) is called for. Alaba has two suffixes, which have passive-like functions, *-taʔ* and *-am*. The relatively rare suffix *-taʔ* derives an intransitive verb from a transitive one and promotes the patient to subject. They seem to have a resultative meaning component. There need not be an implication of agent, but it is also possible to overtly express it in instrumental case (cf. Example 4.42). Except for the last part, it qualifies as an anticausative, which is also the label used in the grammar (Schneider-Blum 2007:307-308). I will refer to it as passive.

(41) *wodár(-u) mur-táʔ-y(o).*
rope-NOM.M cut-TAʔ-3SG.M.PF
'The rope was (in the state of being) cut.' (Schneider-Blum 2007:309)

(42) *dah-iccíin(i) kar-táʔ(-u) has-toonti-ndóo?*
snake-INSTR.SG.M bite-TAʔ-VN.NOM want-2SG.PF-QU
'Do you want to be bitten by a snake?' (Schneider-Blum 2007:309)

The suffix *-am* does much the same as *-taʔ*, but an agent is always implied. Like above, it is marked as instrumental, if it is expressed overtly (Schneider-Blum 2007:309-310). It is at present unclear, what the relationship between the two suffixes is.

(43) *wodár(-u) mur-ám-y(o).*
rope-NOM.M cut-AM-3SG.M.PF
'The rope was cut (by someone).' (Schneider-Blum 2007:309)

Alaba also has a so-called 'middle voice', which is used in reflexive and autobenefactive constructions. It is

[15] The examples are not glossed, so the glossing is mine. Why the form, which is morphologically clearly present tense, is translated as past I do not know.

1SG	X-ø-V1C1
1PL	X-ø-V2C1 X-n-V2C1
2SG	X-t-V2C2
2PL	X-t-V1C2
3SG.M	X-ø-V1
3SG.F	X-t-V2
3PL	X-t-V2

Table 4.15: Alaba agreement template

marked by *-akk'-* after consonant clusters and by *-ʔ-* elsewhere. The related languages Kambaata and Hadiyya have very similar middle markers and it is suggested that this a innovation of their proto-language (Schneider-Blum 2007:313). In form, the Beja passive/reflexive quite closely resembles the Alaba passives.

4.5.3 Reconstruction, the overlap and a note on Alaba-K'abeena

Hayward (1984:84) reports that the Eastern Cushitic Lowland languages Saho and Afar have a 'middle' prefix that goes back to **t-*. It has reflexive and autobenefactive functions with transitive verbs and does not affect their valency (Hayward 1984:83). All other Eastern Cushitic languages also have 'middle' suffixes, but the forms vary to some degree across the languages. This mostly concerns the presence or absence of consonant and/or vowel alternations for some persons in the paradigm and the quality of the vowel (Hayward 1984:86). The suffix is reconstructed as **-aḍ-/*-iḍ-* for first person singular, **-an-/*-in-* for first person plural and **-at-/*-it-* for second and third person. However, *-n* can be explained as assimilation (it only occurs before an other *n*, see Figure 4.2) and the status and source of *-ḍ* are unclear, which means that to posit *-t* as the source is quite reasonable.

Note that Alaba is a Highland East Cushitic language, which means that it is not very closely related to the languages on which the reconstruction is based. As was mentioned above, the 'middle' marker of Alaba is most probably an innovation of its immediate proto-language shared with Hadiyya and Kambaata. Also, it does not look like the Lowland Cushitic marker at all.

A more obvious candidate is the passive marker *-taʔ*, but to know whether there is a connection or not, one would have to know if there are cognate suffix in other Highland languages and then attempt a reconstruction of Proto-East-Cushitic. Hayward (1984) actually also mentions Beja in his article. He says that Beja "has prefix verbs with a stem extension *t* which almost certainly corresponds to the forms we are considering" (Hayward 1984:208). This means that according to him, the passive suffix *-t* of the strong stems is related to the middle marker of the Lowland Cuhsitic languages. That in turn suggests that the marker goes back to Proto-Cushitic, i.e. is of very ancient origin. It had two functions: reflexive and agentless passive, just like in Beja. In the other languages, it was also introduced into the suffixal paradigms, but this is not case in Beja (Hayward 1984:219).

There is no reconstruction of the agreement system of the Cushitic languages - or at least, I was not able to find one - but for comparison, the Alaba paradigm is presented schematically in Table 4.15 and Afar, Oromo and Somali paradigms in Figure 4.2. We see that in all of these, the second person involves a *-t-* just like in Beja. Although this is only speculation, it could point to an ancient origin of the marker as well. As long as there are no more detailed reconstructions, I cannot know whether there is a historical connection between the second person marker and the passive/middle marker. However, as both seem to be very old, my best guess is that they are unrelated. The feminine marker *-t-* probably goes back to Proto-Afro-Asiatic, as it not only appears in Cushitic, but also in Semitic (Appleyard 2004:183).

The reconstructions presented above suggest that the feminine marker is of very old age. While nothing is known with certainty about the passive/reflexive marker of Beja, the Eastern Cushitic evidence suggests that it may go back to Proto-Cushitic. The most sensible conclusion is that the two markers are unrelated to each other. It would be difficult to motivate a connection between a feminine marker and a passive/reflexive anyway, so one should refrain from doing so in the absence of compelling evidence.

4.6 Summary

The previous sections discussed voice and person marking of ten languages spoken in Africa. There are thirteen morphological voice markers out of which seven overlap with one or more person markers, which renders a total of 12 person-voice overlaps. There are six overlaps with an estimated probability of 50% or higher, which means that in my sample, the chances for a voice marker found in Africa to be at least possibly connected with a voice marker are 46%:

		ʿAfar	Somali	Oromo
		orob- 'return home in evening'	*qab-* 'take'	*bēk-* 'know'
Simple stem				
sg	1	*orb-a*	*qab-ā*	*bēk-a*
	2	*orob-ta*	*qab-tā*	*bēk-ta*
	3m	*orb-a*	*qab-ā*	*bēk-a*
	3f	*orob-ta*	*qab-tā*	*bēk-ti*
pl	1	*orob-na*	*qab-nā*	*bēk-na*
	2	*orob-tan*	*qab-tān*	*bēk-tani*
	3	*orb-an*	*qab-ān*	*bēk-ani*
Middle stem				
sg	1	*orb-it-a*	*qab-t-a*	*bēk-aḍ-a*
	2	*orb-it-ta*	*qab-at-ta*	*bēk-at-ta*
	3m	*orb-it-a*	*qab-t-a*	*bēk-at-a*
	3f	*orb-it-ta*	*qab-at-ta*	*bēk-at-ti*
pl	1	*orb-in-na*	*qab-an-na*	*bēk-an-na*
	2	*orb-it-tan*	*qab-at-tan*	*bēk-at-tani*
	3	*orb-it-an*	*qab-t-an*	*bēk-at-ani*

Figure 4.2: Imperfective indicative and middle voice forms in three Lowland Cushitic languages (Hayward 1984:206)

voice markers	no. of overlapping VM	no. of overlaps	prob >0.4	in %
13	7	12	6	46

In general, antipassives do not seem to be common in Africa. After I had added a few African languages with passives to my sample, I specifically started looking out for antipassives. Even so, only two out of ten languages have an antipassive, to which Soninke with its general detransitivizer can be added. Interestingly, both antipassives are found in languages with do not mark core participants in any way, neither by case marking nor by agreement (cf. Table 4.16). This is clearly a hint that this voice also exists independently of ergative structures, but also independently of accusative structures. Most of the languages have no case marking for NPs and pronouns, and half have agreement, which is always accusatively aligned.

A summary of all voice markers is presented in Table 4.17. At first, it is quite striking, how many voice-person overlaps there are. However, most markers involved only consist of one vowel or consonant, so the chances for an overlap are high to begin with. Furthermore, Jola-Fonyi and Banjal take the highest share of these, but they are not independent data points. The languages in question are closely related and the voice markers are not only identical in form, they also have the same function. They are thus best seen as a retention of the proto-language of Jola-Fonyi and Banjal and only counted as one instance each. The same goes for the overlaps with the person markers, as the forms involved are the same, except for the Jola-Fonyi third person singular accusative variant *-ɔ* that does not exist in Banjal.

In ǁAni, it is quite clear that the object suffixes derive from the independent pronouns, as they are mostly identical and do not exist in the related language Kxoe. This is thus also counted as one overlap and not two. KSS and TSK have a very similar suffix, *-andi* and *-ándí ~-ńdí*, but with different functions, which means that they are seen as separate instances. Interestingly, the Mande language Soninke has an antipassive suffix *-ndì*, which is very similar in form. It would be well worth investigating whether these are connected in any way. The passive/anticausative in Alaba and the passive/reflexive in Beja may well be related, too, but the details are complex and the two languages are not closely related, so for the time being they are seen as different instances.

Aside from the Jola languages, the situation within families looks very heterogenous. Either the voice markers have different morphological forms or the forms are identical, but they have different functions. The same goes for the overlaps, except in Mande where Soninke and Mandinka both have an overlap with the third person plural pronoun.

As there are not very many languages in my sample, this cannot count as pattern, but it is still interesting that all of the possible connections involve second and third persons. In the Mande languages, the more likely scenario for the direction of the development is from person to voice marker, while the Jola languages exhibit both and KSS is undecided due to lack of reconstruction. It does not seem as there is a strong preference for one

Language	Pronouns	Agreement		NP	Voice
Alaba-K'abeena	accusative	A only	accusative	accusative	PASS
Beja	accusative / neutral (rest vs. 1SG)	A and P	accusative	accusative	PASS
Banjal	neutral / accusative (SAP vs. 3)	A and P	accusative	neutral	PASS
Jola-Fonyi	neutral	A and P	accusative	neutral	PASS
ǁAni	neutral	P only	accusative	neutral	PASS
Kxoe	neutral	none	neutral	neutral	PASS
Mandinka	neutral	none	neutral	neutral	AP, PASS
Soninke	neutral	none	neutral	neutral	DETR
KSS	neutral / accusative (preverb. obj. vs postverb. object)	none	neutral	neutral	AP
TSK	neutral	none	neutral	neutral	PASS

Table 4.16: Alignment and voice marking in the languages of the Africa

or the other in general.

Reflexives are expressed differently from reciprocals in most cases and not strongly associated with voice: the reflexive-passive overlap is found in Kxoe and partly in Beja, and the antipassive-reflexive in Mandinka. This is quite opposite to what Janic (2013:80) reports for Bantu languages, where the antipassive is expressed by the same marker as the reciprocal. Mandinka demonstrates, that this not universally true for Africa, but is probably best seen as a Bantu characteristic.

Language	Voice		Person		Direction	Prob.	Reflexive and Reciprocal	
Jola-Fonyi	AL.PASS	*-i*	1SG.NOM	*(n)i-*	PM >VM	0.1	PLR (incl. REC)	*-ɔr*
			2SG.ACC	*-i*	PM >VM	0.5	REFL	*-ɔr-ɔ*
	ACAUS	*-ɔ*	3SG.H.ACC	*-ɔ(l)*	VM >PM	0.1		
			3.NH.ACC	*-NCL-ɔ*	VM >PM	0.5		
			3	*NCL-ɔ*	VM >PM			
Banjal	AL.PASS	*-i*	1SG.NOM	*(n)i-*	PM >VM	0.1	PLR (incl. REC)	*-or*
			2SG.ACC	*-i*	PM >VM	0.5	REFL	*-or-o*
	ACAUS	*-o*	3.NH.ACC	*-NCL-o*	VM >PM	0.5		
			3	*NCL-o*	VM >PM	0.5		
ǁAni	PASS	*-è ~-ɦè*	1PL.M	*ǁé*		0.1	REFL, ACAUS?	*-sànn*
			1PL.M.P	*-ǁé*		0.1	REC, COLL?	*-ku*
Kxoe	PASS, ACAUS, REFL	*-can*					REC, COLL	*-ku*
	IMPS	*-i ~-wi ~-yi*	-					
Mandinka	AP, REFL (2/3)	*í*	2SG	*í=*	PM >VM	0.7	REFL (1)	*ń̩*
			3PL	*i=*	PM >VM	0.5	REC	*ñôo ~ ñoŋ*
	AP non-fin.	*-rí ~-dirí*	-					
	PASS	*ø*						
Soninke	DETR	*-i*	3PL	*ì=*	PM >VM	0.5	REFL	*dú*
	AP	*-ndì*	-				REC	*mé*
KSS	AP	*-a*	3SG	*a*		0.5	REFL (3SG ~ 3PL only)	*ŋga ~ ŋgeɣ/ŋgii*
	ACAUS?, CAUS	*-andi*	-					
TSK	PASS	*-ándí ~-ńdí*	-				REFL (3SG ~ 3PL only)	*ŋ̀-yî ~ ŋ̀-yów*
							REC	pron. *kèré*
Beja	PASS, REFL	*-am ~-t*	FEM	*-t-*		0.1	REC	unknown
			2NOM	*-t-*		0.3		
Alaba	PASS	*-am*					REFL	*-ʔ ~-akk'*
	PASS, ACAUS	*-taʔ*					REC	*-ʔ-am ~-akk'-am*

Table 4.17: Overview of the languages of Africa

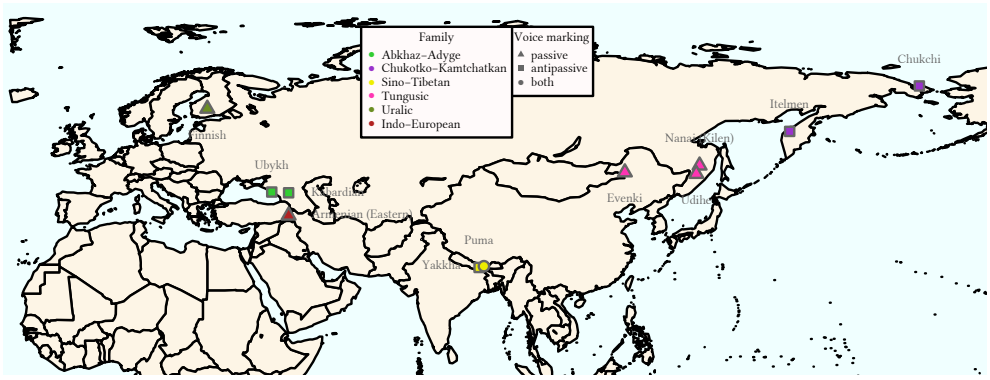


Figure 5.1: Language map of Eurasia

	pronouns		agreement	
	ABS	ERG	ABS	ERG/OBL
1SG	*sa ~ sara*		*sə-*	*s- ~ z-*
1PL	*da ~ dara*		*də-*	*d-*
2SG	*wa ~ wara*		*wə-*	*w- ~ b-*
2PL	*fa ~ fara*		*fə-*	*f-*
3SG	*ār*	*ābə*	*ø- ~ ma-*	*y- ~ r-* (OBL)
3PL	*āxar*	*ābəxam*	*ø- ~ mā-*	*y- ~ y-X-xa ~ yā-*

Table 5.1: Person marking in Kabardian (Matasović 2009:22, 34)

5 Languages of Eurasia

5.1 Kabardian and Ubykh (Abkhaz-Adyge)

Kabardian and Ubykh both belong to the small Abkhaz-Adyge family located in the Caucasus. Kabardian is part of the Circassian branch, Ubykh is a direct daughter of Abkhaz-Adyge, but unfortunately it is extinct by now. Kabardian is still spoken, but it is in desperate need of better description. That is not to say that there is no literature about it, there are even comprehensive grammars, but a lot of the material is in Russian, i.e. not accessible for many scholars, or there are problems with it. Colarusso (1992) is the only comprehensive grammar in English and it has many issues, some of which will be touched upon below. Matasović (2009) is a very helpful short grammar (a 125 pages), which is much easier to follow and much clearer in its presentation and discussion, but - as the title indicates - not very extensive. Kabardian is said to have a productive antipassive in *WALS* (Polinsky 2013), which is why it was included in the sample. Ubykh was chosen out of convenience: there is a very recent comprehensive grammar in English.

5.1.1 Person marking

Kabardian has neutrally aligned pronouns for first and second person and an ergative-absolutive system for third person pronouns, which can also be used as demonstratives, see Table 5.1. The longer variants of the first and second person are used as stems to which affixes such as negation can be added. (Matasović 2009:22-23).

Agreement is a little more complex: Kabardian cross-references subject, object and indirect object on the verb. The functions are mostly distinguished by the slot they occupy, as the forms are largely the same (Table 5.1). In fact, the schwa should not be considered part of the forms at all, as it is conditioned by the environment (B. Bickel, p.c.). The absolutive forms cross-reference the patient of a transitive verb, the theme of a ditransitive verb or the S of an intransitive verb. The ergative forms refer to the A of a transitive or ditransitive clause, but also to the goal of a ditransitive clause (Matasović 2009:34-35). The ordering of the prefixes is as follows (adapted from Matasović 2009:34) and illustrated in Examples (1-a) and (1-b) with ditransitive clauses:

intransitive	S		
transitive	P	A	
ditransitive	T	G	A

(1) a. *(sa) (wa) ābə w-ay-s-t-ā-ś.*
1SG 2SG 3SG.ERG 2SG-3SG-1SG-give-PRET-AFF
I gave you to him.'
b. *(ābə) (sa) wa wə-q'ə-z-ay-t-ā-ś.*
3SG.ERG 1SG 2SG 2SG-DIR-1SG-3SG-give-PRET-AFF
He gave you to me.' (Matasović 2009:35)

There is an additional complication to the system, namely the directional prefixes *q'a-* and *na-*. The former roughly translates to 'hither' and the latter to 'tither', but they seem to fulfill other functions apart from indicating direction, as in Example 5.2 (Matasović 2009:71).

(2) *ø-q'a-k'^{w}a*
3SG-DIR-PRES.go
He is coming this way.' (Matasović 2009:71)

The point is that with some combination of person markers the prefixes are obligatory, while they are banned from others. Unfortunately, Matasović (2009:72) only gives three examples and mentions in a footnote that their distribution seems to be linked to the person hierarchy. His examples (cf. Examples (3-a) to (3-c)) remind of a direct-inverse system, with *q'a-* marking the inverse (3>SAP). The function of *na-* is more difficult to explain, as it occurs with 1SG>2SG, but is banned from 1SG>2PL. For the time being, nothing more can be said about this.

(3) a. *sə-na-w-ź-ā-ś (*sə-w(ə)-z-ā-ś)*
1SG-DIR-2SG-wait-PRET-AFF
I waited for you.'
b. *sə-və-ź-ā-ś (*sə-n(e)-və-ź-ā-ś)*
1SG-2PL-wait-PRET-AFF
I waited for you (pl.).'
c. *ø-q'ə-d-aw-wa (*d-aw-wa)*
3SG-DIR-1PL-PRES-hit
He is hitting us.' (Matasović 2009:72)

As a side note: Colarusso (1992:92-94) labels these 'horizon of interest', which is not very telling. About *q'a-* he says: "It should be noted that when there is a choice as to which noun determines the horizon of interest (...), the noun in the absolutive is always the determiner.". To illustrate this, he gives pairs like Examples (4-a) and (4-b), which seem to indicate that *q'a-* marks something that is emotionally close to the speaker. Whether this is an extension of the purely spacial meaning 'hither' or a separate function cannot be decided here.

(4) a. *wa ƛ'ə-r ø-q'a-b-wək'^{y}ə-ž-ā-ś*
2SG man-ABS 3SG-DIR-2SG-kill-ILL-PRET-AFF
You finally killed the man (=my kinsman).'
b. *wa ƛ'ə-r ø-b-wək'^{y}ə-ž-ā-ś*
2SG man-ABS 3SG-2SG-kill-ILL-PRET-AFF
You finally killed the man (=a stranger).' (Colarusso 1992:93)

In Ubykh, the pronouns show neutral alignment throughout and agreement is similarly constructed as in Kabardian. The forms are basically the same for all functions, but they occupy different slots, cf. Table 5.2. They also cross-reference S, A, P (T) and G and it seems that the position of the prefixes is exactly the same as in Kabardian (Fenwick 2011:105). This is illustrated in Examples (5-a) and (5-b), which correspond to Examples (1-a) and (1-b) from Kabardian. Note the absence of the directional prefix in Example (5-b).

(5) a. *wɨ́-ø-s-t^{w}ɨ-n.*
2SG-3SG-1SG-give-PRES
I give you to him. '
b. *wɨ́-sí-n-t^{w}ɨ-n*
2SG-1SG-3SG-give-PRES
He gives you to me.' (Fenwick 2011:105-106)

5.1.2 Antipassive-like constructions

In Kabardian, there is a construction referred to as 'antipassive' by Colarusso (1992), in which the verb is said to be inflected intransitively and the direct object to be demoted to an oblique. Roots ending in /ə/ generally take an intransitive suffix *-a* (Colarusso 1992:177). Unfortunately, there is no further explanation of the functions of *-a*

	pronouns	agreement	
		ABS	ERG
1SG	*sɨʁʷʒ́ ~ sʁʷʒ́*	*sɨ- ~ s-*	*sɨ- ~ s- ~ z-*
1PL	*ʃɨʁʒ́ɬɜ ~ ʃɨʁʷʒ́*	*ʃɨ- ~ ʃ-*	*ʃɨ- ~ ʃ- ~ ʒ-*
2SG	*wɨʁʷʒ́ ~ wʁʷʒ́ ~ ʁʷʒ́*	*wɨ-*	*wɨ- ~ w-*
2PL	*ɕʷɨʁʷʒ́ɬɜ ~ ɕʷɨʁʷʒ́*	*ɕʷɨ- ~ ɕʷ-*	*ɕʷɨ- ~ ɕʷ- ~ ʑʷ-*
3SG	*ɐʁʷʒ́*	*ɐ- ~ jɨ- ~ ɨ- ~ ø-*	*nɨ- ~ n- ~ ø-*
3PL	*ɐʁʷʒ́ɬɜ*	*ɐ- ~ jɨ- ~ ø-*	*ɐ- ~ nɐ-*

Table 5.2: Person marking in Ubykh (Fenwick 2011:76, 100)

or a more detailed description of the antipassive. Moreover, the dative form in Example (6-b) is left unexplained.

(6) a. *pśaaśa-m gʸaana-ha-r ø-q'a-y-a-də-ha-r.*
girl-OBL shirt-PL-ABS 3ABS-HORI-3ERG-PRES-sew-PL-PRES
The girl is sewing the shirts.' [16] (Colarusso 1992:177)

b. *pśaaśa-r gʸaana-m ø-ya-də-a-aɣ-ś.*
girl-ABS shirt-OBL 3ABS-3DAT-sew-INTR-PAST-AFF
The girl was sewing at the shirt.' (Colarusso 1992:54)

Indeed, there are also other interpretations of this construction: Matasović (2009:38) says that the intransitive constructions with two participants are not derived from basic transitive ones or marked in any way. In addition, while the factors driving the distribution of the affix *-(a)w* are not entirely clear, it is actually a present tense affix appearing on all verbs with a first or second person and on all intransitives with a third person.

In other words, there are different classes of verbs in Kabardian, and those with an oblique object are just one of them. Semantically transitive verbs can appear in two constructions. A few verbs are "labile", i.e. they can occur with both constructions, but most verbs are assigned to either one or the other and must be derived to function as member of the other class (Matasović 2009:37). The construction are the following (terminology according to Matasović 2009):

- intransitive monovalent: the sole argument is in absolutive case and cross-referenced on the verb
- intransitive bivalent: the agent is in absolutive case, the patient in ergative [17] and both participants are marked on the verb
- transitive: the agent is in ergative case, the patient in absolutive case and both participants are marked on the verb

Remember that first and second person pronouns have only one form and that the syntactic role of the agreement marker on the verb is only distinguished by position. This means that for SAP>SAP configurations, the only difference between the intransitive bivalent and the transitive is in the order of person markers on the verb: in the former, the agent comes first, while in the latter, it is the patient (compare Examples (8-b) and (8-c)). Third person absolutive is unmarked, but as the SAPs have overt absolutive marking, the reference is always clear. All of this is schematically represented in Table 5.3 and illustrated by Examples (7-a) to (7-c) for third person acting on a third and in Examples (8-a) to (8-c) for first person singular acting on second person singular.

(7) a. *ś'āla-r mā-dža.*
boy-ABS 3SG-read
The boy is reading.'

b. *ś'āla-r txəɬ-əm ø-y-aw-dža.*
boy-ABS book-ERG 3SG-3SG-PRES-read
The boy is reading the book.'

c. *ś'āla-m txəɬ-ər ø-ya-dža.*
boy-ERG book-ABS 3SG-3SG-PRES-read
The boy is reading the book (to the end).' (Matasović 2009:38)

(8) a. *sa s-aw-pɬ.*
1SG 1SG-PRES-watch
I am watching.'

b. *sa wa sə-w-aw-pɬ.*
1SG 2SG 1SG-2SG-PRES-watch
I am watching you.'

[16] The prefix *q'ə-/q'a-* is described as marking 'horizon of interest'. It seems that it indicates the speaker's continued interest in a situation, but the explanation is not very clear (cf. Colarusso 1992:84-85).

[17] The ergative marks agents in transitive clauses but also obliques of various kinds (Matasović 2009:18).

present			
1SG>2SG		3>3	
pronoun	verb agreement	pronoun	verb agreement
S	S-aw-V	S-ABS	S.ABS-V
A P	A-P-aw-V	A-ABS P-ERG	(P.ABS-)A.ERG-aw-V
A P	P-A-aw-V	A-ERG P-ABS	(P.ABS-)A.ERG-V
preterite			
1SG>2SG		3>3	
pronoun	verb agreement	pronoun	verb agreement
S	S-V	S-ABS	S.ABS-V
A P	A-P-aw-V	A-ABS P-ERG	(P.ABS-)A.ERG-V
A P	P-A-V	A-ERG P-ABS	(P.ABS-)A.ERG-V

Table 5.3: Case frames and agreement of verb classes in Kabardian

c. *sa wa wə-s-ɬ'āġʷ-ā-ś.*
1SG 2SG 2SG-1SG-see-PRET-AFF
I saw you.' (Matasović 2009:39-40)

The 'intransitive bivalent' is the one often referred to as antipassive. With 3>3 configurations in the present tense, it is tempting to analyze it this way, as the agent is marked like an S, the patient appears as oblique and the verb receives special marking *(-aw)*. In the preterite, however, the analysis does not work that well anymore: the marker *-aw* is absent in all constructions (see Table 5.3). The problems are even greater with SAP>SAP configurations: a) as there is no case marking, the arguments are the same in the transitive and intransitive bivalent construction, b) the marker *-aw* appears in all three constructions in the present and c) person marking on the verb is reversed in the transitive and intransitive bivalent construction (see Table 5.3). For all these reasons, the intransitive bivalent construction should not be considered an antipassive, as it "is just as unmarked (underived) as the transitive one" (Matasović 2009:38-39). To sum up, a thorough analysis of the data reveals that there is (most probably) no voice marking in Kabardian (see below for a discussion of the so-called passive).

Ubykh has a special absolutive agreement prefix *jɜ-*, called 'absolutive impersonal'. It is used instead of one of the other absolutive prefixes and indicates the lack of a direct object (Fenwick 2011:108). To call it 'impersonal' is rather unfortunate, as direct objects are most often not persons at all and the term generally refers to construction with an indefinite or unspecified agent.

The 'absolutive impersonal' construction is exemplified in Example (9-b) with a corresponding transitive clause and a basic intransitive and transitive clause in Examples (9-b) and (10-b). The slot that the first person singular occupies it that of the agent, as can be seen from Examples (9-a) and (10-b). The verb is otherwise unchanged, except that the slot for the patient is occupied by *jɜ-* and not another person prefix. To summarize, the agent still occupies the ergative slot, the verb remains the same and the prefix clearly occupies the absolutive slot. The construction is thus best considered an 'indefinite object' construction that shares certain characteristics with the antipassive, i.e. the suppression of an overt patient and indefinite reference.

(9) a. *tʃ'ɜχʷɜ́ ʁʲɜ ø-s-f-q'ɜ́-mɜ.*
today meat 3SG-1SG-eat-PAST-NEG
I have not eaten meat today.'
b. *tʃ'ɜχʷɜ́ jɜ-s-f-q'ɜ́-mɜ.*
today JE-1SG-eat-PAST-NEG
I have not eaten today.' (Fenwick 2011:108, quoted from Hewitt 1974)

(10) a. *sɨ-bɜχɜ́-n.*
1SG-be.angry-PRES
I am angry.'
b. *ɐ-s-kʷ'ɜbɜ́-n.*
3SG-1SG-bathe-PRES
I bathe him/her.' (Fenwick 2011:100, quoted from Mészáros 1934:192,228)

A note on agent demoting constructions in Kabardian and Ubykh:
Both languages have been said to feature a passive construction, but neither of them is morphologically marked. Indeed, Hewitt (2005:110) mentions that none of the Abkhaz-Adyge languages has a native passive, but some of them have developed one under the influence of neighboring languages.

In Kabardian, a transitive verb can either be inflected intransitively to form a passive or a periphrastic construction with the verb *-x̌ʷ-* can be used. In the periphrastic passive, the embedded verb must always carry a past tense marker (Colarusso 1992:135). From Example 5.11, we see that the case assignment also changes. The agent is marked as instrumental, which is not the case in a basic transitive clause. As expected, the patient is still in absolutive case, as it is the new S of the passive clause. From Example 5.12, we learn that the auxiliary verb means 'to happen'. Contrary to the other passive construction, the verb is still inflected transitively, i.e. the agent is expressed as ergative. The literal translation of Example 5.12 is thus probably 'It happens that we build a house.'. It is open to discussion, whether such a construction is adequately described as passive and according to Matasović (2009:32), it is not. I will not go into details any further, as neither construction involves morphological marking on the verb, so I will leave it to others to decide what the proper label is.

(11) *gʷaʒə-r λ'ə-m-kʼʸa ø-ʔʷəx̂ə-žə-aɣ-ś.*
wheat-ABS man-ERG-INSTR 3ABS-remove-finally-PAST-AFF
The wheat was harvested by the man.' (Colarusso 1992:136)

(12) *wəna-r ø-d-ś'ə-aɣ ma-x̌ʷ.*
house-ABS 3ABS-1PL-make-PAST 3ABS-happen
The house is being built by us.' (Colarusso 1992:136)

What is expressed in other languages by a passive, is covered in Kabardian by an impersonal construction. This involves a third person plural with indefinite reference (Colarusso 1992:136). It is called 'indefinite passive' in the grammar, but the verb is clearly still transitive and the agent expressed as an ergative, so I think this is rather an active construction.

(13) *gʷaʒə-r ø-y-ha-ʔʷəx̂ə-žə-aɣ-ś.*
wheat-ABS 3ABS-3ERG-PL-remove-finally-PAST
They harvested the wheat (=The wheat was harvested).' (Colarusso 1992:136)

Ubykh has a passive construction, but it was calqued from Turkish. The verb is inflected intransitively and the agent is demoted to oblique, being marked by the postposition *-dɜkʲ'ɜwn(i)* (Fenwick 2011:142). In addition, a few transitive verbs can be inflected intransitively and drop their ergative argument, as in Example 5.15. The agent cannot be expressed overtly and from the examples, it looks like none is implied either (Fenwick 2011:143).

(14) *ɐ-pχʲʒ́ʃʷ ɐ-tɬ́t-dɜkʲ'ɜwn ɐ-ɕɜ́ɕ-ɜw:t.*
DET-woman DET-man[OBL]-by 3SG.ABS-hit-FUT
The woman will be hit by the man.' (Fenwick 2011:142, quoted from Hewitt 1974)

(15) *ɐ-ʁʷɨ́ngʲɜ ɐ-ɕχɜrɜb-q'ɜ́.*
DET-mirror 3SG.ABS-shatter-PAST
The mirror shattered.' (Fenwick 2011:143, quoted from Charachidzé 1991:24)

5.2 Evenki and Udihe (Tungusic)

Evenki and Udihe are Tungusic languages, the former spoken in Mongolia and Central and Eastern Russia, the latter in Eastern Russia only. Evenki belongs to the Northern Tungusic branch, while Udihe belongs to the East Tungus branch. Nanai, which is not discussed here because it does not have an overlap between person and voice marking, is closely related to Udihe and spoken in roughly the same region (Hammarström et al. 2014).

5.2.1 Person marking

Udihe has one set of pronouns which inflect for case mostly like nouns. The alignment is nominative-accusative and the other cases are based on the same stem as the accusative (see Table 5.4). The *e* that appears in the accusative forms of first and second person is epenthetic. The third person pronouns go back to the noun *beje* 'body' with the third person agreement affix and are still pronounced *bejeni/bejeti* occasionally in Southern dialects (Nikolaeva & Tolskaya 2001:333-336). They refer to humans only. The *bue*-forms are only used anaphorically and their antecedent must be introduced previously (Nikolaeva & Tolskaya 2001:753-754).

There is a dual inclusive form, consisting of the oblique first person stem and the element *zuŋe* 'two, both', which is phonologically bound to it. This not attested with any other person/number combination (Nikolaeva & Tolskaya 2001:333-336). Pronouns do not usually appear in subject function, as there is already subject verb agreement. They are present when a new participant is introduced or in contrastive constructions (Nikolaeva & Tolskaya 2001:764). Object pronouns, on the other hand, are mostly present. Of course, they, too, can be dropped when they are known from context (Nikolaeva & Tolskaya 2001:769).

	pronouns		agreement (with S/A)				
	NOM	ACC	PRES	PAST	FUT	PERF	SUBJ
1SG	*bi*	*min-e-we ~ bin-e-we*	*-mi*	*-mi*	*-i*	*-i*	*-mi*
1DU.I	*min-zuŋe*	*minti-wA*	*-ʃi*	*-ʃi*	*-ʃi*	*-ti*	*-ʃi*
1PL.I	*min-ti*						
1PL.E	*bu*	*mun-e-we*	*-u*	*-mu*	*-u*	*-u*	*-u*
2SG	*si*	*sin-e-we*	*-i*	*-i*	*-i*	*-i*	*-i*
2PL	*su*	*sun-e-we*	*-u*	*-u*	*-u*	*-u*	*-u*
3SG	*nua-ni ~ bue-ni*	*nua-ma-ni ~ bue-ma-ni*	*-ini ~-ili*	*-ni*	*-ni*	*-ø*	*-ø*
3PL	*nua-ti ~ bue-ti*	*nua-ti-we ~ nua-ma-ti ~ bue-ma-ti*	*-iti*	*-ti*	*-ti*	*-du*	*-du*

Table 5.4: Person marking in Udihe (Nikolaeva & Tolskaya 2001:212, 334)

	pronouns		agreement (with S/A)		
	NOM	ACC	set I	set II	mixed
1SG	*bi*	*mine(-ve)*	*-m*	*-v*	*-m*
1PL.I	*mit*	*mit-ve ~ mit-pe*	*-p ~-t*	*-t*	*-ty*
1PL.E	*bu*	*mune(-ve) ~ mune*	*-v ~-vun*	*-vun*	*-mun*
2SG	*si*	*sine(-ve)*	*-nni*	*-s*	*-ni*
2PL	*su*	*sune(-ve)*	*-s ~-sun*	*-sun*	*-sun*
3SG	*nungan*	*nungan-ma-n*	*-n*	*-n ~-ø*	*-in*
3PL	*nungar-tyn*	*nungar-va-tyn*	*-ra ~-ø*	*-tyn ~-l*	*-tyn ~-r*

Table 5.5: Person marking in Evenki (Nedjalkov 1997:200-201, 259-260, 264)

The verb co-references S and A arguments only. However, there are several conjugation sets for tense/mood categories. The second person forms remain the same throughout all the sets. Note that most forms occur in more than one set (cf. Table 5.4). The labels for the sets are actually a shortcut, as most of the sets appear in more than one tense or mood category: the past forms are also used with past participles, the future also with converbs and present and future participles, the subjunctive forms also in the permissive and the perfect also in the conditional (Nikolaeva & Tolskaya 2001:212-213). Example 5.16 illustrates a basic intransitive and Example 5.17 a basic transitive clause with a pronoun and agreement.

(16) *Bi ŋala-i auli-e-ni.*
1SG.NOM hand-1SG.POSS swell-PAST-3SG
My hand has swollen.' (Nikolaeva & Tolskaya 2001:511)

(17) *Bi coŋku-we ñientile:-mi.*
1SG.NOM window-ACC open.PAST-1SG
I opened the window.' (Nikolaeva & Tolskaya 2001:512)

The independent pronouns in Evenki exhibit the same system as those in Udihe: there is an unmarked nominative forms and the other cases are attached to an oblique stem. In the accusative, the oblique stem without case marker can also be used (see Table 5.5). In the indicative mood, the free pronouns are obligatory as subjects, objects, and indirect objects. There are only very few cases when they can be dropped without leaving the sentence ungrammatical (Nedjalkov 1997:195). It is not mentioned whether the third person forms also go back to a noun meaning 'body', but the plural and singular accusative form also include the verbal person markers, just as in Udihe. Also, their case forms are irregular (Nedjalkov 1997:202).

Agreement on the verb is with the S/A argument only and there are again several sets of forms, but less than in Udihe. The first set is used with present, non-future and future tense, and directly follows the tense marker, which is obligatory. In first and second person singular, the present tense marker is absent, though (Nedjalkov 1997:259). The second set attaches to past, past iterative and future categorical tense and the forms are identical to the possessive inflection on nouns. The synthetic conditional forms also take set II person markers (Nedjalkov 1997:260-261). The debitive mood is said to have a mixed set (Nedjalkov 1997:263-264), but most of the forms do not occur as such in either set I or II, cf. Table 5.5. An intransitive and a transitive clause are presented in Examples 5.18 and 5.19.

(18) *Er bejetken Turu-du bi-d'eche-n.*
this boy.NOM Tura-DAT be-IMPF-3SG
This boy lived in Tura.' (Nedjalkov 1997:74)

(19) *Asatkan ileken-me tet-te-n.*
girl.NOM doll-ACC dress-NFUT-3SG
The girl dressed the doll.' (Nedjalkov 1997:66)

5.2.2 Voice marking

Udihe has a two passive constructions, both marked by the suffix *-u*. Depending on the preceding element, there are variants: after vowels, either a glide is inserted resulting in *-wu* or the suffix contracts with the vowel to *-u:*. Verbs ending in *-n* change this to *-m* when *-u* is affixed. The same changes apply when the passive is followed by the past tense suffix *-o:* (Nikolaeva & Tolskaya 2001:306-307).

The first construction is called 'personal passive'. As is expected, the patient is promoted to subject and cross-referenced on the verb. If a pronoun is used it appears in the nominative. However, usually there is no pronoun (Nikolaeva & Tolskaya 2001:572). From Examples 5.20 and 5.21 we see that the agent appears in the dative, i.e. as an oblique. In addition, Example 5.21 shows that the passive can also be attached to derived transitive verbs.

(20) *Min-du akinda-u-ze-i si meime-zi.*
1SG-DAT stab-PASS-SBJT-2SG 2SG harpoon-INSTR
You will be stabbed by me with the harpoon.' (Nikolaeva & Tolskaya 2001:572)

(21) *Agdi-du ŋele-we-si-u-i.*
thunder-DAT be.afraid-CAUS-IMPF-PASS-1SG
I am frightened by thunder.' (Nikolaeva & Tolskaya 2001:573)

There is a second construction, which demotes the agent but does not promote the patient, which is still accusatively marked. The agent appears in dative case, as above (Nikolaeva & Tolskaya 2001:573). This construction is called 'agentless passive' in the grammar, but I find that rather misleading as the agent can be, and judging from the examples (cf. Examples 5.22 and 5.23), frequently is overtly expressed.

(22) *Soŋgo ule:-we-ni diga-wu-ini in'ei-du.*
bear meat-ACC-3SG eat-PASS-3SG dog-DAT
The bear meat is eaten by the dogs.' (Nikolaeva & Tolskaya 2001:573)

(23) *B'ata-wa abuga-du dančі-wo:-ni.*
boy-ACC father-DAT curse-PASS.PAST-3SG
The boy was cursed by his father.' (Nikolaeva & Tolskaya 2001:574)

Furthermore, Udihe also possesses an anticausative derivation. It applies to transitive verbs and derives intransitives without the implication of an agent. The patient appears as the subject in nominative case and the verb is marked by the suffix *-ptA/-ktA* or *-kpi*, see Example 5.24. The anticausative only allows third person subjects (Nikolaeva & Tolskaya 2001:590). This process is not productive and applies only to a few verbs. The three suffixes all have the same meaning, and some verbs are found with all of them, while others appear only with one. It is even possible to use the anticausative on causative verbs, e.g. *sa-u-pte* (know-CAUS-ACAUS) 'be known' (Nikolaeva & Tolskaya 2001:304-305).

(24) *Čaja olokto-kpi:-ni.*
tea.NOM cook-ACAUS-3SG
The tea is being cooked.' (Nikolaeva & Tolskaya 2001:590)

Additionally, the reflexive pronoun can be used to emphasize that the action happened on its own, as in Example 5.25.

(25) *Wopti mene kimpigi-pte:-ni.*
door.NOM REFL close-ACAUS-3SG
The door closed by itself.' (Nikolaeva & Tolskaya 2001:591)

The voice constructions in Evenki are very similar. Firstly, there is a passive construction marked by the suffix *-v* or one of its phonologically conditioned variants *-p/-b/-mu/-vuv/-muv/-mup*. The patient is promoted to subject and the agent, if it expressed at all, appears in dative case (cf. Example (26-b)). In most cases, though, it is omitted (Nedjalkov 1997:217-218). The construction is thus formally and syntactically identical to the Udihe 'personal passive'.

(26) a. *Hurkeken uluki-ve va:-re-n.*
boy.NOM squirrel-ACC kill-NFUT-3SG
The boy killed a squirrel.'

	SG.NOM	SG.OBL	PL.NOM	PL.OBL
1	**bi*	**mi-n-*	**bö(ö)*	**mö-n-*
2	**si*	**si-n-*	**sö(ö)*	**sö-n-*

Table 5.6: Proto-Tungusic first and second person pronouns (adapted from Janhunen 2013:216-217)

b. *Uluki (hurkeken-du) va:-v-re-n.*
squirrel.NOM (boy-DAT) kill-PASS-NFUT-3SG
The squirrel was killed (by the boy).' (Nedjalkov 1997:218)

With three verbs, the passive suffix has a reflexive meaning. This is attributed to Russian influence, as it is only attested in translation. The verbs are: *aj-* 'save', *typa-* 'make dirty' and *va:-* 'kill/hurt' (Nedjalkov 1997:111). There is also an 'impersonal passive', which is expressed by a construction with participles formed by *-d'AngA* or *-vkA*. A notion of necessity or (im)possibility is always present and no tense markers are used in such constructions. The patient retains its accusative case marking (Nedjalkov 1997:222-223). Note that passive suffix is also present (cf. Example 5.27).

(27) *Kungaka-r-ve ajat alagu-vu-vka.*
child-PL-ACC good teach-PASS-PART
It is necessary to teach children well.' (Nedjalkov 1997:223)

This is somewhat reminiscent of the Udihe 'agentless passive' in that the patient also appears in the accusative. Evenki also possesses an anticausative derivation, for which the same suffix as in the passive is used. This derivation applies to about thirty transitive verb roots. There is also a specialized anticausative suffix *-rgA* which appears on a few verb roots mostly denoting actions of destruction like 'break' and 'tear' (Nedjalkov 1997:227-228). Apparently, the same verb can also take both suffixes, compare Examples 5.28 and 5.29.

(28) *D'av sukcha-v-ra-n.*
boat.NOM break-ACAUS-NFUT-3SG
The boat broke.' (Nedjalkov 1997:228)

(29) *Minngi purta-v sukcha-rga-ra-n.*
1SG.GEN knife-1SG.POSS break-ACAUS-NFUT-3SG
My knife broke.' (Nedjalkov 1997:228)

The third suffix deriving intransitives from transitives in Evenki is the resultative *-chA*. It also marks resultative aspect and then does not affect the valency of the verb. The sole argument of the derived intransitive can either correspond to the patient, as in Example (30-b), or to the agent, as in Example (31-b). With the patient orientation, the agent cannot be expressed overtly (Nedjalkov 1997:254-255). With the agent orientation, it is not obvious that the verb is really detransitivized, as there is no change in case marking and both arguments are still present. Unfortunately, there is no further explanation in the grammar.

(30) a. *Asatkan dukuvun-ma duku-d'ara-n.*
girl.NOM letter-ACC write-PRES-3SG
The girl is writing a letter.'
b. *Tar dukuvun ajat duku-cha-d'ara-n.*
that letter.NOM good write-RES-PRES-3SG
That letter is written well.' (Nedjalkov 1997:227)

(31) a. *Kungakan dyl-vi dungki-re-n.*
child.NOM head-PREFL lower-NFUT-3SG
The child lowered his/her head.'
b. *Kungakan dyl-vi dunkgi-che-re-n.*
child.NOM head-PREFL lower-RES-NFUT-3SG
The child holds his/her head lowered.' (Nedjalkov 1997:255)

5.2.3 Reconstruction and its consequences for the overlap

The passive suffix *-u* is identical to a non-productive causative marker *-u*, which in most cases replaces the stem final vowel. It precedes other derivational suffixes, occuring directly after the stem, e.g. *kes-u-li* (suffer-CAUS-INC) 'start torturing'. Some causative verbs with *-u* behave syntactically different from productive causative constructions, their second argument appearing in lative case (see Example 5.32) and not accusative, as expected (Nikolaeva & Tolskaya 2001:302-303).

Source		Udihe		Evenki	
caus.-pass.	*-ti	-si	res., progr., iter., distr.	-t ~-ci	pass., res., progr., intens.
aux. 'do, make' >caus	*-ki	-	-	-ki ~-gi	non-productive caus.
refl.-anticaus.	*-p	-	-	= pass.	in a few cases only
anticaus.	*-rA	(-kpA ~-ktA ~~-kpi)		(-rga)	
verb 'give'	bu	-u ~-wu	passive, non-prod. caus.	-v- ~-p ~-b ~-mu ~-vuv- ~-muv ~-mup	passive, non-prod. caus.

Table 5.7: Overview of voice-related morphology reconstructed for Proto-Tungusic (adapted from Yap & Iwasaki 1998:196, Robbeets 2012:235)

(32) *'Ain-tigi: sa-u-je.*
brother-LAT.1SG know-CAUS-2SG.IMP
Inform my brother.' (Nikolaeva & Tolskaya 2001:303)

The productive strategy to derive a causative is by adding the suffix *-wAn* to the verb (Nikolaeva & Tolskaya 2001:301). In Evenki, the situation is quite comparable: the productive way of forming a causative is by adding the suffix *-vkAn/-pkAn/-mukAn.* There are, however, two other suffixes which only appear on a limited number of verb roots and also form causatives (Nedjalkov 1997:229-230). One of them is identical to the passive marker and illustrated below in Example 5.33.

(33) *Beje mo:-l-va eme-v-re-n.*
man.NOM tree-PL-ACC come-CAUS-NFUT-3SG
The man brought firewood.' (Nedjalkov 1997:230)

Indeed, such a causative-passive overlap is found in all Tungusic languages and the diachronic scenario seems to be more or less clear. The ultimate source of the suffix is the verb 'to give', which is synchronically *bu* in Udihe and *bu:* in Evenki, but I was not able to find a reconstructed form. This then developed into a causative suffix, and from there into a passive suffix via a reflexive permissive-causative stage (Yap & Iwasaki 1998:196). The permissive stage is attested in Solon, a dialect of Evenki, where the suffix *-u:* means 'let something happen to one-self', cf. Example 5.34 . Additional evidence for this pathway comes form Manchu, which belongs to the Manchu-Jurchen branch: the cognate suffix *-bu* is also used for causative and passive, but the causative is the more productive function (Yap & Iwasaki 1998:194-196).

(34) *zaw-u:-sa*
catch-PERM-RECPAST
He let himself be caught.' (Solon) (Yap & Iwasaki 1998:196, quoted from Nedjalkov 1978:73)

In view of this scenario, it also makes sense that a new causative marker developed, as the older form became more grammaticalized and multifunctional. Actually, the now productive causative suffix in Evenki, *-vKan*, is a combination of the causative-passive suffix *-v* and the element *-kAn*, which is derived from a verb 'to say' (Yap & Iwasaki 1998:195).

From Table 5.7, we see that a causative-passive form already existed in Proto-Tungusic, but was recruited in both Udihe and Evenki for primarily aspectual functions . A second causative form derived from an auxiliary 'do, make' is also attested in Evenki as a non-productive strategy to form causatives (Robbeets 2007:263-265). Proto-Tungus also had an anticausative suffix, but I do not know whether the Udihe and Evenki forms are reflexes of *-rA or innovations.

The pronouns reconstructed for Proto-Tungusic correspond quite closely to what is found in Evenki and Tungus (cf. Table 5.6). The agreement forms derive from the free pronouns in all Tungusic languages, except for Manchu. The plural forms go back to the oblique stem, i.e. they had a final nasal. As the forms in the modern languages are only partially transparent, the affixation must have taken place quite some time ago (Janhunen 2013:217-218). This suggests that the second person plural *-u* is a reduction of *su-n.* Note that in Evenki, the same form is either *-sun*, directly reflecting the older state, or a reduced version *-s* (see Table 5.5).

In my view, a reduction to *-s* is very comprehensible, as this simply means that last two elements have been lost. To get to the Udihe form *-u* one has to drop the final nasal and loose the initial sibilant. However, this can be explained by restrictions on consonant clusters. First of all, verb roots in Udihe either end in a vowel or an *-n* (Nikolaeva & Tolskaya 2001:79). Secondly, consonant clusters are only permitted with */n/* and a voiced dental obstruent and thirdly, the spirants */x/* and */s/* are not usually encountered in clusters (Nikolaeva & Tolskaya 2001:63). This all suggest, that the cluster */ns/* is not acceptable in Udihe. To avoid such clusters, either an epenthetic vowel in inserted or a consonant is deleted. That neatly explains the loss of /s/ with verb roots ending in */n/* and I just need to assume that this variant was then generalized to verb stems ending in vowels. In Evenki, the first person singular set II form *-v* is of interest. That it is a reduction of *bi* is very plausible, as the plural

	A (and S)			S	P
	NFUT & FUT	INT	COND		
1SG	*t-*	*m-*	*mʔ-*	*-ø (-k)*	*-ɣəm*
1PL	*mət-*	*mən-*	*mənʔ-*	*-ø (-mək)*	*-mək*
2SG	*ø-*	*q-*	*nʔ-*	*-ø*	*-ɣət*
2PL				*-tək*	*-tək*
3SG				*-ø*	*-n*
3PL				*-t*	*-net*

Table 5.8: Chukchi prefixes and suffixes indicating person and number (Dunn 1999:180)

A/P	3SG	3PL
2PL	*-tkə*	
3SG	*-nin*	*-ninet*

Table 5.9: Suppletive A and P suffixes in Chukchi (Dunn 1999:181)

exclusive form in the same set is *-vun*, which goes back to **bu-n*.

All the evidence presented above leads to the conclusion that the overlap in both cases is most probably attributable to coincidence. The passive, as well as the agreement forms, are well reconstructable and derive from two distinct sources.

5.3 Chukchi and Itelmen (Chukotko-Kamchatkan)

Itelmen is a direct daughter of Chukotko-Kamchatkan, while all the other languages including Chukchi belong to the Chukotian branch. Both languages are spoken in Siberia, near the coast on the very far east (Hammarström et al. 2014).

5.3.1 Person marking

Chukchi's person marking system is quite complex and involves numerous sets of forms, which cannot be generated according to a rule. There are eight active paradigms: one for non-future, future, intentional and conditional, each with a variant for neutral and progressive aspect (Dunn 1999:177).

The transitive verb indexes person and number of A and P with an intricate system of pre- and suffixes. Before presenting one paradigm in its entirety, we will first discuss the elements involved concerning person.

The prefixes cross-referencing A (and S in some contexts) are fused with mood markers. S and P, on the other hand, are indicated by suffixes, which are not fused with an other category (see Table 5.8). The forms in brackets only appear in neutral aspect paradigms and the third person forms display some irregularities in the intentional and conditional, and partly in the non-future (Dunn 1999:180). As we can see from Table 5.8, the prefixes only distinguish first person from the rest, the S forms only second and third plural from the rest and only the patient indexes have separate forms for all person/number combinations.

In addition, there are suppletive suffixes indexing A and P at the same time, but only involving second and third persons. One forms covers a second person plural agent acting on a third person and the two others, a third singular agent acting on a third person singular or plural patient, see Table 5.9.

Furthermore, Chukchi exhibits 'inverse alignment', i.e. some configurations of A and P receive special marking. The inverse markers and their distribution are presented in Table 5.10. We see that the system is not as simple as that every scenario involving an SAP patient is inverse or vice versa. A third person singular acting on a third person patient is also marked as direct, for example. The suppletive forms are those from Table 5.9.

With the inverse forms, there is at most one participant co-referenced on the verb, but *ine-* and *tku-* are generally not accompanied by person markers. Only a 2PL agent is indicated by the suffix *-tək*, which is otherwise employed to cross-reference a patient. Inverse forms marked by *-ne* take a suffix indexing the patient (Dunn 1999:182-183). For a better impression of how the different parts of the system play together, the active non-future neutral paradigm for transitive and intransitive verbs is presented in Table 5.11. Both neutral aspect and non-future tense are unmarked, i.e. in this paradigm there are only the person indexes (Dunn 1999:185-186).

Itelmen does not have a direct-inverse system (anymore). There are two sets of forms, one for the indicative and one for the optative/imperative and two conjugation classes (Georg & Volodin 1999:142). As Fortescue (2003:63) notes, there is little sign of an ergative organization of the paradigm, just as in Chukchi. Indeed, we see

<table>
<tr><td>A/P</td><td>1SG</td><td>1PL</td><td>2</td><td>3</td></tr>
<tr><td>1</td><td colspan="2">-</td><td colspan="2">direct</td></tr>
<tr><td>2SG</td><td rowspan="3">ine-</td><td rowspan="2">-tku</td><td rowspan="2">-</td><td>direct</td></tr>
<tr><td>2PL</td><td rowspan="2">suppletive (direct)</td></tr>
<tr><td>3SG</td><td colspan="2">ne-</td></tr>
<tr><td>3PL</td><td colspan="4">ne-</td></tr>
</table>

Table 5.10: Direct and inverse marking in Chukchi (Dunn 1999:182)

A/P	1SG	1PL	2SG	2PL	3SG	3PL	INTR
1SG	-	-	*t-X-ɣət*	*t-X-tək*	*t-X-(ɣʔə-)n*	*t-X-net*	*t-X-(ɣʔe-)k*
1PL	-	-	*mət-X-ɣət*	*mət-X-tək*	*mət-X-(ɣʔə-)n*	*mət-X-net*	*mət-X-mək*
2SG	*ine-X-(ɣi-)i*	*X-tku-ɣʔ-i*	-	-	*X-(ɣʔə-)n*	*X-net*	*X-(ɣʔ-)i*
2PL	*ine-X-tək*	*X-tku-tək*	-	-	*X-tkə*	*X-tkə*	*X-tək*
3SG	*ine-X-(ɣi-)i*	*ne-X-mək*	*ne-X-ɣət*	*ne-X-tək*	*X-nin*	*X-ninet*	*X-(ɣʔ-)i*
3PL	*ne-X-ɣəm*				*ne-X-(ɣʔə-)n*	*ne-X-net*	*X-(ɣʔe-)t*

Table 5.11: Chukchi active non-future neutral aspect paradigm (Dunn 1999:177)

that the agent is consistently marked in all of the persons and numbers and this marking, e.g. 1SG *t-*, also appears in the intransitive form. The marking of the patient is much less uniform, except for the second person and the indirect object (dative) forms (see Tables 5.12 to 5.14). While also the Itelmen paradigm evades a simple classification in terms of alignment, it seems to be organized at least partly along the lines of a nominative-accusative system.

5.3.2 The affixes *ine-* and *-tku* in Chukchi

Two of the affixes marking inverse also have other functions, some of them valency-changing others not. We will first have a brief look at the latter, before discussing the former. The suffix *-tku* marks iterativity on both transitive and intransitive verbs (Example 5.35) and it derives verbs from nouns referring to a tool meaning 'use X as tool' or 'work with X' (Example 5.36) (Dunn 1999:261, 269).

(35) *ənqen=ʔm ənŋin n-ə-jʔu-tku-lʔet-qin ŋan: jʔu jʔu jʔu.*
DEM.ABS=EMPH thus HAB-EP-say.jʔu-ITER-DUR-3SG DEIX INTJ INTJ INTJ
He [laughed] like this: jʔu jʔu jʔu.' (Dunn 1999:261)

(36) *aŋqa-corm-ə-k n-ə-nɣiŋe-tku-qinet.*
sea-SIDE-EP-LOC HAB-EP-UTIL-3PL
They are net-fishing beside the sea.' (Dunn 1999:270)

The prefix *ine-* is also used to mark applicative. It attaches to transitive verbs, demoting the original patient to oblique and introducing a former oblique as a new object. This new object usually has the semantic role of a recipient or location. Thus, it does not affect the valency of the verb, but rather re-arranges the roles of the arguments (Dunn 1999:214). It is mostly used to indicate that a location or recipient argument that is more topical than the patient (Dunn 1999:215). Comparing the basic transitive clause in Example (37-a) and the applicative construction in Example (37-b), we see that agreement is transitive in both cases. However, the absolutive argument is the patient in Example (37-a), but the location in Example (37-b).

A/P	1SG	1PL	2SG	2PL	3SG	3PL
1SG	-	-	*t-X-(w)in*	*t-X-sxen*	*t-X-çen*	*t-X-çeʔn*
1PL	-	-	*n-X-(w)in*	*n-X-sxen*	*n-X-çen*	*n-X-çeʔn*
2SG	*-miŋ*	*-miʔŋ*	-	-	*-n*	*-ʔn*
2PL	*-miŋ-sx*	*-miʔŋ-sx*	-	-	*-sx*	*-sx-en*
3SG	*-(w)əmnen*	*-(w)əmneʔn*	*-(w)in*	*-sxen*	*-nen*	*-neʔn*
3PL	*n-X-(w)əmnen*	*n-X-(w)əmneʔn*	*n-X-(w)in*	*n-X-sxen*	*n-X-nen*	*n-X-neʔn*

Table 5.12: Itelmen transitive agreement class I indicative (Georg & Volodin 1999:143)

A/P	1SG	1PL	2SG	2PL	3SG	3PL
1SG	-	-	*t-X-xkin*	*t-X-kisxen*	*t-X-kiçen*	*t-X-kiçeʔn*
1PL	-	-	*n-X-xkin*	*n-X-kisxen*	*n-X-kiçen*	*n-X-kiçeʔn*
2SG	*-xkmiŋ*	*-xkmiʔŋ*	-	-	*-çwin*	*-çwiʔn*
2PL	*-xkmiŋ-sx*	*-xkmiʔŋ-sx*	-	-	*-sxik*	*-xkiʔn*
3SG	*n-X-kəmnen*	*n-X-kəmneʔn*	*n-X-xkin*	*n-X-kisxen*	*n-X-çiŋnen*	*n-X-çiŋneʔn*
3PL					*n-X-wnen*	*n-X-wneʔn*

Table 5.13: Itelmen transitive agreement class II indicative (Georg & Volodin 1999:144)

	2PL.DAT	3SG.DAT	3PL.DAT	INTR
1SG	*t-X-kisxen*	*t-X-kiçen*	*t-X-kipnen*	*t-X-kiçen*
1PL	*n-X-kisxen*	*n-X-kinen*	*n-X-kipnen*	*n-X-kiçen*
2SG	-	*-kinen*	*-kipnen*	*-ç*
2PL	-	*-sx*	*-sx*	*-sx*
3SG	*-kisxen*	*-kinen*	*-kipnen*	*-(w)en*
3PL	*-kisxeʔn*	*-kineʔn*	*-kipneʔn*	*-(w)eʔn*

Table 5.14: Itelmen dative and intransitive agreement (Georg & Volodin 1999:142, 145)

(37) a. *ətlʔa-ta jəme-nenat ewirʔ-ə-t.*
mother-ERG hang-3SG>3PL clothing-EP-3PL.ABS
Mother hung up the clothes.'
b. *ətʔla-ta ena-jme-nen nilɣ-ə-n.*
mother-ERG APPL-hang-3SG>3SG cord-EP-3SG.ABS
Mother hung (something) on the cord.' (Dunn 1999:215)

Both affixes also function as antipassives. While they commonly do so in non-finite verb forms and nominalizations (cf. Example 5.39), they are rare in finite forms (but see Example 5.38). The antipassive derivation turns a transitive verb into an intransitive one, with the S corresponding to the former A. When the suffix *-tku* is used its iterative meaning is also present, as in Example 5.39 (Dunn 1999:216-217). Interestingly, most negated transitive verbs appear in the antipassive, as in Example 5.40.

(38) *ɣəmo t-ena-n-walom-at-ə-k.*
1SG.ABS 1SG-AP-CAUS-hear-TH-EP-1SG
I made an an announcement.' (Dunn 1999:216)

(39) *qənwet pirq-ə-ɣʔi ecɣi ŋelwəl jara-ŋqaca-ɣtə qənwet pirq-ə-ɣʔi /*
finally collapse-EP-TH no.sooner herd.ABS house-beside-ALL finally collapse-EP-TH /
penr-ə-tko-lʔ-ə-n qora-jŋ-ə-n.
attack-EP-AP.ITER-NMLZ-EP-3SG.ABS reindeer-AUG-EP-ABS
Finally it collapsed, as soon as the herd was by the house, finally it collapsed, that attacking reindeer.' (Dunn 1999:217)

(40) *waj cakej! ŋotqena-jɣəm! ənŋe ena-jʔo-ka q-ə-ra-ɣt-ə-ɣʔe.*
hey sister.VOC here-1SG.ABS NEG.HORT AP-approach-NEG INT-EP-home-go.to-EP-PF
Hey sister! I'm here! Don't approach, go home!' (Dunn 1999:217)

Kurebito (2012:183) states that the antipassive is the most common valency-reducing operation in Chukchi and all the examples he provides are with finite verbs, like Examples (41-b) and (42-b). The data are from his own fieldwork, which he gathered from 2010 on. [18] As this is a good ten years later than Dunn (1999) wrote his grammar, one could assume that the use of the antipassive has increased. But this is only speculation.

(41) a. *tumɣ-e rəlwen-nin-ø nelɣ-ə-n.*
friend-ERG burn-3SG>3SG-PAST skin-EP-ABS.SG
The friend burned the skin.'
b. *tumɣətum ine-nlwet-ɣʔi-ø nelɣ-e.*
friend.ABS.SG AP-burn-3SG-PAST skin-INSTR
The friend burned a skin.' (Kurebito 2012:183)

[18] He does not say so explicitely, but his research project on Chukchi (and other languages) started then (see `http://www.aa.tufs.ac.jp/en/projects/jrp/jrp166`).

	class I	class II
1SG	*n-X-miŋ*	*n-X-xkmiŋ*
1PL	*n-X-miʔŋ*	*n-X-xkmiʔŋ*
2SG	*n-X-win*	*n-X-xkin*
2PL	*n-X-sxen*	*n-X-kisxen*
3SG	*n-X-çen*	*n-X-kiçen*
3PL	*n-X-çeʔn*	*n-X-kiçeʔn*

Table 5.15: Itelmen passive paradigms (Georg & Volodin 1999:163)

(42) a. *ʔəttʔ-e penr-ə-nen-ø melota-lyən.*
dog-ERG rush-EP-3SG>3SG-PAST hare-ABS.SG
The dog rushed the hare.'
b. *ʔətt-ə-n penr-ə-tko-yʔe-ø melota-ytə.*
dog-EP-ABS.SG rush-EP-AP-3SG-PAST hare-DAT
The dog rushed to a hare.' (Kurebito 2012:184)

A short note on the anticausative and reflexive and reciprocal expressions:
There is a further valency-changing operation in Chukchi, the anticausative. It is, however, not a productive derivation and apparently only appears with one verb, the transitive *pela-* 'leave', see Example 5.43. It involves the thematic suffix *-ət*, which has a wide range of other functions (Dunn 1999:219).

(43) *pel-at-yʔa-t.*
leave-ACAUS-TH-3PL
They remained (behind).' (Dunn 1999:219)

There is no special way of marking reciprocals, only some non-productive affixes with very specialized meanings. A reflexive can be expressed with 'body', which is then co-referenced as a patient on the verb (Dunn 1999:218-219).

(44) *yəmn-in əwik m-uwi-yʔe-n.*
1SG-3SG.POSS body.ABS 1SG.INT-cook.meat-TH-3SG
I cook meat for myself (lit. my body).' (Dunn 1999:219)

However, Kurebito (2012:185-186) presents a different view on reflexivity: he lists it among other detransitivization processes. They can either be formed by the suffix *-ət*, e.g. *qetw-ət* 'stab oneself' from *qetw-* 'stab', or by the suffix *-tku*, cf. Example 5.45

(45) *t-ə-lpiw-tku-yʔek-ø.*
1SG-EP-cut-REFL-1SG-PAST
I cut myself.' (Kurebito 2012:185)

5.3.3 Passive and antipassive in Itelmen

Unlike other Chukotko-Kamchatkan languages, Itelmen does not have case marking for core arguments, but only for obliques (Georg & Volodin 1999:71). In addition, pronouns are also neutrally aligned, which means that the subject or object status of an NP is only indicated on the verb.

There is a construction called 'passive' in which the agent is either not expressed at all or case marked as an oblique. The discussion in Georg & Volodin (1999:163-164) is very brief and - at least to me - quite confusing. There is a special passive paradigm, presented in Table 5.15. It is said that the first and second person forms are identical to the transitive forms with a third plural agent - but that does not really hold, cf. Tables 5.12 and 5.13. Actually, the first person forms as such are not found at all in the active paradigm and the suffixal part is the one that appears with a second person agent. The second person forms are indeed the same as with a third plural agent, but also identical to the first plural agent forms in class II. The third person forms in both classes are identical to the first plural agent forms. Then, the authors go on to say that the prefix should actually be interpreted as a passive marker and not as a third plural agent form.

The problem here seems to be that what they say is diachronically true, but not synchronically and they do not mention that rather important detail. Indeed, Fortescue (2003:60) explains exactly that: the passive prefix in Itelmen goes back to a third person plural agent marker (for details, see Section 5.3.4).

Synchronically, if we compare the active transitive clause in Example (46-a) with its passive counterpart in Example (46-b), it is clear that the *n-* in the passive clause cannot be interpreted as third person plural agent

A/P	1SG	1PL	2SG	2PL	3SG	3PL	INTR
1SG	-	-	*tə-X-gət	*tə-X-tək	*tə-X-gəRæn	*tə-X-næt	*tə-X-gəRæk
1PL	-	-	*mət-X-gət	*mət-X-tək	*mət-X-gəRæn	*mət-X-næt	*mət-X-mək
2SG	(*inæ-X-gəRæt)	*næ-X-mək	-	-	*-gəRæn	*-næt	*-gəRæ(t)
2PL	(*inæ-X-tək)	*-mək	-	-	*næ-X-tkə	*-tkə	*-tək
3SG	(*inæ-X-gəRæn)	*næ-X-mək	*næ-X-gət	*næ-X-tək	*næ-X-ninæn	*-ninæt	*-gəRæn
3PL	*næ-X-gəm				*næ-X-gəRæn	*-næ-X-næt	*-gəRæt

Table 5.16: Proto-Chukotian past agreement forms (Fortescue 2003:59-60)

anymore. The agent is already expressed overtly by an oblique noun phrase and it is singular, not plural.

(46) a. *Xiwne-ʔn min'ļ n-ənkw-nen.*
wolf-PL hare 3PL-catch-3SG
The wolves caught the hare.'
b. *Min'ļ n-ənkw-kiçen xiwne-nk.*
hare PASS-catch-3SG wolf-LOC
The hare was caught by the wolf.' (Georg & Volodin 1999:164)

The Itelmen passive is then fairly prototypical in demoting the agent to an oblique and indexing only the patient argument on the verb. It deviates in one parameter though, namely that the person markers are not those of the intransitive set, but rather patient forms of the transitive paradigm.

There is also a very rare antipassive construction, which can be formed in two ways: either by a prefix *in-* and intransitive inflection of the verb (see Example 5.47) or by a prefix *an-/in-/na-/ne-* or a suffix *-ʔļ/ļ* or both together, combined to a circumfix. The demoted patient can be expressed overtly in instrumental case (Georg & Volodin 1999:165-166). Most of the examples with the circumfix or parts of it are either not whole clauses, non-finite verbs or subordinate clauses like Example 5.47, but the finite verb in Example 5.48 shows that person marking is still present in the antipassive.

(47) *Fse iļc-qzu-z-eʔn qaʔm k'e an'-ļen'lloze-ʔļ-kaq.*
everybody be.silent-IMPF-PRES-3PL NEG who AP-ask-AP-NEG
Everbody remains silent, nobody asks questions.' (Georg & Volodin 1999:165)

(48) *T'salaj min'ļ-el in-ənk-qzu-z-en.*
fox hare-INSTR AP-hunt-IMPF-PRES-3SG
The fox habitually hunts hares.' (Georg & Volodin 1999:165)

Now the passive and antipassive prefix do look similar to the inverse marker *ine-* in Chukchi. We will discuss below (Section 5.3.4), whether a historical connection is possible or not.

5.3.4 On the history of *ine-/in-* and *ne-/n-*

Fortescue (2003:58-62) presents a reconstruction of Proto-Chukotian person markers (cf. Table 5.16) and then discusses how the Itelmen forms relate to them.

First of all, the element **-gəRæ-* is probably an old completive suffix or an even older participial marker. Note that intervocalic */R/* is lost in Itelmen and in general a lot of contractions take place in that language. The first person plural subject marker *n-* in Itelmen really goes back to **mət-* and is thus cognate with the Chukchi form, but has historically nothing to do with the third person plural agent prefix *n-*. There was first a syncope to **mt-* and then an assimilation to *nt-*, which is attested in the Sedanka dialect of Itelmen. In the southern dialect presented here, the */t/* was then lost (Fortescue 2003:58). It was already noted above (Section 5.3.3), that the antipassive prefix in Itelmen looks similar to the inverse and antipassive marker in Chukchi. Indeed, they both go back to **inæ-*, which had an antipassive function (Fortescue 2003:60). The Itelmen passive and third plural agent marker *n-* is related to the inverse marker *ne-* in Chukchi. Fortescue (2003:60) proposes that **næ-* originally marked a third person subject, then developed into a passive marker - which it still is in Itelmen - and from there into an inverse marker in Chukchi. All this is summarized in Table 5.17.

A note on the suffix *-tku*:
The origin of *-tku* is not clear, but there are some hints that indicate that it only recently developed into an inverse marker. Firstly, in the southernmost regions, *-tku* is not found at all in the verbal paradigm and *ne-* is used instead. This also the distribution found in the Koryak dialects. Secondly, as already mentioned above, it has a

Itelmen		Chukchi		Source	
in-	antipassive	*ine-*	inverse, antipassive	**inæ-*	antipassive
n-	passive, 3PL.A	*ne-*	inverse	**næ-*	3PL.A
n-	1PL.S/A	*mət-*	1PL.S/A	**mət-*	1PL.S/A

Table 5.17: Some voice and person markers in Itelmen and Chukchi and their sources

A/P	1SG	1NSG.I	1DU.E	1PL.E	2SG	2DU	2PL	3SG	3NSG	itr.
1SG					*X-na*	*X-na-ci*	*X-na-nin*	*X-u-ŋ*	*X-u-ŋ-cʌn*	*X-ŋa*
1DU.I								*X-ci*	*X-ci-ci*	*X-ci*
1PL.I								*X-u-m*	*X-u-m-cʌn*	*X-i/-e*
1DU.E					*ni-tʌ-X*	*ni-tʌ-X-ci*	*ni-tʌ-X-i*	*X-ci-ka*	*X-ci-ci-ka*	*X-ci-ka*
1PL.E					*ni-tʌ-X*	*ni-tʌ-X-i*		*X-u-m-ka*	*X-u-m-cʌm-ka*	*X-i-ka*
2SG	*tʌ-X-ŋa*		*kha-tʌ-X*					*tʌ-X-i*	*tʌ-X-i-ci*	*tʌ-X*
2DU	*tʌ-X-ŋa-cʌŋ*		*kha-tʌ-X-ci*					*tʌ-X-ci*	*tʌ-X-i-ci-ci*	*tʌ-X-ci*
2PL	*tʌ-X-ŋa-nʌŋ*		*kha-tʌ-X-i*					*tʌ-X-u-m*	*tʌ-X-u-m-cʌm*	*tʌ-X-i/e*
3SG	*pʌ-X-ŋa*	*kha-X*	*ni-pʌ-X-ci-ka*	*ni-pʌ-X-i-ka*	*tʌ-X*	*tʌ-X-ci*	*tʌ-X-i*	*X-i*	*X-i-ci*	*X*
3DU	*pʌ-X-ŋa-cʌŋ*	*kha-pʌ-X-ci*			*ni-tʌ-X*	*ni-tʌ-X-ci*	*ni-tʌ-X-i*	*pʌ-X-ci*	*pʌ-X-ci-ci*	*pʌ-X-ci*
3PL	*ni-pʌ-X-ŋa*	*kha-mʌ-X*	*ni-pʌ-X-i-ka*		*ni-tʌ-X*	*ni-tʌ-X-i*		*pʌ-X*	*mʌ-X-i-ci*	*mʌ-X*

Table 5.18: Verbal person marking (non-past) in Puma (Sharma 2014:175)

wide array of other functions, both verbal and nominal. Thirdly, it seems to have been recruited to mark plurality in SAP>SAP configurations (Dunn 1999:183-184).

To sum up, Chukchi has an overlap between the antipassive and inverse marker, which is also a person marker. More precisely, the antipassive overlaps with the marker that appears in 2>1SG and 3SG>1SG configurations, that is, it seems to be linked to first person singular patients. As has been shown above, the marker is also present as an antipassive in Itelmen, but not as a person marker. Therefore, the most plausible scenario is that the antipassive marker was recruited as an inverse marker in Chukchi.

The inverse marker *ne-* is attested in Itelmen as third person plural agent marker, but also as a passive. The scenario here is quite the opposite: the prefix started out as third person marker and developed into a passive marker; a development that is well attested. In Itelmen that is what still is today, but in Chukchi it was then recruited as an inverse marker. How the three inverse markers in Chukchi - *ine-*, *ne-* and *-tku* - came to be distributed in the way they are today warrants more research and cannot be investigated here.

5.4 Puma and Yakkha (Sino-Tibetan, Kiranti)

Puma and Yakkha are two Kiranti languages spoken in Eastern Nepal, but not adjacent to each other. Puma is part of the Southern Central Kiranti subgroup, while Yakkha belongs to the Eastern Kiranti subgroup (Bickel & Gaenszle 2015:76, 78).

5.4.1 Person marking

Kiranti languages are renowned for their complex verbal person marking: A and P are obligatorily marked, usually in various slots preceding and succeeding the verb stem. The marking of person, number and syntactic role often interact with each other. In addition, there are morphophonological processes, which means that some morphemes are rarely overtly realized. To complicate the matter even more, some suffixes can be 'copied' and are then realized in several slots (Schackow 2014:211-212, Sharma 2014:136).

Both Puma and Yakkha are typical Kiranti languages in that respect. The system in Puma is a little bit more extensive than the one in Yakkha in that there are more different forms and positions. In Yakkha, the vast majority of person markers are suffixes (Table 5.19). Here is not the place to discuss all the details at length. The reader interested in the details is referred to Schackow 2014:211-223 and Sharma 2014:132-152, among others.

On transitive verbs, both the agent and the patient are indexed. The blank cells indicate that the forms do not exist; instead, reflexives are used. Some of the affixes only indicate number, some only person and others a combination thereof. For a better understanding of how these systems work in practice, consider Examples 5.49 and 5.50, which illustrate a transitive non-past sentence in Yakkha and Puma, respectively.

(49) *khʌnna-a ŋa-lai tʌ-cet-ŋa.*
2SG-ERG 1SG-DAT 2-hit-1SG.P.NPAST
You hit me.' (Puma) (Sharma 2014:141)

A/P	1SG	1NSG	2SG	2DU	2PL	3SG	3NSG	itr.
1SG			*-nen*	*-nen-ci*	*-nen-i*	*-ŋa*	*-ŋ-ci-ŋ*	*-ŋ*
1DU.I						*-c-u*	*-c-u-ci*	*-ci*
1PL.I						*-m*	*-m-ci-m*	*-i*
1DU.E			*-nen-ci*		*-nen-i*	*-ŋ-c-u-ŋ*	*-ŋ-c-u-ŋ-ci*	*-ŋ-ci-ŋ*
1PL.E			*-nen-i*			*-m-ŋa*	*-m-ci-m-ŋa*	*-i-ŋ*
2SG	*-ŋ-ka*	*-ka*				*-ka*	*-ci-ka*	*-ka*
2DU	*-ka*					*-c-u-ka*	*-c-u-ci-ka*	*-ci-ka*
2PL						*-m-ka*	*-m-ci-m-ka*	*-i-ka*
3SG	*-ŋ*	*-ø*	*-ka*	*-ci-ka*	*-i-ka*	*-ø*	*-ci*	*-ø*
3DU	*-ø*					*-c-u*	*-c-u-ci*	*-ci*
3PL			*N-X-ka*			*N-X*	*N-X-ci*	*N-X*

Table 5.19: Verbal person marking in Yakkha (Schackow 2014:214)

(50) *chim-me-ŋ-c-u-ŋ-ci-ŋ=ha*
ask-NPAST-COPY-DU-3P-COPY-3NSG.P-E=NMLZ.NSG
We (dual excl.) will ask them.' (Yakkha) (Schackow 2014:221)

5.4.2 From antipassive to first person patient in Puma

Puma has two strategies for antipassive constructions: zero marking and the prefix *kha-*. The construction with the *kha*-prefix is restricted to human objects, which can never be expressed overtly. Thus, such a clause is ambiguous between a first person object and antipassive interpretation, unless there is another overt NP (compare Example (51-a) and Example (51-b)). By contrast, the zero derivation has no semantical restrictions and its object has to be present in all cases, as in Example (52-b) (Bickel & Gaenszle 2015:6).

(51) a. *(kho-ci) som-kha-mʌ-tuk.*
3-NSG[NOM] love-AP-3PL.S-love.NPST
They love people.'

b. *(kho-ci-a) som-kha-mʌ-tuk.*
3-NSG-ERG love-1NSG.I-3PL.S-love.NPST
They love us.' (Bickel & Gaenszle 2015:69)

(52) a. *khim(-lai) copp-u-ŋ.*
house(-DAT) look.NPST-3SG.P-1SG.A
I look at the/a house.'

b. *khim cop-ŋa.*
house look-1SG.S.NPST
I see houses. or: I do house-seeing.' (Bickel & Gaenszle 2015:70)

The semantic restrictions imposed by *kha-* are explained by its eymology: it derives from Proto-Kiranti **khəl* 'all'.[19] Most likely, this was a frequent object in zero antipassive constructions, as it has a relatively generic reference. However, to become part of the verb, *kha-* had to loose "most of the properties that objects still have in Puma antipassives." (Bickel & Gaenszle 2015:70). This is confirmed by the fact that relativization of the patient is possible with *ø*-antipassives, but not with *kha*-antipassives (Bickel & Gaenszle 2015:71).

Puma, as well as other Kiranti languages of the region, has been in close contact with Maithili, an Indo-Iranian language. Maithili has a politeness strategy by which reference to first persons is avoided, especially in varieties with high prestige. There is evidence that Southern Kirant languages were in contact with exactly these high-prestige forms of Maithili. It it thus reasonable to conclude that the development from antipassive to first person was initiated by exposure to the Maithili avoidance strategy (Bickel & Gaenszle 2015:80-81).

As a result, the prefix *kha-* has replaced all person markers involving a first person non-singular inclusive and exclusive when combined with a second person agent (Bickel & Gaenszle 2015:69).

5.4.3 From antipassive to first person patient in Yakkha

In Yakkha, there is only one way of expressing a passive or antipassive, namely zero derivation. Because its history and further development is somewhat parallel to scenario in Puma, I will first discuss the antipassive.

[19] In present-day Puma, it has been replaced by the Indo-Aryan loan *jhara* 'all', which means that the diachronic link is not evident anymore (Bickel & Gaenszle 2015:70).

As already mentioned, there is no additional morphology on the verb to mark an antipassive construction. Rather, the transitive verb is simply inflected intransitively (compare Example (53-b) to its active counterpart Example (53-a)). It is still possible to express the patient, which is in nominative case like in a transitive clause, but it is no longer co-referenced on the verb (Schackow 2014:355).

(53) a. *nnakha nak-se ŋ-ghe?-me=hoŋ ce?ya n-jekt-wa.*
those ask-SUP 3PL-go-NPST=SEQ matter 3PL.A-speak-NPST[3P]
After they go there to ask (for the girl), they discuss the matter.'
b. *menuka=le ucun=nuŋ ceŋ-me?=na.*
Menuka=CTR nice=CPM speak[3SG]-PST=NMLZ.SG
Menuka talks nicely.' (Schackow 2014:356)

From Table 5.19, we see that all the first patient forms are the same as the singular intransitive forms of the respective agent. Materials from the 1980's report forms which explicitly index a first person patient (see Schackow 2014:219f. for a detailed discussion).

Transitive verbs with intransitive inflection can also have a passive interpretation. The agent is optionally expressed as an oblique argument in ablative case and is not cross-referenced on the verb (cf. Example (54-b)). However, this is at best a marginal phenomenon in spoken language, as arguments in general are usually not expressed (Schackow 2014:352).

(54) a. *magman=ŋa na wa sis-u=na*
Magman=ERG this chicken kill-3P[PAST]=NMLZ.SG
Magman killed this chicken.'
b. *na wa magman=bhaŋ sis-a=na*
this chicken Magman=ABL kill[3SG]-PST=NMLZ.SG
This chicken was killed by Magman.' (Schackow 2014:352)

In many cases, passives can also be interpreted with a first person plural agent, as in Example 5.55. Indeed, the first person agent interpretation is the preferred and a passive interpretation is even rejected by speakers in some cases (Schackow 2014:362).

(55) *kisa sis-a=na.*
deer kill[3SG]-PST=ART.SG
The deer was killed. *or* We killed the deer.' (Schackow 2014:362)

Such a pattern is not attested in other Kiranti languages. While Schackow (2014:362) sees a parallel development to the antipassive, Bickel & Gaenszle (2015:75) think it is unrelated. The ø-antipassive forms have fully replaced the first person plural patient forms, which is why in present-day Yakkha, the intransitives are used in this place. The development from the passive to first person plural agent forms has not gone so far until now. But it is not unreasonable to assume that it could happen in the future.

5.4.4 On similar developments in neighboring languages

Similar developments are attested in many neighboring Kiranti languages, more precisely, in the sociolinguistic area Southern Kirant (see Bickel & Gaenszle 2015:64 and Section 2.2 for more details.) Several of these show a similar development to that in Puma, but starting from a lexeme meaning 'people'. In Belhare, the intermediate step between the use of 'people' in an antipassive environment to its reanalysis is attested.

(56) a. *un ma?i ni-yu.*
3SG.NOM person[SG.NOM] [3SG.S]see-NPST
S/he sees people.'
b. *un-na ma?i-ni-yu.*
3SG-ERG 1E.P-see-NPST
S/he sees us (excl.).' (Bickel & Gaenszle 2015:68)

There is language internal evidence that *ma?iniyu* in Example (56-b) is actually one word and not two: no element can appear between *ma?i* and *niyu* while this is perfectly possible in Example (56-a) (Bickel & Gaenszle 2015:64).

The languages in question belong to different subgroups, so the developments are parallel innovations. However, they form a contiguous geographical area. I will not go into details here about where the construction started and how it spread. The main point is that the parallel innovations from voice marker to first person marker can be attributed to the contact with Maithili and the political history of the region (Bickel & Gaenszle 2015:79ff.).

	pronouns				agreement
	NOM	ACC	GEN	PART	NOM
1SG	*minä*	*minu-t*	*minu-n*	*minu-a*	*-n*
1PL	*me*	*me-i-dät*	*me-i-dän*	*me-i-tä*	*-mme*
2SG	*sinä*	*sinu-t*	*sinu-n*	*sinu-a*	*-t*
2PL	*te*	*te-i-dät*	*te-i-dän*	*te-i-tä*	*-tte*
3SG	*hän*	*häne-t*	*häne-n*	*hän-tä*	*-ø ~-:*
3PL	*he*	*he-i-dät*	*he-i-dän*	*he-i-tä*	*-vat ~-vät*

Table 5.20: Finnish pronouns and verb agreement (Karlsson & Chesterman 2008:61, 136)

5.5 A note on Finnish and Eastern Armenian

The attentive reader may have noted that none of the languages discussed so far are located in Europe. The region, as is well known, is dominated by Indo-European languages and these are not fond of voice marking altogether. Furthermore, if a European language does have voice marking, it is either periphrastic, involving a passive participle (Haspelmath 1994:151) or, in case of the antipassive, can be traced back to the Proto-Indo-European reflexive marker **sē* (Janic 2013:45f.). Even so, there is an interesting phenomenon in Finnish, as already mentioned in Section 2.2. We will have a closer look at the forms involved here. After that, I will briefly present voice and person marking in Armenian, firstly so that at least one Indo-European language is included and secondly, because there is a partial overlap in voice and person marking.

Finnish:
Finnish has accusatively aligned pronouns and agreement that cross-references S and A (see Table 5.20). First and second person pronouns are often omitted in discourse, but the third person pronoun has to be present in most cases (Karlsson & Chesterman 2008:62). The partitive is used for indefinite, non-limited quantity words that function as objects and plural nouns functioning as subjects (Karlsson & Chesterman 2008:82-83). The genitive is also used to mark subjects with some types of verbs (Karlsson & Chesterman 2008:96). There is a construction in Finnish which is often labeled 'impersonal passive'. There has been quite a discussion about whether this is appropriately labeled passive or not (see Helasvuo & Vilkuna 2008:234-235 for references). The verb is marked by the suffix *-tAAn*, which is segmentable into a marker *-tA* and the element *-an*, which goes back to a third person marker in the reflexive inflection of certain Finnish dialects (Helasvuo & Vilkuna 2008:229). It still occupies the same slot as all the other person markers, which means that in the past tense, the two are separated by the tense marker, cf. Example (57-b). While the forms are segmented in Helasvuo & Vilkuna (2008) (e.g. *-t-i-in* as PASS-PAST-PERS), probably for historical reasons, I doubt that they are transparent for speakers of Finnish and thus I leave them unsegmented.

The impersonal passive construction is always agentless, but a non-specific human agent is implied. The patient, however, is still marked as such: it appears in the accusative case (compare Examples (57-a) and (57-b)). This only applies to pronouns, full NPs have nominative case in the same construction, as in Example 5.58. As certain constructions allow nominative objects in Finnish, this does not necessarily indicate that the patient has been promoted to subject. Patients that are marked in partitive case in the active, remain so in the impersonal. In both cases, the verb does not agree with the subject in the passive (Helasvuo & Vilkuna 2008:229-230).

(57) a. *he ve-i-vät häne-t pois.*
3PL.NOM take-PAST-3PL 3SG-ACC away
'They took him away.'
b. *häne-t vie-tiin sairaala-an.*
3SG-ACC take-IMPS.PAST hospital-ILL
'S/he was taken to the hospital.' (Helasvuo & Vilkuna 2008:229)

(58) *jos pyörä vie-dään si-tä kannatta-a kysal-lä uuttera-sti poliisi-n löytötavaro-i-sta.*
if bicycle.NOM take-IMPS it-PAR be.worth-3SG ask-INF diligent-ADV police-GEN lost.property-PL-ELA
'If one's bicycle is stolen, it is worthwhile to keep asking for it at the lost property office of the police.' (Helasvuo & Vilkuna 2008:228)

Note that there is also a periphrastic construction, called 'personal passive', with the auxiliary 'become' and a participle, in which the verb agrees with the subject and the patient is expressed in nominative case (cf. Example 5.59). Its use is, however, quite restricted (Helasvuo & Vilkuna 2008:220-221).

(59) *Sinä tul-i-t vali-tu-kusi.*
2SG.NOM become-PAST-2SG choose-PTC-TRA

You became elected.' (Helasvuo & Vilkuna 2008:221)

As already described in Section 2.2, the first person plural is being replaced by the impersonal construction in Colloquial Finnish (Ajanki 2010). For the sake of convenience, the examples are repeated here (Examples (60-a) and (60-b)).

(60) a. *(me-ø) osta-mme auto-n.*
(1PL-NOM) buy-1PL car-GEN/ACC
We will buy a car.'
b. *me-ø oste-taan auto-ø.*
1PL-NOM buy-IMPS car-NOM
We will buy a car.' (Ajanki 2010)

There is actually an example in the grammar of Karlsson & Chesterman (2008), who does not mention this use, that also reflects the first plural interpretation, namely Example 5.61.

(61) *Suome-ssa juo-daan sekä maito-a että olutt-a.*
Finland-ILL drink-IMPS and milk-PART as.well.as beer-PART
In Finland people drink both milk and beer.' (Karlsson & Chesterman 2008:175)

Eastern Armenian:
Armenian, or more specifically Eastern Armenian, has a passive formed with the suffix *-v* that attaches to the present or aorist stem of the verb. With a few exceptions, all transitive verbs can be passivized. The suffix is not a specialized passive marker: it also expresses reflexivity (Example (62-c)), reciprocality (Example (62-d)) and the anticausative (Example (62-b)). In all of these cases, the verb is detransitivized (Dum-Tragut 2009:176). In most cases, it is actually used in a periphrastic construction involving a participle and the auxiliary 'be' (only the aorist is a synthetic verb form), but it is still the *-v* that marks the detransitivization. Reflexives and reciprocals can be, and commonly are, expressed by syntactic constructions.

(62) a. *Anna-n sir-v-um ē ir bolor dasĕnker-ner-ic'.*
Anna.NOM-DET love-V-PTCP.PRES be.SG her all classmate-PL-ABL
Anna is loved by all her classmates.' (Dum-Tragut 2009:341)
b. *całkman-ĕ ǰard-v-ec'.*
vase.NOM-DET break-V-AOR.3SG
The vase broke.' (Dum-Tragut 2009:345)
c. *patrast-v-um ēi mekn-el Gyumri.*
prepare-V-PTCP.PRES be.1SG depart-INF Gyumri.NOM
I prepared myself to depart from Gyumri.' (Dum-Tragut 2009:572)
d. *Anuš-n u Aram-ĕ hambur-v-um en.*
Anuš.NOM-DET CONJ Aram.NOM-DET kiss-V-PTCP.PRES be.3PL
Anuš and Aram kiss.' (Dum-Tragut 2009:358)

There is a set of personal pronouns and agreement with S and A, though the latter is only used in the aorist, which is the only synthetic verb form in Eastern Armenian (Dum-Tragut 2009:229). With all other forms, the personal pronouns are used. There is a split in the third person, with human patients being dative marked, while non-human patients appear in nominative case. This is also true of full NPs (Dum-Tragut 2009:80, 85). As first and second person cannot be non-human, they are always accusatively aligned. [20]

The variants are morphologically conditioned by verb class: the variants on the left appear with simple verbs in *-el, -al* and verbs suffixes with *-v*, mentioned above, and *-c'r* 'causative'. The forms to the right are used with derived verbs in *-enal, -anal, -n, -č'* (Dum-Tragut 2009:229).

From Table 5.21, we see that the 3SG agreement form for derived verbs is formally a bit similar to the passive marker *-v*. However, they do not have a historical connection, which would be difficult to motivate anyway, as the formal overlap is not complete and *-av* is only a variant, notably one that does not occur with the passive. The 3SG form *-av* goes back to the Old Armenian 3SG *-aw* which was the form of the aorist in the medio-passive. [21] Its origin is not entirely clear, but the most probable hypothesis is that it is a regular development from the Proto-Indo-European medio-passive form **-ato*. There are no other examples for this sound sequence, so it is unclear whether the sound law exists or not (Schmidt 1985:221-222).

There have been several proposals regarding the origin of the passive marker *-v*, but scholars have not come to an agreement yet. The passive in *-u* existed already in Old Armenian and was quite frequent. The first approach takes the conjugation class of verbs in *-u-* in Old Armenian as the starting point; the aorist forms are

[20] There is no accusative case in Armenian, i.e. no case dedicated to marking objects. The dative has very many other functions as well.
[21] The voice system in Old Armenian was quite different from that in Modern Armenian.

	pronouns		agreement
	NOM	DAT	NOM
1SG	*es*	*inj*	*-i ~-a*
1PL	*menk'*	*mez*	*-ink' ~-ank'*
2SG	*du*	*k'ez*	*-ir ~-ar*
2PL	*duk'*	*jez*	*-ik' ~-ak'*
3SG	*na*	*nra-n*	*-ø ~-av*
3PL	*nran-k'*	*nran-c'*	*-in ~-an*

Table 5.21: Pronouns and agreement in Eastern Armenian (Dum-Tragut 2009:124, 229)

	strong verb		u-conjugation	
	AOR.ACT	AOR.PASS	AOR.ACT	AOR.PASS
1SG	*-i*	*-ay*	*-wc'i*	*-wc'ay*
1PL	*-ak'*	*-ak'*	*-wc'ak'*	*-wc'ak'*
2SG	*-er*	*-ar*	*-wc'er*	*-wc'ar*
2PL	*-ēk' ~ ik'*	*-ayk'*	*-wc'ēk'*	*-wc'ayk'*
3SG	*e-*	*-aw*	*-yc'*	*-wc'aw*
3PL	*-in*	*-an*	*-wc'in*	*-wc'an*

Table 5.22: Old Armenian aorist verb forms (Jasanoff 1979:141, Ziegler 2009)

given in Table 5.22. The hypothesis is that somewhere between Old and Modern Armenian a reanalysis of the *u*-conjugation forms took place and the *-w* was then interpreted as marking the passive. The second hypothesis assumes that verbal nouns in *-ac* and *-uac* were involved that developed into participles in Modern Armenian. However, the link between passive meaning and the *-uac* forms is not so clear (Jungmann 1975:141-142). Whatever the exact history of the forms in question, it seems quite clear that there is no connection between the 3SG *-aw*, which existed already in Old Armenian, and the passive marker *-v*, which developed only between Old and Modern Armenian.

5.6 Summary

In the languages surveyed in this section, there were nine voice markers found in nine languages, see Table 5.23. The first thing to be noted is that apart from Armenian, none of the languages have an overlap between voice marking and reflexive and reciprocal expressions. This could be attributed to the particular expression of reflexives and reciprocals: many languages in the sample express these concepts by nouns or pronouns and not by verbal affixes. In this line it must also be noted that in the majority of cases, reflexive and reciprocal have a separate encoding.

The Tungusic passive-causative suffix is counted as one, because it can safely be reconstructed with that function for Proto-Tungusic. However, as the person markers it overlaps with in Udihe and Evenki have different functions, i.e. second and first person singular respectively, they are seen as separate instances. Conversely, the Itelmen antipassive is probably cognate with the Chukchi antipassive prefix *ine-*, but because Itelmen also uses it as part of a circumfix it is counted separately. This means that seven of the nine voice marker show an overlap with a person marker, but as the Itelmen passive prefix overlaps with two forms, there are eight overlaps out of which five have at least a chance level probability of a historical connection. Overall, based on my sample, a voice marker occurring in Eurasia has 56% chance of a diachronic association with a person marker:

voice markers	no. of overlapping VM	no. overlaps	prob. >0.4	in %
9	7	8	5	56

So far as voice marking is concerned, it springs to mind that most of the languages have either a passive or antipassive. The only exceptions are Yakkha with a general detransitivizer and Itelmen which has both. Interestingly, the direction of the development seems quite uniform in this macro-area: the voice marker turns into a person marker (or is on the way of doing so). Only in Itelmen, the reverse is the case: the 3PL agent marker developed into a passive.

The association of alignment and voice marking is very strong in Eurasia: all the passive markers are found in languages which have accusative alignment throughout, while the antipassives occur in languages with ergative alignment for NPs and ergative or neutral alignment in pronouns. In addition, all of the antipassive languages has a complex agreement system, cf. Table 5.24.

Language	Voice		Person		Direction	Prob.	Reflexive and Reciprocal	
Kabardian	none						REFL	*za- ~ zə- ~ z-*
							REC	*za- ~ zara-*
Ubykh	PASS	*periphrastic (calqued from Turkish)*					REFL, REC	*zɜ-*
Chukchi	AP	*ine-*	2>1SG, 3SG>1SG	*ine-*	VM >PM	0.9	REFL	nom. *cinit-kin*, part. *cinit* (A only)
	AP	*-tku*	2>1PL	*-tku*	VM >PM	0.8	REC	no special marking
Itelmen	AP	*an-/in-/na-/neX-(ʔ)l̩*	-				REFL	nom. *uwik*
	PASS	*n-*	1PL.A	*n-*		0.1	REC	*lo- ~ lu-*
			3PL.A	*n-*	PM >VM	0.9		
Puma	AP	*kha-*	1PL.P	*kha-*	VM >PM	0.9	REFL	V2 *-cen*
							REC	V2 *-mu*
Yakkha	DETR	*ø-*	1PL.P	*ø-*	VM >PM	0.9	REFL	V2 *-ca*
							REC	V2 *-khusa*
Nanai (Kilen)	PASS, CAUS	*-wu*	-				REFL	nom. *mənə*
							REC	*-matɕi*
Udihe	PASS, CAUS	*-u ~-wu*	2SG.NOM	*-u*		0.1	REFL	nom. *men-e* (SG) , *men-e-men-e* (PL)
	ACAUS	*-ptA ~-ktA ~-kpi*	-				REC	nom. *men-e-men-e*
Evenki	PASS, CAUS	*-v*	1SG.NOM	*-v*		0.1	REFL	nom. *meːn/meːr*-POSS
							REC	*-mAt ~-mAch* and nom. *memegi-l-ver*
Finnish	IMPS, PASS	*-tAAn*					REFL	nom. *itse*
			1PL	*-tAAn*	VM >PM	0.9	REC	nom. *toinen-toinen*
Armenian (Eastern)	PASS, ACAUS, REFL, REC	*-v*	3SG.NOM	*-av*		0.1	REFL	nom. =DAT of pers. nom.

Table 5.23: Overview of the languages of Eurasia

Language	Pronouns	Agreement		NP	Voice
Kabardian	neutral / ergative (SAP vs. 3)	A and P	ergative	ergative	none
Ubykh	neutral	A and P	ergative	ergative	none
Chukchi	ergative	A and P	mixed	ergative	AP
Itelmen	neutral	A and P	mixed	ergative	AP
Armenian (Eastern)	accusative	A only	accusative	accusative	PASS
Puma	ergative	A and P	mixed	ergative	AP
Yakkha	neutral	A and P	mixed	ergative	DETR
Nanai (Kilen)	accusative	A only	accusative	accusative	PASS
Udihe	accusative	A only	accusative	accusative	PASS
Evenki	accusative	A only	accusative	accusative	PASS
Finnish	accusative	A only	accusative	accusative	PASS

Table 5.24: Alignment and voice marking in the languages of Eurasia

	PAN	PMP
1SG	**i-aku*	
2SG	**i-Su, *i-kaSu*	**i-kahu*
3SG	**si-ia*	
1PL.I	**i-(k)ita*	
1PL.E	**i-(k)ami*	
2PL	**i-kamu*	**ikamu, *ihu*
3PL	**si-ida*	

Table 6.1: Proto-Austronesian and Proto-Malayo-Polynesian pronouns (Blust 2013:314)

6 Languages of the Pacific

All languages in the Pacific macro-area but one are Austronesian. This might be a little bit surprising, given the extensive diversity found in Papua New Guinea. However, Papuan languages are not fond of morphologically marked voice alternations. Indeed, a quick survey of about ten grammars of various language of PNG confirmed this: not one languages had a voice marker or anything with a similar function. As many languages in that region are not described at all or only very briefly, it is difficult to say whether this is a characteristic of Papuan languages or whether it has been simply overlooked until now.

6.1 Proto-Austronesian pronouns and other relevant aspects

As mentioned above, all languages, except for Savosavo, descend from Proto-Austronesian (PAN in the following). Fortunately, the literature on PAN is quite extensive, compare, for example, the recent and comprehensive volume by Blust (2013). In the following, I will briefly present the reconstruction of the pronominal system and of various affixes which will be relevant to the discussion of the individual languages below. Some aspects of the Oceanic branch are taken up in Section 6.2. The PAN pronouns are reconstructed with a clusivity distinction for first person and a two-way number contrast. The Proto-Malayo-Polynesian forms only differ from PAN in second person (cf. Table 6.1). They consist of two morphemes, the first being the nominative marker, namely **i-* for first and second person and **si-* for third person. In many languages, these have become fused to the pronouns, so that the pronouns are synchronically monomorphemic (Blust 2013:315).

The stative prefix **ma-* is very widespread in Austronesian languages. It is most productive in the languages of Taiwan, the Philippines and western Indonesian. Outside of this area, the prefix is mostly fossilized. It is often found on words that are translated as adjectives in English (Blust 2013:376).

The prefix **paRi-* is best represented in the Oceanic languages and will be discussed in more detail below (Section 6.2). It is attested to mark reciprocality and plural subjects on verbs and collectivity on nouns (Blust 2013:380).

The prefix **ta-*, or **taR-*, indicates a 'sudden, unexpected or accidental action' (Blust 2013:382). It is found in a wide area ranging from the central Philippines to Polynesia. However, in most languages it is not very prominent. Details concerning its development in Oceanic languages are presented in Section 6.2.

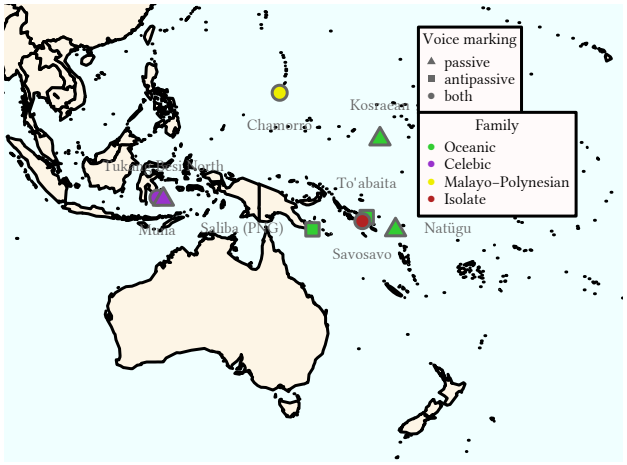


Figure 6.1: Language map of the Pacific

	independent pron.	subj. I	subj. II	subj. III	obj.	poss.
1SG	**(i)au*	**au=*	**ku=*	**(y)a-*	**=au*	**-gu*
2SG	**(i)ko(e)*	**ko=*	**mu=*	**o-*	**=ko*	**-mu*
3SG	**ia*	**i=*	**(y)a=, ña=*	**e-*	**=a*	**-ña*
1NSG.I	**kita*	**ta=*	**ta= (?)*			**-da*
1NSG.E	**ka(m)i, kamami*			**ka(i)=, mi=*		**-ma(m)i*
2NSG	**ka(m)u, kamiu*			**kau=, m(i)u=*		**-m(i)u*
3NSG	**(k)ira*	**=ra*	**ra=(?)*		**=ra*	**-dra*

Table 6.2: Proto-Oceanic person markers (Lynch et al. 2002:67-68)

6.2 Oceanic Languages

The following four languages are all Oceanic, but belong to different branches. Due to lack of description or absence of voice markers it was not possible to pick several languages from the same subgroup. But to explore the diversity and similarities within one family can also be very informative. Saliba, To'abaita, Natügu and Kosraean all stem from Proto-Oceanic, which is reconstructable for the most part, but of course not without controversies. Before going into the discussion of the single languages, I will first present the Proto-Oceanic person marking and voice marking system.

There is a set of independent pronouns with neutral alignment, as well as subject, object and possessive markers (see Table 6.2). There are three series of subjects markers, because the reconstruction of the exact forms is problematic. The gaps in the paradigm are not due to lack of information, but were probably filled by independent pronouns, i.e. the paradigm really was defective. In most Oceanic languages, however, the gaps have been filled with newly created forms (Lynch et al. 2002:67-68). The nominative marker of PAN has either been fused or lost completely (compare Table 6.1).

There are several valency-changing devices reconstructed for POC (Evans 2003:301). I will only briefly introduce those relevant to the following discussion. Proto-Oceanic had several strategies to decrease the valency of a verb: reduplication, the prefix **ma-* and the prefix **ta-*. With the prefix **ma-*, the P argument of the transitive clause becomes the S argument of the intransitive clause, i.e. it had a passive function. In most modern languages, the reflexes of **ma-* attach primarily to verbs with a high transitivity value, i.e. with an animate agent, and this is assumed to be true also for the proto-language. The prefix also had an other function, namely "to derive an Undergoer subject verb that indicated a stative property" (Evans 2003:302). However, this use is not productive in any of the modern Oceanic languages, but it preserved in some Undergoer subject forms. The suffix can be traced back to PAN, where it derived stative verbs from nominal roots (cf. Section 6.1).

With the prefix **ta-*, as with **ma-*, the S argument corresponds to the P of the transitive clause. In addition, it is restricted to spontaneously occurring events happening without the involvement of an agent. This also reflected in Lynch et al. (2002:83)'s description as 'spontaneous, anticausative intransitive'. It was regularly used as intransitive corresponding to a verb with the transitive suffix **-i* (Evans 2003:303). Thus, it seems to directly continue PAN **ta-*.

The POC suffix **-akin[i]* had valency-increasing effect, namely that of introducing an additional participant. Indeed, in many modern Oceanic languages, its reflexes are used with a causative meaning (Evans 2003:303).

	pronouns	agreement	
		NOM	ACC
1SG	*yau*	*ya-*	*-gau*
2SG	*kowa*	*ku- ~ ko-*	*-go*
3SG	*iya*	*ye- ~ i-*	*-ø ~-ya*
1PL.I	*kita*	*ta-*	*-da*
1PL.E	*kai*	*ka-*	*-gai*
2PL	*komiu*	*kwa-*	*-gomiu*
3PL	*siya*	*se- ~ si-*	*-di*

Table 6.3: Person markers in Saliba (Margetts 1999:26)

However, in other Oceanic languages including those of the Micronesian branch, **-akin[i]* has developed a rather opposite function: it derives intransitive resultatives from transitives. It is assumed that it was used to form agentless passives in Proto-Micronesian (Evans 2003:135).

Also of importance for the following discussion is the POC prefix **paRi-*. It is commonly agreed that it indicated plurality of relations and thus is often said to have had a collective and reciprocal meaning. In many modern Oceanic languages its reflexes are indeed used in reciprocal and/or antipassive constructions (Janic 2013:56-57). This is also consistent with reflexes of **paRi-* in non-Oceanic languages, as mentioned in Section 6.1.

6.2.1 Saliba (Austronesian, MP, Oceanic, Papuan Tip linkage)

Saliba is an Oceanic language spoken in Papua New Guinea. Unfortunately, grammars or grammar sketches of other Papuan Tip languages are as of now inexistent, so no other language of that subgroup could be included.

Saliba's person marking system is quite what is expected from a modern Oceanic language. The pronouns exhibit neutral alignment, while agreement shows accusative alignment (Table 6.3). The free pronouns are used with non-verbal predicates and can also co-occur with the agreement markers adding emphasis. The variants are remnants of a no longer existing distinction between realis and irrealis (Margetts 1999:27). See the discussion about Chamorro in Section 6.3.2 for an intact system of this kind. The pronouns correspond, with minor changes, to what is reconstructed for POC. The nominative agreement forms most closely resemble set I (see Table 6.2), even though they might as well be shortened forms of the independent pronouns. At least, the gap of 1PL.E seems to have been filled with such a reduced form. The accusative pronouns, however, do not seem to descend from the POC object markers, rather they are clearly derived from the independent pronouns, with some minor adaptions and changes. The 1PL.E pronoun *kai* most probably comes from POC 1NSG.E **ka(m)i* (Anna Margetts, p.c.). The 1PL.NOM *ta-* could be the direct reflex of POC set I **ta=* or, if it is the shortened form of the independent pronoun, the second part of **kita*. Both forms are quite clearly not of recent origin. Considering that Papuan Tip languages have separated early from the Proto-Oceanic dialect chain (Ross 1988:193), one might not have expected this.

Detransitivizing operations:
The prefix *ta-* derives resultative intransitives. As opposed to in many other Oceanic languages, it is not productive and only attested with seven verbs mostly indicating some kind of destruction: *kesi* 'break (thin rigid objects)', *godu* 'break (long rigid objects)', *utusi* 'break (string-like objects)', *pulisi* 'tear', *huhu* 'pluck', *soke* 'open' and *you* 'bend' (Margetts 1999:199). Even though no statement is made whether it implies an agent or not, the author does say that it constitutes "the mirror image of causativization" (Margetts 1999:199) and all the examples, like Example (1-b), are also in line with an anticausative interpretation.

(1) a. *Kawa-gu ya-huhu-ø.*
tooth-1SG.POSS 1SG.NOM-pluck-3SG.ACC
'I took my tooth out.'
b. *Kawa-gu se-ta-huhu.*
tooth-1SG.POSS 3PL.NOM-ACAUS-pluck
'My teeth have fallen out.' (Margetts 1999:201)

The prefix quite clearly goes back the POC anticausative **ta-* discussed above (Section 6.2) and this is confirmed by Evans (2003:281).

Saliba also an other detransitivizing prefix *kai-*. It attaches to transitive verbs which then become intransitive and the object is either not expressed at all or occurs as an oblique, i.e. without co-reference on the verb. It thus fits our definition of an antipassive (Margetts 1999:181). The exact status of the object and whether the clause as

a whole should be considered transitive or intransitive is difficult to determine, but it must not concern us here.

(2) *Ka-dui na hinage yama ka-kai-gwali.*
1PL.E.NOM-dive CONJ also fish 1PL.E.NOM-AP-spear.
'We dive and spear fish.' (Margetts 1999:181)

(3) *Ya-lao ya-kai-deuli.*
1SG.NOM-go 1SG.NOM-AP-wash
'I go and wash the laundry/the dishes.' (Margetts 1999:182)

The prefix is not used frequently; it only appears with 14 verb stems in Margetts (1999)'s corpus. As is typical for antipassives, it usually describes habitual activities, in this particular case often linked to fishing techniques (Margetts 1999:183). Some forms are now lexicalized and have a very specific, fishing-related meaning, e.g. *kai-katu* 'catch a fish with a hook' from *katu* 'catch' (Margetts 1999:184).

Note that Margetts (1999:192) does not use the label antipassive because the prefix only applies to few verbs in this function and it has other functions, which would be obscured by the label. Derived intransitive verbs with *kai-* can also mean 'VERB around', 'play at VERBING' or 'pretend to VERB'. It is most often used to refer to children playing. In this function, reduplication of the verb stem is obligatory, cf. Example 6.4. It shares with the antipassive construction that there can never be an overt object and the focus is on the activity. Nominal bases are also possible in such derivations, see Example 6.5 (Margetts 1999:192-193)

(4) *Wawaya-o se-kai-kam-kamposi.*
child-PL 3PL.NOM-AP-RED-jump
'The children are jumping (playing, jumping into the sea).' (Margetts 1999:192)

(5) *Se-kai-waga-waga.*
3PL-AP-RED-boat
'They play boat.' (Margetts 1999:193)

There is also a classificatory prefix *kai-* that attaches to verb stems and adds the information that body or body weight of the agent is involved in the activity denoted by the verb. It is considered to be separate prefix, homophonous to the antipassive/play-function prefix, because the transitivity of the base verb is not affected (Margetts 1999:193-194).

(6) *Tebolo ya-kai-piloi-ø.*
table 1SG.NOM-BODY.WEIGHT-turn.over-3SG.ACC
'I sat on (the edge of) the table and made it turn over.' (Margetts 1999:194)

Conclusion about the overlaps:
As of now, there is no literature about the history of Saliba or the Papuan Tip languages as a subgroup. While *ta-* is easily explained by comparison with other Austronesian languages, this proves difficult for *kai-*. As we will see in Section 6.2.2, To'abaita has an antipassive prefix *kwai-*, which on the surface looks quite similar to the Saliba antipassive. But the To'abaita form is a reflex of POC **paRi-* and this cannot be the etymology of Saliba *kai-*. POC **paRi-* would have rendered something like **ɬha(l)i* or **ɬpa(l)i* (Jonathan Schlossberg, p.c.). Thus, the two instances are unconnected. There is a very slight possibility that *kai-* arose via a metathesis from **-akini*, but the probability is very low (Jonathan Schlossberg, p.c.).

In conclusion, the possibility remains that the antipassive *kai-* developed out of the first plural exclusive form *kai-*, which is well reconstructable. There is no evidence to support this, but also nothing that speaks against it. It is also possible that the classificatory *kai-* and the antipassive prefix *kai-* are historically connected to each other. But it is not clear what kind of pathway this would involve, as there is no functional overlap between the two.

There are several other languages in the sample, which show a connection between first person non-singular and antipassive (i.e. Puma, Matses and Muna) in the sample, but in general the development seems to go from antipassive to person marking, i.e. exactly in the opposite direction. One can only hope that there will be more research on the Papuan Tip languages in the future, as to verify or reject the hypothesis.

6.2.2 To'abaita (Austronesian, MP, Oceanic, Southeast Solomonic)

To'abaita belongs to the Southeast Solomonic subgroup and accordingly, is spoken in the Solomon Islands.

There is one set of pronouns with neutral alignment, i.e. covering S, A and P (Lichtenberk 2008:243). For the subject- and object-agreement, however, there are several paradigms: non-future, future/imperfective, sequential, negative and dehortative. In Table 6.4, the future and non-future/imperfective forms are given, in that order. The first syllable remains the same for all sets and each set has identical or similar last syllables throughout

	pronouns	agreement	
		NOM	ACC
1SG	*nau*	*ku ~ kwai*	*-ku*
2SG	*ʔoe ~ ʔoo*	*ʔo ~ ʔoi ~ ʔoki*	*-mu*
3SG	*nia*	*ʔe ~ e*	*-na~-a*
1DU.I	*koro*	*koro ~ kokui*	*-karoʔa*
1DU.E	*kamareʔa*	*mere ~ meki*	*-mareʔa*
2DU	*kamaroʔa*	*moro ~ mori ~ moki*	*-maroʔa*
3DU	*keeroʔa*	*kero ~ keki ~ kiki*	*-daroʔa*
1PL.I	*kulu*	*kulu ~ kuki*	*-kuluʔa ~-kaluʔa*
1PL.E	*kamiliʔa ~ kamaliʔa*	*mili ~ miki*	*-miliʔa ~-maliʔa*
2PL	*kamuluʔa ~ kamaluʔa*	*mulu ~ muki*	*-muluʔa ~-maluʔa*
3PL	*kera ~ kiiluʔa*	*kera ~ kere ~ kilu ~ keki ~ kiki*	*-da ~-daluʔa*

Table 6.4: Person markers in To'abaita (Lichtenberk 2008:144, 243)

(Lichtenberk 2008:144). If one compares the To'abaita forms to those reconstructed for POC, one immediately notices that a lot of rearranging must have taken place. I will not attempt at hypothesizing about how all of these forms developed. As mentioned above, the first syllable remains the same over most of the sets, e.g. for first person singular *kwa*, realized as *ku* if nothing else follows. The last syllable, on the other hand, is similar throughout each set, the future/imperfective adding *(k)i* (Lichtenberk 2008:144). It thus seems most reasonable to assume, that the 1SG.NOM future/imperfective form *kwai* is the result of the combination of *kwa* and *(k)i*, the former probably a descendant of POC 1SG.NOM set I **ku=*.

The prefix *kwai-*

The prefix *kwai-* indicates low individuation of participants, which means that either one is not expressed separately from the other. This notion is adapted from the 'low distinguishability of participants' discussed in ????. When two participants have the same role, are a part of a collective or one of them is not important, low individuation applies and the prefix *kwai-* is used. This means it appears in reciprocal constructions (Example 6.7) and in antipassive constructions (Example 6.8).

(7) *Roo wela kera kwai-nalu-fi.*
two child 3PL.NOM.NFUT KWAI-splash-TR.
'The two children are splashing each other (with water).' (Lichtenberk 2008:861)

(8) *Nau ku kwai-suʔu-si fasi-a alata.*
1SG 1SG.NOM.NFUT KWAI-prevent-TR ABL-3SG.ACC fishing.area
'I banned people from (entering, fishing in) my fishing area.' (Lichtenberk 2008:865)

On the clause level, both constructions are intransitive, as there is only a subject but no object. Note, however, that transitive suffixes are retained. Multisyllabic transitive verbs do not carry a transitive suffix. When *kwai-* attaches to this kind of verbs, the transitive suffix *-i* must also be added, except for monomorphemic bases (cf. Example (9-a) vs. Example (9-b)). Whether the resulting meaning is reciprocal or antipassive is determined by the semantics of the verb stem (Lichtenberk 2008:863-4).

(9) a. *kwai-gili-i*
KWAI-tickle-TR
'tickle each other'
b. *kwai-amasi*
KWAI-call.sb.for.help
'call (people) for help ' (Lichtenberk 2008:863)

Antipassives are mainly used to express habitual actions. The demoted object is backgrounded and cannot be expressed overtly, but is always implied. As it refers to a certain kind of entities, e.g. people, it is characterized by a plurality of relations, just like the reciprocal (Lichtenberk 2008:864). It is not a frequent derivation. In a few cases, forms with *kwai-* seem to be lexicalized with special meanings or formal behaviors (Lichtenberk 2008:866). Reciprocal situations can also be expressed in other ways, i.e. with no special marking or a pronominal strategy. The pronominal strategy is used with transitive and intransitive verbs. As opposed to the construction with the *kwai-*prefix, the object suffix is retained, as in Example 6.10 (Lichtenberk 2008:874-5).

	obj. pronouns	set I enclitics	set II enclitics
1MIN	*ni=nge*	*=ä*	*=nge*
12MIN	*ni=gi*	*=ki*	*=gi*
2MIN	*ni=m(ü)*	*=ü*	*=m(ü)*
3MIN	*ni=de*	*=ø (S), =le (A)*	*=de*
1AUG	*ni=gö*	*=kö*	*=gö*
12AUG	*ni=gu*	*=ku*	*=gu*
2AUG	*ni=mu*	*=amu*	*=mu*
3AUG	*ni=dö*	*në-X=ng, në-X=ngü (S), në-X=lö (A)*	*në-X=dö*

Table 6.5: Person markers in Natügu (van den Berg & Boerger 2011:230)

(10) *Roo wela nau ki kera thaito?oma-daro?a.*
two child 1SG.NOM PL 3PL.NOM.NFUT know-3DU.ACC
'The two children of mine know each other (well).' (Lichtenberk 2008:875)

In addition, the pronominal constructions is also open to a reflexive interpretation, but this is impossible with the *kwai*-construction. As many other prefixes with similar functions, *kwai-* goes back to POC **paRi-*, cf. Section 6.2. It is assumed that the antipassive function in To'abaita is a later development from the reciprocal (Moyse-Faurie 2008:161).

We have seen that the 1SG.NOM future/imperfective *kwai* most probably goes back to **ku+i*, while the verbal prefix *kwai-* comes from POC **paRi*. It is thus most reasonable to assume that the similarity in form is entirely due to coincidence in this particular case.

6.2.3 Natügu (Austronesian, MP, Oceanic, Temotu)

Natügu, mainly spoken on the island of Santa Cruz, belongs to the Temotu subgroup of Oceanic, which behaves quite unlike many other Oceanic languages. Recent work has shown that there is convincing evidence that the Temotu subgroup really is a branch of Oceanic, albeit one that split off early (van den Berg & Boerger 2011:228-229). This becomes immediately apparent, when one compares the person markers of Natügu (Table 6.5) to those of other Oceanic languages, like Saliba and To'abaita (see Table 6.3).

The distribution of the two enclitic sets is rather odd and evades traditional labels: set I marks A and S throughout, while set II marks P, but also subjects of passives and applicative derivations (van den Berg & Boerger 2011:230). In addition, it is not quite clear what triggers the use of the free object pronouns instead of the set II clitics.

Passive

Natügu has a prefix *në-*, which, among other things, is used to mark an agentless passive. As opposed to all other clause types, there is no subject marking on the verb (compare Examples (11-a) and (11-b)).

(11) a. *Këdü=ngü nüni në-äpe-tö=lö më stoa.*
ART-PL mat 3AUG.I-buy-DIR=3AUG.I PREP store
'Some mats they buy at the store.'
b. *Këdü=ngü nüni në-äpe-tö më stoa*
ART-PL mat NE-buy-DIR PREP store
'Some mats are bought at the store.' (van den Berg & Boerger 2011:335)

There are several pieces of evidence that suggest that *në-* is indeed a passive and not just a construction with generic subject (van den Berg & Boerger 2011:235-236):

- the otherwise obligatory subject enclitics are missing, thus the clause cannot be active
- *në*-forms always take set II clitics which correspond to patients in active transitive clauses
- the agent cannot be expressed overtly

Furthermore, the authors go on to show that *në*-constructions are also different from topicalization and nominalization (see below) (van den Berg & Boerger 2011:237-238). There is no information about reflexives and reciprocals, but as the authors carefully compare the passive to all related constructions, it is safe to assume that they are marked in a different way, if they have special marking at all. The prefix is also used as a nominalizer and then is accompanied either by *-kö*, if it is possessed, or by *-ngö*, if there is no possessor (van den Berg & Boerger 2011:234). This is illustrated below in Examples 6.12 and 6.13.

(12) *Në-wë-kö=de në-vo-ngö pöla.*
NMLZ-work-NMLZ=3MIN.II NMLZ-go-NMLZ sea
'His work is traveling on the sea.'

(13) *Kölâ në-kölë-ngö kä möbö=pe=ø mëli kä.*
DEIC NMLZ-know-NMLZ SUB lost=AST=3MIN.I time DEIC
'This is knowledge which is lost now.' (van den Berg & Boerger 2011:234)

Reconstruction of *në-*

Most probably, *në-* goes back to the Proto-Malayo-Polynesian infix **-in-*, which functioned as nominalizer and perfective patient voice marker (cf. Section 6.3.2). It must be added though, that the reconstructions of the Temotu vowels is complex and has not been undertaken up to now, so this scenario is of preliminary nature (van den Berg & Boerger 2011:240). It seems like a valid proposition, however, as the two markers in question have similar functions: they promote the patient and they nominalize verbs.

Almost the same situation is found in Bola, a language belonging to the Western Oceanic linkage. In addition, it is reported that Nakanai, a language from the same subfamily, shows remnants of a passive infix that also goes back to PAN **-in-*. The same infix is still productive for forming nominalizations (van den Berg & Boerger 2011:240-241). This leads the authors to propose that a passive should be reconstructed already for POC. However, that must not concern us for the following discussion.

There are, however, other options and we will briefly discuss the most plausible one (for details see van den Berg & Boerger 2011:243-244). In an other scenario, the PMP infix **-in-* was only used as a nominalizer in Temotu and the nominal form was later reinterpreted as verbal. While this does explain the lack of subject agreement, it is difficult to see, why agents are banned. On the other hand, I fail to see how the preferred scenario explains the absence of otherwise obligatory subject marking.

Whatever the exact history of *në-*, everything points to the passive function as more original than the person marking function: "The use of *në-* as the prefixal part of third person augmented is probably a later development" (van den Berg & Boerger 2011:240). The arguments given are: a) it is the only circumfix person marker, b) it is semantically empty and c) it does not appear in the third person minimal pronoun (van den Berg & Boerger 2011:240, fn. 16). This means that whatever the details, the voice marker developed into a person marker, or to be more precise, into a part of a person marker. If one accepts van den Berg & Boerger (2011)'s proposal, the whole chain of developments can be summarized as follows:
PMP **-in-* 'nominalizer, perfective patient orientation' > POC **ni-* 'nominalizer, agentless passive' > Natügu *në-* 'nominalizer, agentless passive' > Natügu *në-* 'third person augmented'. This pathway is unusual, as the direction from third person plural to passive is well attested, but from passive to 3rd plural not.

6.2.4 Kosraean (Austronesian, MP, Oceanic, Micronesian)

Kosraean, like all languages previously discussed, is Oceanic, but belongs to the Micronesian subgroup of the family. It does not cross-reference person on the verb.

The alignment of the personal pronouns is basically accusative, but, except for first person singular, the forms have the same morphological make-up for both nominative and accusative. For third person, some variants of the accusative do not occur in the nominative (Table 6.6). Which variant is used depends on the morphology of the verb form, the most widely used form being *uhl/uhltal* (Lee 1975:101-102). The main difference between nominative and accusative is the position of the elements. The nominative pronouns are free words, i.e. they need not be directly adjacent to the verb (cf. Example 6.14). The accusative forms, on the other hand, are suffixes. Nothing can appear between the object marker and the verb and all other verbal suffixes attach to the object marker, as in cf. Example 6.15. They never co-occur with free noun phrases and also display other properties of referential pronouns (Song 1994:528-529).

(14) *El wac na thung.*
3SG.NOM always ADV cry
'He always cries.' (Song 1994:527)

(15) *pahtok-kom-yak*
push-2SG.ACC-DIR
'push you up' (Song 1994:529)

	NOM	ACC
1SG	*nga*	*-yuh*
1PL.I	*kuht*	*-kuht*
1PL.E	*kitacl*	*-kitacl*
2SG	*kom*	*-kom*
2PL	*komtacl*	*-komtacl*
3SG	*el*	*-el ~-il ~-acl ~-uhl ~-ohl*
3PL	*eltahl*	*-elthal ~-iltahl ~-acltahl ~-uhltal ~-ohltal*

Table 6.6: Personal pronouns in Kosraean (Lee 1975:100-101)

The passive *-yuhk*

As in most other Austronesian languages, verbs are either strictly transitive or intransitive in Kosraean. There are regular derivation processes that turn a transitive verb into intransitive one (Lee 1975:263f.). In addition, there is also passive that applies to simple and derived transitive verbs, marked by the suffix *-yuhk*. The agent can be expressed overtly and is then introduced by the preposition *sin*. From the examples it seems as though it is more common to not express the agent at all (Lee 1975:189-191).

As there is no case marking on full noun phrases, the only morphological changes from the transitive (Examples (16-a) and (17-a)) sentences to their passive counterparts (Examples (16-b) and (17-b)) is to be observed in the verb form and constituent order.

(16) a. *Tuhlihk sacn thulakihn pinsuhl nuhtihk ah.*
child DEM snatch.TR pencil my DET
'The child is snatching my pencils.' [22]

b. *Pinsuhl nuhtihk ah tuhlakihn-yuhk sin tuhlihk sacn.*
pencil my DET snatch.TR-PASS PREP child DEM
'My pencils are being snatched by that child.' (Lee 1975:190)

(17) a. *Nga akihlen-yac acn sac.*
1SG.NOM mark.TR-DIR place DEM
'I marked the place.'

b. *Akihlen-yuhk-i acn sac.*
mark.TR-PASS-DIR place DEM
'The place was marked.' (Lee 1975:190)

Returning to the personal pronouns in Table 6.6 we notice that the 1SG.ACC form *yuh* is very similar to the passive marker. The possessive suffix for first person singular is *-k*. This suffix is used with inalienable nouns, as in Examples (18-a) and (18-b). However, the final vowel of the stem is not the same for the two forms and such vowel changes are systematic. The impersonal from *niyac-* [23] 'its leg' is taken as basic and regularly changes into *-uh* before *-k* and into *-o* before *-m* (Lee 1975:62-64). This in itself would not be very interesting, as it is difficult to see that there should be any connection to the pronoun or passive suffix. But the impersonal form *niyac-* does not represent the base form of 'leg', this seems to be *ne*, which is described as a phonetic reduction of *niyac-* (Lee 1975:64). There is no explanation of why this reduction takes place or what elements are involved. One might hypothesize that the directional suffix *-yac* is involved (cf. Example (17-a)), but this is mere speculation. It does indicate though, that the form from Example (18-a) is segmentable into *ni-yuh-k*. But it is most reasonable to assume that the resemblance to the first person singular accusative form and the antipassive is purely coincidental.

(18) a. *niyuh-k*
leg-1SG.POSS
'my leg '

b. *niyo-mtacl*
leg-2PL.POSS
'your leg ' (Lee 1975:62)

[22] Neither glossing nor morpheme segmentation is provided by the grammar. The translation of each element is adapted from (Willson 2010), the segmentation is my own.

[23] Kosraean has a rather peculiar orthography and <*ac*> represents the vowel /ɛ/ and <*uh*> the vowel /ʌ/. A comprehensive list is to be found in Lee 1975:4-5.

	pronouns	agreement		
		NOM realis	NOM irrealis	ACC
1SG	*iaku*	*ku-*		*-aku*
1PA	*ikami*	*ko-*	*ka-*	*-kami*
1PL	*ikita*	*to-*	*ta-*	*-kita*
2SG	*iko'o*	*u- ~ nu-*	*ko-*	*-ko*
2PL	*ikomiu*	*i-*	*ki-*	*-komiu*
3SG	*ia*	*no- ~ o-*	*na- ~ a-*	*-e'*
3PL	*amai*			

Table 6.7: Person markers in Tukang Besi North (Donohue 1999:113)

About the reconstruction of *-yuhk*
Indeed, one need not engage in further speculations, since the etymology of the antipassive suffix *-yuhk* has already been established: it is a reflex of Proto-Micronesian **-aki*, which goes back to POC **-akin[i]* mentioned above (Section 6.2). Reflexes of **-aki* are found in all Micronesian languages and they derive resultatives or agentless passives, and these functions are also reconstructed for the proto-languages (Evans 2003:135).

I was not able to find information about the prehistory of the 1SG.ACC form *-yuh*. Remember that is pronounced as */yʌ/* and thus could probably go back to the POC first person pronoun **(i)au*. However, as the passive marker has sound etymology and only partially overlaps with the person marker, it is most sensible to assume that they are not diachronically connected.

6.3 Other Malayo-Polynesian Languages

6.3.1 Tukang Besi North and Muna (Austronesian, MP, Celebic)

With Tukang Besi North (TBN, in the following) and Muna spoken in Indonesia, we will now move on to the Celebic branch of Malayo-Polynesian. In both languages, there is only set of pronouns and there are agreement forms for both A and P, which are accusatively aligned. In addition, the nominative forms have different sets for realis and irrealis in both languages. In Muna, there are three verb classes with slightly varying sets for the nominative forms (see Table 6.8). Only the realis forms are given here, because the irrealis ones are very similar and do not show an overlap with a voice marker either. I will not go into further details about the person marking system of Muna, as it is not directly relevant to the discussion.

The accusative agreement forms have only one set in both Muna and TBN, cf. Table 6.7 and Table 6.8. In TBN, number for third person is not distinguished in agreement, but only in the independent pronouns (Donohue 1999:113). The first person glossed as PA is a paucal form, which usually refers to a small group of up to four people. The plural form is used with groups of more than four people. However, there is considerable overlap in their use and younger speakers are beginning to use these forms with an inclusive/exclusive distinction, which so many other Austronesian languages have (Donohue 1999:114). The first person plural forms are used for generic reference as well (Donohue 1999:115). Free pronouns are only rarely used in TBN, as there is always agreement for reference to the arguments (Donohue 1999:115), as in the intransitive clause in Example 6.19. Whether or not there is agreement with the patient, depends on its marking: if it is marked by *na* it is indexed on the verb (see Example (20-b)), if it is marked by *te* it is not (cf. Example (20-a)) (Donohue 1999:135).

(19) *No-wila legolego.*
3NOM.R arm.swinging
'He was walking, swinging his arms.' (Donohue 1999:130)

(20) a. *Ku-gonti te kau.*
1SG.NOM-cop NPIV tree
'I chopped wood.' (Donohue 1999:130)

b. *Ku-'ita-'e na kau.*
1SG.NOM-see-3SG.ACC PIV wood
'I chopped wood.' (Donohue 1999:130)

TBN, as many other Austronesian languages, does not mark arguments according to their grammatical relations or semantic role, but rather as pivot (called 'nominative' in the grammar), non-pivot (called 'core' by the grammar) or oblique (Donohue 1999:49). The marker *na* refers to the pivot and *te* to the non-pivot. However, there is no full-fledged symmetric voice system (see Chamorro in Section 6.3.2 for a more detailed explanation of such a system), rather there a two clause types for transitive clauses (adapted from Donohue 1999:51,53):

	pronouns	agreement (realis)			
		NOM *a*-class	NOM *ao*-class	NOM *ae*-class	ACC
1SG	*inodi*	*a-*	*ao-*	*ae-*	*-kanau*
1DU.I	*intaidi*	*do-*	*do-*	*de-*	*-kasami*
1PL.I	*intaidi-imu*	*do-X-Vmu*	*do-X-Vmu*	*de-X-Vmu*	
1PL.E	*insaidi*	*ta-*	*tao-*	*tae-*	
2SG	*ihintu*	*o-*	*omo-*	*ome-*	*-ko*
2PL	*ihintu-umu*	*o-X-Vmu*	*omo-X-Vmu*	*ome-X-Vmu*	*-ko-omu*
2SG.POL	*intaidi*	*to-*	*to-*	*te-*	*-kaeta*
2PL.POL	*intaidi-imu*	*to-X-Vmu*	*to-X-Vmu*	*te-X-Vmu*	*-kaeta-amu*
3SG	*anoa*	*no-*	*no-*	*ne-*	*-e*
3PL	*andoa*	*do-*	*do-*	*de-*	*-da*

Table 6.8: Person markers in Muna (van den Berg 1989:53,68)

intransitive	NOM-V	*na* S	
basic transitive	NOM-V-ACC	*na* P	*te* A
no object indexing	NOM-V	*te* P	*na* A

Note that TBN has rigid VOS word order, i.e. the schema above represents the real order of elements in a clause. This is exemplified again with two overt arguments in Examples (21-a) and (21-b).

(21) a. *No-kiki'i-ko na iko'o te beka.*
3NOM.R-bite-2SG.ACC PIV 2SG NPIV cat
'The cat bit you.'
b. *No-kikki'i te beka na iko'o.*
3NOM.R-bite-2SG.ACC PIV cat NPIV 2SG
'The cat bit you.' (Donohue 1999:53)

The transitive clauses with a patient index on the verb can be seen as basic because they are more frequent, all transitive clauses may appear with it, but some transitive verbs cannot appear without it and patient indexes are included in the citation form of the verb (Donohue 1999:53-54).

The three passives of TBN
The prefix *to-* marks a general passive, i.e. the transitive verb it attaches to becomes intransitive, the agent is demoted and the object receives pivot marking. It also has a stative meaning. As has been mentioned above, there is transitive clause construction, in which object agreement is absent the patient is marked by *te*, as in Example 6.22. The passive clause in Example 6.23 differs from that in two respects: the argument marked by *na* the patient not the agent and the latter cannot be expressed overtly at all (Donohue 1999:54). It it thus valid to analyze this as a voice alternation rather than a third clause type.

(22) *'U-'ita na kalambe te iko'o.*
2SG.NOM.R-see PIV young.girl NPIV 2SG
'You saw the young girl.' (Donohue 1999:275)

(23) *No-to-'ita na kalambe.*
3NOM.R-PASS-see PIV young.girl
'The young girl was seen.' (Donohue 1999:275)

As can be seen from Example (24-b) , an interpretation as a stative with a third person dummy is also possible. According to Donohue (1999:275), speakers were often in disagreement whether such a sentence is to be interpreted as passive action or passive state.

(24) a. *'U-to-'ita (na iko'o).*
2SG.NOM.R-PASS-see (PIV 2SG)
'You were seen.'
b. *No-to-'ita na iko'o.*
3NOM.R-PASS-see PIV 2SG
'You were visible.' (Donohue 1999:275)

passive prefix	overt actor	implied actor	degree of affectedness
to-	no	yes	low-high
te-	no	no	high
mo-	no	yes	total

Table 6.9: Properties of passive prefixes in TBN (Donohue 1999:281)

The prefix *te-* marks an accidental passive, i.e. it only applies to transitive verbs which can take a generic or non-volitional inanimate actor. The patient, which is the subject of the derived intransitive, must be fully affected by the action (Donohue 1999:278-279). This corresponds to the anticausative definition, as no agent as such implied (cf. Example 6.25 and Table 6.9).

(25) *No-te-nabu-mo na kaluku.*
3NOM.R-ACAUS-fall-PFV PIV coconut
'The coconut happened to fall (through forces of the nature).' (Donohue 1999:279)

The third kind of passive is the marker *mo-*, which attaches to process verbs and indicates that the patient is now in a state that resulted from said action (Donohue 1999:280-281). Structurally, it is the same as the general passive marked by *to-*: there is only S-agreement and the pivot argument is the patient. The main difference is the focus on the resulting state. An overview over some aspects of the three passive constructions is given Table 6.9.

(26) *No-mo-gonti-mo na kau.*
3NOM.R-RES-chop-PFV PIV wood
'The wood is chopped (volitionally).' (Donohue 1999:281)

Voice marking in Muna

In the following paragraphs I will very briefly illustrate voice marking in Muna, mostly for comparative purposes. There is an antipassive marked by the prefix *fo-*, which is formally identical to the causative *fo-*, but behaves differently in certain respects: the causative verbs take set *a*-prefixes, while antipassive verbs take *ae*-prefixes and there is an irrealis variant for the causative (*[m]o-*), but the antipassive remains unchanged (van den Berg 1989:204). While this suggests that we are dealing with to separate prefixes, the formal overlap is still interesting, as it is usually the passive that has the same form as the causative, e.g. as in Tungusic.

The antipassive is mainly used for generic statements and the demoted patient cannot be expressed overtly, but is understood to refer to humans. This is reminiscent of the situation in Matses and the Southern Kirant and indeed, van den Berg (1989:204) says that "it appears that the reference is often to first person inclusive 'we', a category for which no pronominal suffixes are available", cf. Table 6.8. Now, I have to say this is exciting! It looks like Muna is completely parallel to Matses, which means that it adds a further case in point from the Pacific macro-area. Example 6.27 illustrate the indefinite patient interpretation and Example 6.28 the first person inclusive interpretation.

(27) *do-tanda-mo deki do-fo-kadiu.*
3PL.NOM.R-begin-PFV first 3PL.NOM.R-AP-bath
'They started by giving a bath.' (van den Berg 1989:204)

(28) *ingka na-fo-sampu-niki tora o gurudha.*
ENIM 3SG.IRR-AP-come.down-TR again ART garuda
'Don't you know the garuda will come down upon us again.' (van den Berg 1989:204)

In Example 6.28, the verb was first transitivized with *-niki* and then detransitivized with *fo-*. Indeed, this is not uncommon and the antipassive can also be used with causative verbs, as in Example 6.29, in which case the the former precedes the latter (van den Berg 1989:205).

(29) *naando lo-fo-fo-lodo.*
be 3SG.NOM.R-AP-CAUS-sleep
'He is still busy putting someone to bed.' (van den Berg 1989:205)

Muna also has a productive agentless passive construction marked by the prefix *ti-*. It is used in general statements (cf. Example 6.30), or has an accidental or potential meaning, the latter mostly in negative contexts (van den Berg 1989:323-324). There are not very many examples in the grammar, but Example 6.31 shows that 'accidental' probably means that no agent is implied, i.e. *ti-* also marks anticausatives.

	emph. pronouns	ABS pronouns
1SG	*guahu*	*yo?*
1PL.I	*hita*	*hit*
1PL.E	*hami*	*ham*
2SG	*hagu*	*hao*
2PL	*hamyo*	*hamyo*
3SG	*guiya*	*gue?*
3PL	*siha*	*siha*

Table 6.10: Pronouns in Chamorro (Cooreman 1987:31-32)

(30) *giu pata s-um-aha pa-rapi-perapi.*
kind NEG legal-A.PART-legal FUT.NEG 3SG.NOM.IRR-PASS-enjoy
'Something that is illegal will not be enjoyed.' (van den Berg 1989:233)

(31) *no-ti-puru kuli-no s-ghulu-ghulu-ha-e.*
3SG.NOM.R-PASS-peel skin-his one-RED-body-HA-3SG.ACC
'The skin on his whole body peeled off.' (van den Berg 1989:116)

About the overlaps
Donohue (2004) traces the resultative *mo-* back to the PMP stative prefix **ma-* (see Section 6.1). There is no literature about the reconstruction of Tukang Besi, so it is difficult to say whether a historical connection between the general passive *to-* and the first person plural marker *to-* is likely or not. If one assumes that - parallel to *mo-* from PMP **ma-* - they both go back to PMP **ta-*, this speaks against a historical connection. The anticausative marker **ta-* is well reconstructable for PMP, as is a first person inclusive marker **ta-* Section 6.1. Unless the prefixes are attributed to other proto-forms, the most sensible assumption is that they are not connected diachronically. The forms of the Muna voice markers can be reconstructed for PMP, as van den Berg (1991) provides an overview over the historical phonological. The passive marker *ti-* thus must go back to PMP **ti-*, while the antipassive prefix *fo-* can either come from PMP **pe-* or **paw-* (van den Berg 1991:5,9), which are also the possible proto-forms for the reciprocal prefix *po-*. Most probably then, Muna is one of the languages in which the antipassive and reciprocal have developed from a common source. The Muna passive is thus not cognate to the TBN general passive, but maybe to the antipassive *te-*.

Most interesting in the present context is the association of the demoted patient of the antipassive with first person inclusive. As mentioned above, Muna has no accusative agreement markers for inclusive, but it does have pronouns and nominative agreement for it, so it is quite plausible that maybe in the future the prefix *fo-* will be extended to mark first person inclusive patients in other contexts as well. More work on the reconstruction of the Celebic branch will hopefully be carried out in the future, as it seems to be an promising group of languages concerning the development of voice markers.

6.3.2 Chamorro (Austronesian, Malayo-Polynesian)

The last language of the Pacific macro-area to be discussed is Chamorro, which is a direct daughter of Malayo-Polynesian and spoken in Guam and the Northern Mariana Islands (Hammarström et al. 2014). It has a rather peculiar system of pronouns and agreement forms, both consisting of two sets.

The emphatic pronouns have the same form for S, A and P. They are used as nominal predicates in focus constructions or as oblique objects (Cooreman 1987:31-32). The second set of pronouns can be used as subject of intransitive clauses, as in Example 6.32, or as objects of transitive clauses, as in Example (33-b), thus they are called absolutive (Cooreman 1987:32).

(32) *Mu-nangu hao.*
SG-swim 2SG.ABS
'You swim/swam.' (Cooreman 1987:32)

There is agreement with the S and A argument, but the forms and their distribution are different for realis and irrealis. In realis mood, there is person and number agreement for A, named ergative, but only number agreement for S. As P is not expressed by agreement, the system is tripartite. This is illustrated by Examples (33-a) and (33-b), with an intransitive and transitive clause, respectively. In the irrealis, both and S and A exhibit person and number agreement, indicated by the same form, which is called nominative (cf. Examples (34-a) and (34-b)). The alignment is thus nominative-accusative (Cooreman 1987:35-36).

	irrealis	realis		
	NOM	ERG	number agreement	
1SG	*(bai)hu-*	*hu-*		
1PL.I	*(u)ta-*	*ta-*		
1PL.E	*(bai)in-*	*in-*		
2SG	*un-*	*un-*		
2PL	*en-*	*en-*		
3SG	*u-*	*ha-*	SG	*ø ~-um- ~ mu-*
3PL	*u- (S), uma- (A)*	*ma-*	PL	*man- ~ fan-*

Table 6.11: Agreement in Chamorro (Cooreman 1987:36, 39)

(33) a. *Mu-nangu yo? kadda na egga?an.*
SG-swim 1SG.ABS every LNK morning
'I swim every morning.' (Cooreman 1987:37)

b. *Hu-guiaya gue?.*
1SG.ERG-love 3SG.ABS
'I love him.' (Cooreman 1987:32)

(34) a. *Ha-tago? yo? si Pedro na baihu-hanao.*
3SG.ERG-order 1SG.ABS UNM 1SG.NOM-go.
'Peter ordered me to go.' (Cooreman 1987:39)

b. *I amerikanu para uma-chule? tatte ta?lo iya Guam.*
the Americans IRR 3PL.NOM-take back again UNM Guam
'The Americans were going to take Guam back again.' (Cooreman 1987:41)

The third person ergative *ma-* clearly is not derived from the pronoun and is is most probably also not a continuant of anything reconstructed for PAN for third person (see Table 6.1).

The voice system of Chamorro

Austronesian languages are well known to have voice systems that are not comparable to those of many other languages. These systems have been given many names, with 'voice' and 'focus' the two most widely used terms. Generally, this means that in each clause one argument has a special relationship to the verb. This argument has been termed 'pivot', 'theme' and 'topic' among others and usually can either be an S, A or P argument as well as an oblique. Which role it occupies is indicated by affixes on the verb (Blust 2013:436-437). We will call it 'orientation' system here, and the privileged argument 'pivot'. This is simply because I have not used these terms for anything else so far and thus confusion should be avoided. Topping (1973:243ff.) describes Chamorro as having five orientations: actor, goal, causative, referential and benefactive focus. He mentions, though, that the system is quite different from that in Philippine languages. This probably refers to the fact that there is also a non-focus construction. If we take this as basic and the orientations as derived from it, the system is actually quite close to a 'normal' voice system, albeit with more voices than usual. This is probably why Cooreman (1987) chooses not to mention an orientation system at all, but rather describes the voice alternations by the common terms passive and antipassive. She explains this by saying that "the focus system is not complete in Chamorro and exists only in vestigial form" (Cooreman 1988:569).

As we will see below, neither description seems to completely fit the data. This is most adequately explained by Donohue & Machlachlan (1999:121): "Chamorro is in the process of losing its Philippine-type voice system in transitive main clause contexts." Quite naturally, it is difficult to describe a system in transition with categorical terminology. As the function and morphological marking of the construction is most important for this study, I will not argue whether the affixes should be called passive or patient orientation or the like. I will refer to the constructions by the their marking.

The unmarked construction:

The unmarked construction is probably the reason, why the analysis in terms of traditional voice labels like passive arose in the first place. It does not have any orientation, i.e. the verb consists of only the stem and agreement. In addition, both the A and P are marked in the same way, cf. Example 6.35. Topping (1973:243ff.), who calls this 'non-focus construction', seems to take this as basic and considers the other orientations as derived from it. However, such an unmarked construction is not found in typical orientation systems, e.g. in the Philippine languages, and therefore is most probably an innovation of Chamorro (Donohue & Machlachlan 1999:124).

(35) *Ha-li?e? i palao?an i lahi.*
3SG.ERG-see ART woman ART man
'The woman saw the man.' (Donohue & Machlachlan 1999:121)

The *ma*-construction:
The prefix *ma-* occurs with plural agents only. It is analyzed as passive by both Cooreman (1984:401) and Topping (1973:257). Indeed, such constructions are often translated as passives in English. However, there is also evidence against a passive analysis. As been mentioned already, *ma-* can only be used, if the agent is plural. If it is singular, the infix *-in-* must be used (see below). Donohue & Machlachlan (1999) argue that this means that the verb agrees in number with the putative agent, which would be unusual in a true passive construction.

(36) a. *Man-ma-li?e? i famagu?un nu i famala?oan.*
PL-MA-see ART children CASE ART woman
'The children were seen by the women.' [24]
b. *Ma-li?e? i pätgun nu i famala?oan.*
MA-see ART child CASE ART woman
'The child was seen by the women.' (Donohue & Machlachlan 1999:122)

The *-in*-construction:
The infix *-in-*, inserted in the first syllable of the verb root before the vowel (Cooreman 1984:401), can be used with singular agents only. It is ungrammatical with plural agents, as in Example (37-b). The patient is unmarked and the agent is marked by *nu*. It also referred to as passive by Cooreman (1984:401), but as 'goal focus' by Topping (1973:245), with goal equaling patient in most environments. Of course, patient orientation puts emphasis on the patient and thus automatically backgrounds the agent. It is thus functionally very similar to a passive and one readily comprehends that it can also be classified as such.

(37) a. *Si nana-hu ch-in-atge gias tat-hu.*
UNM mother-1SG.POSS smile.at-PASS-smile.at OBL father-1SG.POSS
'My mother was smiled at by my father/ My father smiled at my mother.' (Cooreman 1984:401)
b. **Man-l-in-i?e? i famagu?un nu i famalao?an.*
PL-see-IN-see ART children CASE ART women
'The children were seen by the women. (Donohue & Machlachlan 1999:122)

Actually, *-in-* does not only mark patient orientation, but also perfective aspect. This not mentioned explicitly by Topping (1973) or the others, but all examples of the infix are translated as past in English (Blust 2013:388).

The *man*-construction:
The prefix *man-*, not to be confused with the plural marker *man-* which occupies a different position on the verb (cf. Example 6.38), is analyzed as antipassive by Cooreman (1988:570), 'actor focus' by Topping (1973:245) and as 'actor voice' by Donohue & Machlachlan (1999:122). Now, the agent is unmarked and the patient is marked by *nu*, so the situation is exactly opposite to the one with *ma-* and *-in-*. As can be seen from Example 6.38, the plural agreement prefix *man-* agrees with the agent. This means that the agent is the pivot, thus the patient is backgrounded. Again, this function is very similar to the one carried out by antipassives in other languages.

(38) *Man-man-li?e? i famalao?an nu i lahi.*
PL-MAN-see ART woman CASE ART man
'The woman saw the man.' (Donohue & Machlachlan 1999:122)

Except for the existence of a unmarked neutral orientation, the orientation system found in Chamorro corresponds quite closely to those of other languages of this type, e.g. Tagalog and Kapampangan. Even the morphological marking is basically the same and can be traced back to Proto-Austronesian, cf. Table 6.12. The prefix *man-* is a direct reflex of PAN **maŋ-*, which was used to mark 'actor voice' (Blust 2013:378). The same meaning is reconstructed for **-um-*. In Formosan languages, only the infix marks actor voice, while Extra-Formosan languages typically use both (Blust 2013:383).

The infix *-in-* also goes back to PAN. In many languages, it marks perfective aspect in many Formosan and Philippine languages. In some languages it additionally functions as a nominalizer. In Oceanic languages, this is typically its only function. Lastly, in some other languages, like Chamorro, it expresses a combination of perfective aspect and patient orientation (Blust 2013:385-388).

[24] As always, the spelling is taken over mostly without alterations from the source. As the Chamorro systems are quite different from each other, the inconsistencies may be more apparent than in other languages.

orientation	Chamorro	Kapampangan	Tagalog	PAN
agent	*man-, -um-*	*maN-, -um-*	*mag-, -um-*	**-um-, *maŋ-*
patient	*-in-*	*-an, i-*	*-in, -an, -i*	**-in-*

Table 6.12: Chamorro's voice system compared to other Austronesian languages with the reconstruction of PAN (Donohue & Machlachlan 1999:123, Blust 2013:378, 383, 385)

About a possible connection of the passive and third person

The prefix *ma-* was never part of the voice system. It is a reflex of the PAN stative prefix **ma-*, see Section 6.1, and thus is retention of the proto-language, not an innovation. The third person ergative marker *ma-*, on the other hand, seems to be of more recent origin. At least, it is quite clearly not attributable to anything reconstructed for third person in PMP (cf. Table 6.1). Indeed, Topping (1973:258) notes that in certain contexts *ma-* is ambiguous between a passive and a third person reading (cf. Example 6.39) and suggests that the third person marker has developed out of the passive. This would then be a reverse case of the well attested third plural to passive pathway.

(39) *Ma-sangan na maolek iya Guam*
MA-say PIV good LOC Guam
'They say that Guam is good. *or* It is said that Guam is good.' (Topping 1973:258)

However, according to Reid (2002:81-82) there is another option, which arises through the comparison with the Palauan agreement system. The the plural agent irrealis form is *uma-*, so *ma-* could simply a reduction of this. In Palauen, the second person forms go back to a truncated auxiliary verb **umay?* 'to go' (for a detailed explanation see Reid 2002:81-82). This could also be the source of the second person irrealis markers in Chamorro, and maybe also of the third person plural. With the information available so far, we cannot decide which of the two proposals is more likely. Thus, the possibility - but nothing more than that - remains that the third person plural marker developed from the passive marker. Concerning the A-orientation/antipassive marker *man-* and the plural number marker *man-*, the former is usually seen as a reflex of PAN **maŋ-*. Reid (2002:91) proposes a different scenario, based on that the base form of the prefix in Chamorro is *man-* and not *maŋ-* like in other languages. In his view, both the plural marker and the antipassive ultimately come from a combination of **ma na Noun* 'plural noun'. The second part, *na*, is a linker that occurs in many Austronesian languages and also synchronically still does in Chamorro, see Example 6.40 (Reid 2002:90). He does not specify what the first part is.

(40) *i díkike' na patgon*
DET small LINK child
'the small child' (Topping 1973:138)

The hypothesis is that both the antipassive and the plural marker developed out of the construction **ma na*, which over time was reduced to *man*. To sum up, a historical connection is likely, but the details remain unclear.

Finally, there is a similarity of form between the goal orientation/passive infix *-in-* and the first person exclusive marker *in-*. The former is clearly a reflex of PAN **-in-* (see above), while nothing is known about the prehistory of the latter. In my view, a connection is rather unlikely, considering the different positions of the elements involved.

6.4 Savosavo, an isolate

Savosavo is spoken in the Solomon Islands on the Savo Island. It has been classified as Papuan, which just means that is non-Austronesian. There are three other languages in the Solomon islands, namely Bilua, Touo and Lavukaleve, which are also non-Austronesian. However, the four languages most probably do not belong to the same family: they do not share a lot of vocabulary and are not mutually intelligible.

Savosavo has been in close contact with Austronesian languages for a considerable period of time. Even so, its grammatical profile is distinct from those of the surrounding languages in many ways (Wegener 2012:2-3). It is quite evident from Table 6.13 that the person marking system in this language is remarkably different from what has been encountered in Austronesian languages so far. The free pronouns exhibit nominative-accusative alignment throughout, but of the rare marked nominative type, which means that the unmarked form is the accusative (Wegener 2012:131). Indeed, the subject forms are marked the nominative clitic *=na* (Wegener 2012:135). The variants of the 3PL pronoun are syntactically triggered: *ze* is used as the head of a nominative marked noun phrase and *zepo* appears in a postpositional phrase with *-aka* 'with', in noun phrases functioning as objects and in noun phrases marked by the emphatic clitic *=ne* (Wegener 2012:78). All the *a*-variants of the third person are restricted to certain syntactic environments. They indicate proximity (Wegener 2012:222) and appear in the following contexts:

	pronouns			agreement	
	NOM	ACC	NOM clitics	ACC prefixes	ACC suffixes
1SG	*agni=na ~ ai=na*	*agni ~ ai*	*=gne*	*gn-*	*-gni*
1NSG.I	*mai=na*	*mai*	*=me*	*gn-*	*-migni*
1DU.E	*aghe=na*	*aghe*	*=ghe*	*gn-*	*-ghigni*
1PL.E	*ave=na*	*ave*	*=ve*	*gn-*	*-vigni*
2SG	*no=na*	*no*	*=no*	*n-*	*-ni*
2DU	*pe=na*	*pe*	*=pe*	*p-*	*-pi*
2PL	*me=na*	*me*	*=me*	*m-*	*-mi*
3SG.M	*lo=na ~ la=na*	*lo ~ la*	*=lo*	*l-*	*-li*
3SG.F	*ko=na ~ ka=na*	*ko ~ ka*	*=gho*	*k-*	*-ghi*
3DU	*to=na ~ ta=na*	*to ~ ta*	*=to*	*t-*	*-ti*
3PL	*ze=na ~ zepo=na ~ za=na*	*ze ~ zepo ~ za*	*=ze*	*z-*	*-mi*

Table 6.13: Person marking in Savosavo (Wegener 2012:78, 80, 164)

- as subject NP following the emphatic clitic *=ne* (Wegener 2012:222), Example 6.41
- as subject NP in property clauses with a fronted predicate (Wegener 2012:212), Example 6.42

(41) *Ze savu-mi-to lo poghoro ghulia=ga=e za=na.*
3PL[GEN] tell-3PL.ACC-REL DET.PL seven dolphin=Pl=EMPH 3PL=NOM
'These (are) the seven dolphins they mentioned.' (Wegener 2012:222)

(42) *Kama to sua=lo to batu=lo ai ta=na.*
already DET.DU giant=DU 3DU[GEN] head=DU this 3DU=NOM
'The heads of the giants (are) these two already. (lit.: Already the giants' heads (are) these.) ' (Wegener 2012:212)

In addition, there are also enclitic pronouns, but these can only function as subjects. They are Wackernagel clitics: they do not carry their own stress and attach to the first element of a clause. They cannot be the head of an NP, nor modify anything, nor be modified. They co-occur with nominative pronouns or NPs (Wegener 2012:79). It is not clear to me whether they are obligatory and thus constitute a case of agreement, or not. However, Example 6.44 suggests that the enclitic pronouns are optional.

Considering the argument marking on the verb, the situation is exactly opposite to the one encountered with pronouns: the object, i.e. the accusative, is cross-referenced on the verb, but the subject is not. Verbs take either the prefixes, the suffixes or both and there is no variability or choice, i.e. it is lexically determined, see Examples 6.43 to 6.45. The prefixes for first person do not have a number distinction (cf. Table 6.13). However, if a prefixing verb is the only verb in a clause or the first transitive verb of a serial verb construction and the object is first person non-singular, it is obligatory to use a personal pronoun referring to the object (Wegener 2012:165).

(43) *Ze=na te ai lo qana=gha z-ovu-i.*
3PL=NOM EMPH this DET.PL gun=PL 3PL.ACC-put-FIN
'They put up these guns. ' (Wegener 2012:165)

(44) *Ko tada=na boso-ghi*
3SG.F[GEN] man=NOM leave-3SG.F.ACC
'Her husband left her.' (Wegener 2012:165)

(45) *O, ekati=ze kama t-ave-ti ta-i!*
o CERT=3PL.NOM already 3DU.ACC-kill-3DU.ACC FUT-FIN
'O, they will kill them (two)!' (Wegener 2012:165)

6.4.1 The detransitivizer *-za*

The suffix *-za* derives an intransitive verb from transitive verbs that take an object suffix. It has three functions (Wegener 2012:171):

- agentless passive: the subject is removed and the object is promoted to subject position
- antipassive without overt object: the object is removed, the subject is unchanged
- etymological construction: both subject and object are removed and replaced by a subject with the same meaning as the verb stem

It is lexically determined, which of the three functions *-za* will have a with a particular verb. The passive is

the most frequent, followed by the antipassive, both of which are illustrated with the corresponding transitive sentence in Examples (46-b) and (47-b).

(46) a. *Karoti=lo te tozo-li-i.*
carrots=3SG.M.NOM EMPH cut-3SG.M.ACC-FIN
'He cut (a) carrot.'
b. *Lo karoti=na tozo-za-i.*
DET.SG.M carrot=NOM cut-DETR-FIN
'The carrot is cut.' (Wegener 2012:171)

(47) a. *... te=ze ghogho-li te=ze ...*
... CONJ=3PL.NOM swear-3SG.M.ACC CONJ=3PL.NOM
'... and they swear at him and they ...'
b. *Ai lo taemu=la=ze mane oma ghogho-za=ze.*
this DET.SG.M time=LOC=3PL.NOM consecutively NEG swear-DETR=3PL.NOM
'This time they don't swear.' (Wegener 2012:171)

The third function is attested with a few ambitransitive verbs only, which all have something to do with speaking: *kanga(-li)* 'to shout', *leka(-li)* 'to laugh', *onea(-li)* 'to listen' and *rongorongo(-li)* 'to tell a story'. In Example 6.48, we see that the subject is the speech that is uttered (Wegener 2012:171-172)

(48) *Vere=na kanga-za-i.*
speech=NOM shout-DETR-FIN
'The speech sounded/was shoutet.' (Wegener 2012:172)

There is a similar suffix in the neighboring language Lavukaleve, also an isolate. The suffix *-a* also has a passive and an antipassive function. However, it is not productive and only appears with a handful of verbs. In addition, it marks iterativity or intensification with intransitive verbs. Given the similarity of form and function, Wegener (2012:172) speculates that the two suffixes could be diachronically related. However, I think without proper reconstruction and establishing sound correspondences, this is no more than an assumption.

6.4.2 Conclusion about the overlap

As Savosavo is an isolate, there is no literature on its reconstruction or on diachronic scenarios for certain markers so far. This means that the following lines are nothing but speculation, although, one might say that is informed speculation as we have all the other languages for comparison. As the alternation in the third person is regular, i.e. all the forms have a proximal alternative with the vowel *a*, I think it is rather improbable that the detransitivizer *-za* is the source of the person marker *za*. This then leaves the option that the person marker developed into a detransitivizer. As the accusative is the unmarked form, it would make sense to start from there. Unfortunately, there is only one example of *za* 3PL in the grammar (cf. Example 6.41) and it is in the nominative. A quick survey of the other forms revealed only Example 6.42, which is also in nominative case. However, given the description of their usage, this is not surprising: in both contexts they are subjects, i.e. marked by the nominative case marker.

It would thus be interesting to know, whether the 3PL.ACC form *za* really exists or whether the paradigm was just filled up. As long as this remains unsolved, it does not make a lot of sense to invest in further speculation.

6.5 Summary

In the eight languages surveyed for the Pacific macro-area, there are thirteen voice markers of which eleven overlap with a person marker. Again, this is not surprising, as most of the marker under consideration have the structure CV and thus chances for an overlap are high. Three of the overlaps can safely be attributed to coincidence, and an other three are quite unlikely given everything that is known about the languages. This leaves us with five overlaps, which have may be diachronically connected (see Table 6.15). Two of these are very interesting from a theoretical point of view: in Natügu, everything points to a development from passive to third person augmented and a very similar development, passive to third person plural, is at least a possibility in Chamorro. While the opposite pathway is well attested and usually taken as the only possible one, these two languages indicate that the reverse is also possible.

The number of connections, which amount to 38% of the voice markers found in this area, is similar to that of Eurasia and Africa and summarized below:

Markers	no. of overlapping VM	no. of person/voice overlaps	prob. >0.4	in %
13	11	11	5	38

Language	Pronouns	Agreement		NP	Voice
Chamorro	ergative / neutral (neut. vs. emph.)	A and P	trip. / acc. (real. vs. irr.)	neutral	PASS, AP
Muna	neutral	A and P	accusative	neutral	PASS, AP
Tukang Besi North	neutral	A and P	acc. /neut. (rest vs. 2SG)	ergative	PASS
Natügu	accusative	A and P	acc. /neut.	neutral	PASS
Saliba (PNG)	neutral	A and P	accusative	neutral	PASS
To'abaita	neutral	A and P	accusative	neutral	AP, ACAUS
Kosraean	accusative	none	neutral	neutral	AP
Savosavo	accusative	P only	accusative	neutral	DETR

Table 6.14: Alignment and voice marking in the languages of the Pacific

None of the overlaps is with a second person, but given the small size of the sample that does not necessarily imply anything more. What is quite striking though, is that in none of the languages, voice marking overlaps with either reflexives or reciprocals, which are expressed differently from each other in all languages. Except for Saliba, none of the languages uses a verbal affix to express reflexivity and only Saliba, TBN and Muna have a verbal affix for reciprocity.

The association between voice and alignment is not as neat as in other macro-areas. Most of the languages have neutral alignment in full NPs, neutral or accusatively aligned pronouns and accusative agreement, cf. Table 6.14. There is only one languages, Kosraean, that solely has an antipassive and it is also the only language without verbal agreement, but that may be a coincidence.

Language	Voice		Person		Direction	Prob.	Reflexive and Reciprocal	
Chamorro	RES.PASS/P-ORIENT	*ma-*	3PL.ERG	*ma-*	VM >PM	0.7	REFL	adv. *maisa* + simple pronouns
	PASS/P-ORIENT	*X-in-X*	1PL.E	*in-*		0.1	REC	different, but details unknown
	AP/A-ORIENT	*man-*	PL	*man-*	VM >PM	0.7		
Muna	PASS	*ti-*	-				REFL	pron. *wuto*-POSS
	AP	*fo-*	1PL.I	*fo-*	VM >PM	0.9	REC	*po-*
Tukang Besi North	AL.PASS	*to-*	1PL.NOM	*to-*		0.1	REFL	pron. *karama*-POSS
	ACAUS	*te-*	-				REC	*po-*
	RES	*mo-*	-					
Kosraean	PASS	*-yuhk*	1SG.ACC	*-yuh*			REFL	nom. *sifac*
							REC	nom. *sie-sin-sie*
Natügu	AL.PASS	*në-*	3AUG	*në-X=ng/=ngü/=lö*	VM >PM	0.9		unknown
Saliba (PNG)	AP	*kai-*	1PL.E	*kai*	PM >VM	0.5	REFL	*-uyo*
	ACAUS	*ta-*	1PL.I.NOM	*ta-*			REC	*hai-X-uyo*
To'abaita	AP, REC	*kwai-*	1SG.NOM	*kwai*		0.1	REFL	no special marking
Savosavo	DETR	*-za*	3PL.ACC	*za*	PM >VM	0.2	REFL	unknown
							REC	nom. *ma(pa)mapa*

Table 6.15: Overview of the languages of the Pacific

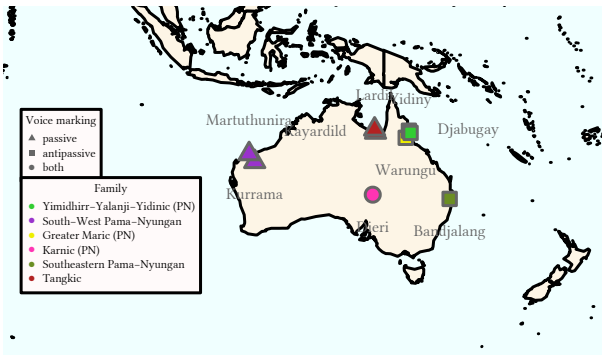


Figure 7.1: Language map of Australia

	SG	DU	PL
1	**ngay*	*ngali*	**ngana*
2	t**ngin*	**nyuNpalV*	**nyurra*

Table 7.1: Proto-Pama-Nyungan first and second person pronouns (Blake 1988:6)

7 Languages of Australia

Australian languages divide themselves into Pama-Nyungan (abbreviated as P-N) and Non-Pama-Nyungan (abbreviated as N-P-N) languages. Terrill (1997) reports that the antipassives are found only infrequently in Australia and all languages that she includes are Pama-Nyungan. Indeed, William McGregor (p.c.) states that N-P-N-languages tend to not have voice alternations and that he does not know of any such languages with an antipassive. Passives are not widespread in Australia either. This is also reflected in my sample. Out of the nine languages, seven are Pama-Nyungan and the two that are not, the Tangkic languages Kayardild and Lardil, have a passive, but no antipassive.

What the exact nature of the two groups is or whether it even makes sense to adhere to this grouping - Dixon (2004) indicates that this not the case - will not be discussed here. As a consequence of their relative rarity, voice alternations are in not reconstructable Proto-Australian. [25] However, there is a suffix that develops into a voice marker in many languages, reconstructed as **-dharri* (Dixon 2004:531). Note that the modern vary quite a bit, due to assimilation, lenition, shortening and the like. In many languages, it is used to express reflexives or reciprocals, sometimes along with passive and/or antipassive functions. In these languages, the suffix detransitivizes the verb it attaches to. (A comprehensive overview over voice markers and their overlap with reflexives and reciprocals is to be found in Dixon 2004:535.) In other languages, however, it only has a semantic effect and no impact on the valency of the verb (Dixon 2004:531-532).

While Terrill (1997) suggests that the antipassive function develops out of the reflexive, Dixon (2004:535) rather believes that both developed out of the original meaning of **-dharri*, whatever it may have been. As an indication of what the pronouns may have looked like some time ago, I will refer to Blake (1988)'s reconstruction, even though it is not without problems.

7.1 Yidiny and Djabugay (Pama-Nyungan, Yimidhirr-Yalanji-Yidinic)

Like many other Australian languages, Yidiny and Djabugay have accusatively aligned pronouns, where the accusative form is based on the nominative (see Table 7.3). Yidiny has a dual form for first person, but it is rarely used (Dixon 1977:165). It is probably borrowed from the neighboring language Dyirbal (Dixon 2004:282). In both

[25] Dixon (2004) does group the languages into Pama-Nyungan and Non-Pama-Nyungan. I will thus call his reconstructions Proto-Australian.

	SG	NON-SG
1	**ngay*	**nyi-rrV*
1+2	**nya*	**nga-rrV*
2	*nginy*	**nu-rrV* ~ **ku-rrV*

Table 7.2: Northern (NPN) first and second person pronouns (Blake 1988:6)

	Yidiny		Djabugay	
	NOM	ACC	NOM	ACC
1SG	*ŋayu*	*ŋaɲaɲ*	*ngawu ~ ngawunggu (A)*	*nganya*
1DU	*ŋali*	*ŋali:ɲ*	*nganydji*	*nganydjiny*
1PL	*ŋaɲdji*	*ŋaɲdji:ɲ*		
2SG	*ɲundu*	*ɲuniɲ*	*nyurra*	*nyurrany*
2PL	*ɲunu:ba*	*ɲunu:ba:ɲ*	*nyurramba*	*nyurrambany*

Table 7.3: Pronouns in Yidiny and Djabugay (Dixon 1977:168, Patz 1991)

Yidiny	Djabugay	Function
-:dji	*-yi*	polyfunctional, including reflexive and antipassive

Table 7.4: Voice marker of Yidiny and Djabugay

languages, demonstratives are used for third person reference (Dixon 1977:180, Patz 1991).

The reconstruction of the pronouns of the immediate ancestor language of Yidiny and Djabugay is presented in Table 7.5. Nothing is known about the prehistory of the 1PL form **ŋanydji*, except that it is not the continuant of the Proto-Pama-Nyungan 1PL **ngana* (cf. Table 7.1). Dixon (1977:179-180) speculates that it could be derived from the 1SG root **ŋay* and the comitative suffix *-dji*, which phonologically results in *ŋaɲdji*. Semantically, a development from **bama ŋaɲ-dji galiŋ* 'a person goes with me' to *ŋaɲdji galiŋ* 'we are going' seems entirely within the realms of possibility. The author points out that there is no evidence to support this scenario, so it might well be that the similarity is purely coincidental.

7.1.1 The suffix *-:dji-n* in Yidiny

The suffix *-:dji-n* is not only used to mark reflexives and antipassives; it has a much wider range of functions. Dixon (1977:274) goes so far as to say: "In fact, *-:dji-n* is at once the most important and the most complex derivational affix in Yidiɲ." Evidently, here is not the place to discuss all its characteristics, instead I will concentrate on the most relevant for our cause.

Dixon (1977)'s rendering of the suffix suggests that it is segmentable into two parts, namely *-:dji-* and *-n*. The first part, *-:dji-*, is also attached to verbs in subordinate clauses to render a meaning 'lest' (Dixon 1977:215). The second part seems to be a conjugation class marker. It is remarked that "*-:dji-n* stems inflect exactly like *-n* conjugation roots" (Dixon 1977:218). This analysis is confirmed by Terrill 1997, where it is presented as *-dji*. The similarity was spotted by the author, too. He states that it cannot be known whether the detransitivizer and the 'lest'-marker have a common origin, but that there is no evidence to support this claim. In addition, he feels that in present-day Yidiny, the two are quite distinct from each other (Dixon 1977:218).

The basic and most frequent function of *-:dji* is to derive intransitives from transitives (Dixon 1977:274). This follows from the fact that it marks any deviation from a well behaved transitive Yidiny clause, in which the A is distinct from P, has volitional control over a completed or anticipated action (Dixon 1977:276). Consequently, the suffix appears in reflexive as well as antipassive constructions, among others. The former optionally includes *ganagyuy/ganamarbu* 'self' in object position, as in Example (1-b). Such a construction always implies an animate agent that has volitional control over the situation (Dixon 1977:280).

(1) a. *wagu:dja giba-:dji-n*
man.ABS scratch-DJI-PRES
'The man scratched himself (on purpose).' (Dixon 1977:412)

b. *bama ŋunŋu ganagayuy gunda-:dji-ŋu*
person.ABS DEM self cut-DJI-PAST
'That person cut themselves.' (Dixon 1977:374)

In a basic transitive clause, like Example (2-a), the agent receives ergative case marking and the patient absolutive. In an antipassive construction, however, the agent is absolutive marked and the patient appears as

	SG	NSG
1	**ŋayu*	**ŋanydji*
2	**nyundu*	**nyurra*

Table 7.5: Proto-Yidiny-Djabugay pronouns (Dixon 2004:281)

	NOM	ACC
1SG	*ngaya*	*nganya*
2SG	*yinda*	*yina*
3SG	*nyola*	*nyonya nyola-nya*
1DU	*ngali*	*ngali-nya*
2DU	*yobala*	*yobala-nya*
3DU	*bola*	*bola-nya*
1PL	*ngana*	*ngana-nya*
2PL	*yorra*	*yorra-nya*
3PL	*jana*	*jana-nya*

Table 7.6: Warungu pronouns (Tsunoda 2011:174-175)

an oblique either in dative or ablative case (cf. Example (2-b)). As pronouns do not have locational cases, a pronominal patient can only appear in dative case and the agent remains absolutive, as in Example (2-c).

(2) a. *wagu:dja-ŋgu guda:ga wawa:l.*
man-ERG dog.ABS see.PAST
'The man saw the dog.'
b. *wagu:dja wawa-:djiɲ-u gudaga-nda / gudaga-la.*
man.ABS see-DJI.PAST dog-DAT / dog-ABL
'The man saw the dog.'
c. *ŋayu ŋanda wawa-:dji-ɲu.*
1SG.ABS 2SG.DAT see-DJI-PAST
'I saw you.' (Dixon 1977:277-278)

That the two functions are closely related, can also be seen in that there are clauses which are open to both a reflexive and antipassive interpretation (Example 7.4).

(3) *ŋayu bambi-:dji-ɲu.*
1SG.ABS cover-DJI-PAST
'I covered myself / I covered something.' (Dixon 1977:281)

A somewhat similar construction is used to express an 'accidental reflexive', as in Example 7.3. The instrument is promoted to subject, which triggers the suffix *-:dji* as the agent is inanimate and thus deviates from the standard. However, the clause remains transitive (Dixon 1977)

(4) *ŋaŋan djina baŋga:ldu gunda-:dji-ŋu.*
1SG.ACC foot.ABS axe.ERG cut-DJI-PAST
'The axe cut my foot = I cut myself, accidentally, on the axe.' (Dixon 1977:282)

Djabugay has a suffix *-yi* which seems to have much the same functions as *-:dji* in Yidiny (Patz 1991:300). Both probably come from the suffix **-dharri*, cf. Section 7. The proposal concerning the development of 1PL *nganydji* brings up an other interesting question, namely whether the nominal derivational comitative *-dji/-yi* is related to the antipassive marker *-:dji-*. In Djabugay, the form in question is *-:rr/-nydji/-i*, one of three comitative markers in the language (Patz 1991:293). At least the middle part resembles not only the Yidiny form, but also the first person plural in Djabugay (cf. Table 7.3). Indeed, it is likely that the two forms are related and come from an earlier **-djir(i)* ~ **-ḏir(i)*. In many other Australian languages, there is a verbal derivational suffix reconstructable as **-djiri* ~ **-ḏiri*, which is probably also the precursor of the antipassive suffix. Whether the similarity between the verbal and the nominal suffix is real or only coincidental cannot be decided (Dixon 1977:139-140). While the possibility remains that there is a connection between the person form and the comitative and/or antipassive marker, the safest assumption at the moment is probably that they are independent of each other.

7.2 Warungu (Pama-Nyungan, Greater Maric)

Warungu, a language of the Greater Maric branch, also has accusative alignment in pronouns. The non-singular accusative forms include a suffix *-nya* added to the nominative form. There are also six other cases, genitive, dative, comitative, locative and two ablatives, of which most include the nominative form and a case suffix (Tsunoda 2011:175). The form in question, 1DU *ngali*, clearly reflects the Proto-Pama-Nyungan 1DU **ngali*, cf. Table 7.1.

Warungu has a polyfunctional verbal suffix *-gali* with a variant *-li*. It is used as a reflexive (Example 7.5), anticausative (Example 7.6) and what is called 'middle' in the grammar (Tsunoda 2011:516, 523, 535). The an-

ticausative is only attested with a few verbs, but it is not clear whether this is just due to lack of data or not (Tsunoda 2011:530-531). The same verb can have a reflexive or anticausative meaning, when suffixed with *-gali ~-li*.

(5) *Gaya giba-gali.*
father.NOM shave-GALI
'Father shaved himself.' (Tsunoda 2011:516)

(6) *Yori wajo-gali-n.*
kangaroo cook-GALI-NFUT
'The kangaroo was cooked.' (Tsunoda 2011:523)

It is not straightforward what is meant by 'middle voice' here. It seems that it attaches to intransitive verbs with not very much meaning change. It is also attested once with a noun and once with an adverb basis (Tsunoda 2011:534-536). I will leave it to further research to define its function more clearly.

(7) a. *bama gawa-yal.*
man.ABS vomit-PURP
'The man is going to vomit.'
b. *ngoni=wa nyola gawa-gali-n.*
there=FOC 3SG.NOM vomit-GALI-NFUT
'The man is vomiting here.' (Tsunoda 2011:535)

The most frequent function of *-gali ~-li* is the antipassive. There are slight semantic and probably also pragmatic differences between the transitive and the antipassive (Tsunoda 2011:428), but the translation for both is the same in the grammar. The former P argument can have ergative, dative, genitive or absolutive case, with the first two being the most common (Tsunoda 2011:427). It is not clear to me what determines the choice of the case form for the demoted P.

(8) a. *bama-nggo gamo bija-n.*
man-ERG water.ABS drink-NFUT
'The man drinks/drank water.'
b. *bama gamo-nggo bija-gali-n.*
man.ABS water-ERG drink-GALI-NFUT
'The man drinks/drank water.' (Tsunoda 2011:428)

(9) a. *bama-nggo gamo yangga-n.*
man-ERG water.ABS search.for-NFUT
'The man looked/looks for water.'
b. *bama gamo-wo yangga-gali-n.*
man.ABS water-DAT search.for-GALI-NFUT
'The man looked/looks for water. ' (Tsunoda 2011:428)

As all the other voice markers discussed so far, *-gali* most probably goes back to **-dharri* (Terrill 1997:78). This means that a connection with the well reconstructable 1DU.NOM *ngali* is not probable and the most sensitive assumption is that the overlap is due to coincidence.

Much the same situation is found in Bandjalang, which belongs to the Southeastern Pama-Nyungan branch. It has a first person plural nominative form *ngali* and a verbal suffix *-li* with reflexive, reciprocal and antipassive functions (Dixon 2004:533, Sharpe 2005). It also goes back to **-dharri*, which means that this overlap seems to be result of coincidence, too.

7.3 Kurrama and Martuthunira (Pama-Nyungan, South-West Pama-Nyungan)

Kurrama and Martuthunira both do not have an overlap in person and voice marking, but are interesting for the discussion of Australian languages from two points of view: first, they have several strategies for marking a passive, some of them expressed as portmanteau with TAM, and second, neither of these passive markers is also used as a reflexive. I will very briefly illustrate the passives, with a short note on how reflexives and reciprocals are formed. In Martuthunira, some verbs are inherently reflexive, e.g. *puntha* 'wash self' (Dench 1995:139). Other verbs take *jankul* 'self' as patient to express reflexivity (Dench 1995:221), as in Example 7.10.

(10) *Ngayu kuliyanpa-lha-rru jankul, wayangka-lha-rru warnu.*
1SG.NOM think-PAST-NOW self frighten-PAST-NOW ASSERT
'I thought about myself now, I was frightened (you see).' (Dench 1995:185)

Unfortunately, Hill (2011:275) did not investigate Kurrama reflexive clauses. He speculates, though, that they are formed with the expression *yamarti* 'alone, by oneself', as a similar construction is found in Yindjiibarndi (Example 7.11), a closely related language.

(11) *Ngayi punththa-kayi tyarnku-u.*
1SG.NOM wash-POT self-ACC
'I will wash myself.' (Hill 2011:276, cited from Wordick 1982:78)

To express reciprocality in Kurrama, the 'collective' suffix *-marri* is used. It marks the following situations: actions performed by a group acting unison, actions involving members of a group acting on each other, actions involving people of the same kin set (Hill 2011:173). It thus seems to express 'plurality of relations'. An example of its reciprocal function is given below (Example 7.12)

(12) *... mangkurlarra-yu yirra-marri-ngu jingkaa-la.*
... children-EMPH call-PLR-REL upriver-LOC
'... while/and the children were calling out to each other up the river.' (Hill 2011:174)

The situation is exactly the same in Martuthunira. Not only is the suffix identical, it also has the same three interpretations (Dench 1995:152-153). Its reciprocal function is illustrated in Example 7.13.

(13) *Parrungka-marri-layi wiyaa.*
shout-PLR-FUT maybe
'Maybe they will start shouting at each other.' (Dench 1995:153)

Both languages have a general derivational passive, but also suffixes combining passive meaning with TAM-categories. The suffix *-nguli* in Kurrama derives a passive verb and can be combined with any TAM-inflection. The patient is promoted to subject and appears in the nominative, the agent, if present, receives instrumental marking. This also holds for the following two inflectional passives. Its main purpose is to allow for coordination or subordination between clauses, as only nominative arguments can be co-referent with an argument in an other clause (Hill 2011:175-176).

(14) *Kupija kartpa-nguli-nha ngurra-yi ngangka-lu.*
baby take-PASS-PAST camp-ACC mother-INSTR
'The baby was taken home/camp by (her/his) mother.' (Hill 2011:176)

Martuthunira has the same suffix *-nguli*. There is, however, a difference to the situation in Kurrama: the agent is marked by the 'effector'-case, which historically derives from the ergative, but is now restricted to mark obliques in passive clauses (Dench 1995:71-72).

(15) *Pukarra manku-ngu-layi pawulu-ngara-lu.*
firewood get-PASS-FUT child-PL-EFF
'The firewood was gathered by the children.' (Dench 1995:228)

In Kurrama, the passive perfective focuses on the endpoint or a resultant state of an action, just like the active perfective. The agent can be expressed overtly. It is most often used in nominalizations and relative clauses (Hill 2011:144). Note that the active perfective is marked by *-ayi*, i.e. the passive perfective does not seem to be derived from the active (Hill 2011:142). The passive perfective in Martuthunira is very similar, but not completely restricted to the perfective aspect (Dench 1995:144), see Example 7.17.

(16) *Murla nhuwa-ngku ngayarntu-lu kampa-rnaarnu.*
meat spouse-INSTR 1SG.GEN-INSTR cook-PASSPFV
'The meat was cooked by my wife.' (Hill 2011:145)

(17) *Nhula muyi ngulu thani-rnu kalyaran-ta nyina-nyila-lu.*
near.you dog that.EFF hit-PASSPFV log-LOC sit-PRES.REL-EFF
'That dog near you was hit by that fellow sitting on the log. ' (Dench 1995:144)

There is a third kind of passive in Kurrama used to denote events that might occur. It is most commonly used in 'lest'-clauses to warn the addressee about something (Hill 2011:169). It is called the 'might' passive in the grammar, but I will refer to as potential passive and gloss it accordingly. Again, there seems to be no connection to the active might-suffix *-wunta ~-rtpunta* (Hill 2011:167).

(18) *Mirta pangkarri-i murna karla-ngka kampa-nnyaa.*
NEG go-POT near fire-LOC burn-PASSPOT
'Don't go there or (you) might be burnt.' (Hill 2011:169)

Kayardild			Lardil	
NOM	poss. stem		NOM	ACC
ngada	*nginjin-*	1SG	*ngata*	*ngithaa-n*
nying-ka	*ngumban-*	2SG	*nying-ki*	*ngimpee-n*
ni-ya	*ni-wan-*	3SG	*ni-ya*	*ni-wee-n*
nga-ku-rr-a	*nga-ku-rr-wan-*	1DU.I	*nga-ku-d-i*	*nga-ku-d-wee-n*
nga-rr-a	*nga-rr(a)-wan-*	1DU.E	*nya-d-i*	*nya-d-wee-n*
ki-rr-a	*ki-rr-wan-*	2DU	*ki-d-i*	*ki-d-wee-n*
bi-rr-a	*bi-rr-wan-*	3DU	*pi-d-i*	*pi-d-wee-n*
nga-ku-l-da	*nga-ku-l(u)-wan-*	1PL.I	*nga-ku-l-i*	*nga-ku-l-wee-n*
nga-l-da	*nga-l(a)-wan-*	1PL.E	*nya-l-i*	*nya-l-wee-n*
ki-l-da	*ki-l(u)-wan-*	2PL	*ki-l-i*	*ki-l-wee-n*
bi-l-da	*bi-l(u)-wan-*	3PL	*pi-l-i*	*pi-l-wee-n*

Table 7.7: Pronouns in Kayardild and Lardil (Evans 1995, Klokeid 1976)

Kayardild	Lardil	Function
-yii	*-yi*	reflexive and passive

Table 7.8: Voice marker of Kayardild and Lardil

There is no parallel passive in Martuthunira. Instead, it has a counterfactual passive, marked by *-ngulaanu* with very similar functions. It is used to encode situations that did not happen or which were expected to happen, but did not (Dench 1995:150). This is illustrated in Example 7.19.

(19) *Nhiingara jalya-ngara yungku-ngulaanu kapalya-ngara-a ngaliwa-wu-u mungka-lwaa-lpurtu.*
this.PL scrap-PL give-PASSCFT pet-PL-ACC 1PL.I-GEN-ACC eat-PURP-COMP
'These scraps should have been given to those pers of ours to eat (but for some reason they weren't).' (Dench 1995:150)

As has become clear, in neither language do the passive suffixes overlap with either the reciprocal or reflexive. In addition, none of the passive suffixes goes back **-dharri*.

7.4 Kayardild and Lardil (Tangkic)

As all of the languages discussed above, the alignment of the pronouns in Kayardild and Lardil is accusative. The accusative forms in Kayardild are based on the possessive stem, which is why the latter is presented in Table 7.7. In Lardil, there are two sets of pronouns, harmonic and disharmonic. Harmonic means, that the people in question are in the same generation or in generation separated by an odd number. Disharmonic refers to people separated by an even number of generations (Klokeid 1976:107). Naturally, this only applies to non-singular pronouns. The forms in Table 7.7 are the harmonic ones. The disharmonic pronouns are based on the same stem forms and also show no overlap and thus are omitted here.

Kayardild has a suffix *-yii-* which is described as 'middle voice'. It has several allomorphs whose distribution depend on the last vowel or consonant of the verb stem and its conjugation class. The rules are as follows (Evans 1995:276-277):

- palatal conj. class, ending in a long vowel: the vowel is shortened before *-yii*, e.g. *ba-yii-ja* from *baa-ja* 'bite'
- palatal conj. class, ending in a short vowel: the vowel is lengthened, e.g. *diya-a-ja* from *diya-ja* 'eat'
- dental conj. class in *-a-*: the vowel is lengthened, e.g. *khala-a-tha* from *khala-tha* 'cut'
- simple stems in *-u-*: *-u-* combines with *-yii* and optionally reduces to *-ii*, e.g. *buru-yii-tha/burr-ii-tha* from *buru-ja* 'get'
- complex stems in *-u-*: *-u-* combines with *-yii* and obligatorily reduces to *-ii*, e.g. *kurru-l-ii-ja* from *kurru-lu-tha* 'kill'

It has several functions: In passive constructions, the P of the transitive verb is promoted to subject, the agent is either suppressed or marked as an oblique and the verb carries the suffix *-yii* (Evans 1995:347), as illustrated in Examples (20-a) and (20-b). Passives are mostly used to emphasize the affectedness of the patient. It is also used in reflexive constructions, which can sometimes lead to ambiguity in the interpretation, as in Example 7.21.

Language	Pronouns	NP	Voice
Warungu	accusative	ergative	AP
Dieri	tripartite / accusative (SG vs. NSG)	split	DETR
Kurrama	accusative	accusative	PASS
Martuthunira	accusative /neutral (rest vs. 3SG)	accusative	PASS
Bandjalang	accusative	ergative	AP
Djabugay	accusative	ergative	AP
Yidiny	accusative	ergative	AP
Kayardild	accusative	accusative	PASS
Lardil	accusative	accusative	PASS

Table 7.9: Alignment and voice marking the languages of Australia

(20) a. *dathin-a kulkiji baa-ju ngumban-ju.*
that-NOM shark.NOM bite-POT 2SG-MPROP
'That shark will bite you.'
b. *nying-ka ba-yii-ju dathin-kiiwa-thu kulkiji-iwa-thu.*
2SG-NOM bite-YII-POT that-VALL-POT shark-VALL-POT
'You will be bitten by that shark.' (Evans 1995:347)

(21) *ngada bala-a-ja karwa-wuru*
1SG.NOM hit-YII-ACT club-PROP
'I was hit with a club. *or* I hit myself with a club.' (Evans 1995:352)

Thirdly, "there is the inchoative use of verbs like 'break"' (Evans 1995:278). Unfortunately, no more information is provided and Example 7.22 is the only one. I am thus unsure about what its function really is. If it were inchoative, I would expect Example 7.22 to translate to 'The boat was beginning to break down.' or the like. The translation given by Evans (1995) rather suggests an anticausative function.

(22) *budubudu dara-a-j*
boat.NOM break-YII-ACTL
'(Our) boat broke down.' (Evans 1995:278)

Lardil has a suffix *-yi*, which is also used in reflexive and passive constructions and exhibits similar allomorphy as in Kayardild. Yukulta, which also belongs to the Tangkic family, uses a suffix *-yi* to form reflexives. This suggests that the suffix goes back to Proto-Tangkic. It probably had a reflexive function and later developed a passive usage in Kayardild and Lardil (Evans 1995:278-279). According to Dixon (1977:533), the suffix goes back to **-dharri*.

7.5 Summary

Whereas the nine languages surveyed are not enough to properly represent the Australian macro-area, some general observations may still be appropriate. A comprehensive overview is given in Table 7.10. As already observed by Terrill (1997) and Dixon (2004), most of the markers have more than one function and usually include the reflexive. The reciprocal is often expressed differently from the reflexive, except in Bandjalang and Dieri.

It is probably safe to say that Australian languages tend not to have specialized voice markers. Interestingly, the two languages that do - Kurrama and Martuthunira - also express tense/aspect with two of the passive markers. If indeed all the suffixes, except those in Kurrama and Martuthunira, go back to **-dharri*, which either had a very general meaning or was already polysemous, this is not so surprising. However, as Kurrama and Martuthunira have shown us, Australian languages are not as uniform as is often assumed. Hopefully, more detailed studies about the function and reconstruction of voice markers in that area will be carried out.

The two overlaps with first person non-singular markers in Yidiny and Warungu are either coincidence, or if there really is a historical connection it goes back very far in time. However, it is more reasonable to assume that they are unconnected, if one does not want to engage in wild speculation. This means that there is no voice and person marking overlap in this macro-area - at least not in my sample. As it was specifically designed to find such overlaps, it seems that Australian languages do not associate person and voice marking. An overview in numbers in presented below:

Markers	no. of overlapping VM	no. of overlaps	prob. >0.4	in %
9	3	3	0	0

On the other hand, the association between voice and reflexivity is very prevalent, but not so much between voice and reciprocity. Along these lines it must be pointed out that Kurrama and Martuthunira use *marri-* (> **-dharri*) to mark a reciprocal, which in most other languages was primarily recruited to mark voice and reflexivity.

The association of alignment of full NPs and voice type is exactly as expected: all ergative languages have antipassives and all accusative languages have passives (see Table 7.9). The alignment of pronouns is very uniform, with all languages exhibiting an accusative structures. Only two languages have a split system. Thus, in Australian languages the alignment of full NPs does seem to be an important factor in the development of voice markers.

Language	Voice		Person		Direction	Prob.	Reflexive and Reciprocal	
Warungu	AP, ACAUS, REFL	*-gali ~-li*	1DU	*ngali*		0.1	REC	*-wa*
Dieri	DETR, REFL, REC	*-tharri*	-					
Kurrama	PASS	*-nguli*	-				REFL	unknown
	PASSPFV	*-rnaarnu*	-				PLR (incl. REC)	*marri-*
	PASSPOT	*-nnyaa*	-					
Martuthunira	PASS	*-nguli*	-				REFL	pron. *jankul*
	PASSPFV	*-rnu*	-				PLR (incl. REC)	*marri-*
	PASSCFT	*-ngulaanu*	-					
Bandjalang	AP, REFL, REC	*-li*	1PL.E	*ngali*		0.1		
Djabugay	AP, REFL	*-yi*	-				REC	*-lndjirri ~ nydjirri*
Yidiny	AP, REFL	*-:dji*	1PL	*ŋaɲdji*		0.2	REC	unknown
Kayardild	PASS, REFL	*-yii ~-ii ~-:*	-				REC	*-nju-tha ~-nthu-tha ~-thu-tha*
Lardil	PASS, REFL	*-yi ~-:*	-				REC	unknown

Table 7.10: Overview of the languages of Australia

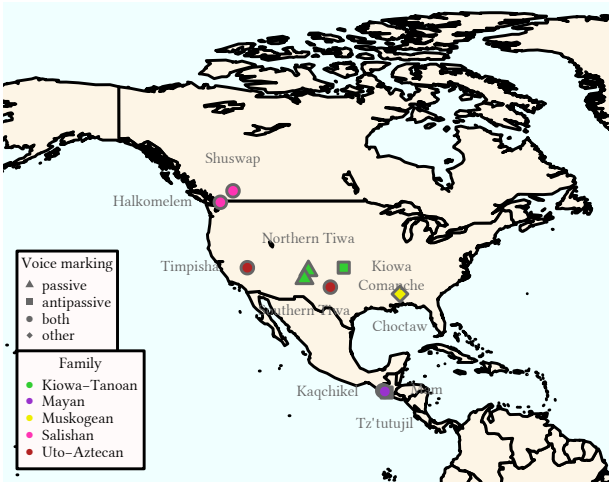


Figure 8.1: Language map of North America

8 Languages of North America

8.1 Halkomelem and Shuswap (Salishan)

Halkomelem is a Central Salishan language spoken on the coast in southwestern British Columbia and northern Washington. Shuswap belongs to the Interior Salish branch and is spoken in roughly the same region as Halkomelem, but further inland (Hammarström et al. 2014).

8.1.1 Person marking

There is one set of pronouns covering S, A and P. The plural forms are partially analyzable. The third person plural probably consists of the singular *ƛ̓á*, a pluralizing infix *-l-* and the suffix *-m*, which will be discussed at length in Section 8.1.2. That is, the author himself proposes a connection between the third person plural pronoun and the voice marker (Suttles 2004:331). Free pronouns can be used as predicate heads and adjuncts, which sets them apart from other person markers (Suttles 2004:331).

The agreement system is more complex. For one, the alignment is split: first and second person are accusatively aligned, with one form covering S and A and a separate one for P, but third person has an ergative system, with S and P being unmarked (see Table 8.1). In subordinate clauses, all persons are accusatively aligned, as there is a special form covering S and A, but no special form for P. The first and second person nominative forms are second-position, i.e. Wackernagel, clitics. They are probably segmentable into an element *c-*, which could be related to the prefix *c-* 'get, have, make, do', and a final element similar to the subordinate nominative forms (Suttles 2004:322). The subordinate forms are suffixes and appear regularly in the following contexts (Suttles 2004:323-324):

- in subordinate clauses introduced by *wə-* 'if, when, that' or *ʔəɬ-* 'whenever, whatever', Example (1-a)
- in negative clauses (which can be analyzed as subordinate clauses headed by the negation), Example (1-b)
- in relative clauses with extracted objects

	pronouns	agreement				
		S	A	P	NOM.SUB	NOM.PASS
1SG	*ʔə́nθə ~ ʔé'nθə*	*c-ən*		*-S ~-S-amx ~-amx*	*-e'n ~-ən ~-ʔe'n*	*-Sel ~ el*
1PL	*ɬ-nímәɬ*	*c-t*		*-al'xw*	*-ət*	*-al*
2SG	*nə́we*	*č-xw*		*-S ~-Samə ~-amə*	*-exw*	*-Sam ~-am*
2PL	*ɬ-w-ə́ləp*	*c-e'p*		*-alə*	*-é'p ~-əp*	*-al*
3SG	*ƛ̓á*	*ø*	*-əs*	*ø*	*-əs*	*ø ~-əy- (SUB)*
3PL	*ƛ̓á-l-əm*					

Table 8.1: Person marking in Halkomelem (Suttles 2004:321, 328, 331)

A/P	1SG	1PL	2SG	2PL	3
1SG	REFL		*c̓éw-əθ(-àmə) cən*	*c̓éw-ət-àlə cən*	*c̓éw-ət cən*
1PL			*c̓éw-əθ-àmə ct*	*c̓éw-ət-àlə ct*	*c̓éw-ət ct*
2SG	*c̓éw-əθ(-àmx) čxw*	*c̓éw-ət-àlxw čxw*	REFL		*c̓éw-ət čxw*
2PL	*c̓éw-əθ-àmx ce'p*	*c̓éw-ət-àlxw ce'p*			*c̓éw-ət ce'p*
3	*c̓éw-əθ(-àmə)-əs*	?	*c̓éw-əθ-à'm* (PASS)	*c̓éw-ət-àl-əm* (PASS)	*c̓éw-ət-əs*

Table 8.2: Example paradigm of a transitive verb in Halkomelem (adapted from Suttles 2004:328)

(1) a. *k̓ʷə̀c-nəxʷ čxʷ ce? wə-ʔəm̓i-'s técəl.*
look-TR 2SG.NOM FUT when-AUX(come)-3SUB arrive.here
'You will see him when he comes.' (Suttles 2004:93)

b. *ʔə́we cən ni'n ném̓.*
NEG 1SG.NOM there.1SG.SUB go
'I didn't go.' (Suttles 2004:324)

The third person ergative form is a suffix that attaches to the transitive marker or to the object marker, if one is present (cf. Example 8.2). Plurality can be expressed by the particle *ʔé'ɬtən*, as in Example 8.3 (Suttles 2004:323).

(2) *c̓éw-əθ-əs ce?.*
help-TR.1SG.ACC-3ERG FUT
'He will help me.' (Suttles 2004:43)

(3) *k̓ʷə̀c-n-ámx-əs ce? ʔéɬtən.*
see-TR-1SG.ACC-3ERG FUT PL
'They will see me.' (Suttles 2004:323)

The first and second person accusative forms are suffixes and they appear to be segmentable, too. The elements *-S* and *-am-* indicate non-third person singular, while *-al-* seems to be the plural counterpart. The final part *-ə* refers to second person and *-x* or *-xʷ* to first person. The variant *-S* mostly occurs with the transitivizer *-t*, which then fuse into *-θ* and is optionally followed by *-amx* or *-amə* (Suttles 2004:327). The same verb root can have all of the variants, so it is not clear what drives their distribution. There is, however, a twist to the story: the third person ergative suffix cannot appear with a second person accusative suffix. It is simply ungrammatical and one must use a passive (see below) to express such a situation. This means that the form *-S*, which can be used for first and second person (see Table 8.1), is never ambiguous in actual usage: if the subject is second or third person, it has to refer to a first person patient. Conversely, if the subject is first person, it must refer to a second person patient, as there are special forms to express co-reference (Suttles 2004:328).

There are special agreement forms for subjects of passive clauses (see Table 8.1). The first and second person forms resemble the accusative suffixes, but in the plural, there is no person distinction. Third person is unmarked in main clauses, but in subordinate clauses, the suffix *-əy-* is used and obligatorily followed by a passive suffix (Suttles 2004:329). There are no examples here because the passive will be discussed in more detail in Section 8.1.2. Note that the nominative clitics cannot appear in passive clauses.

For a better impression, the paradigm transitive of the verb *c̓éw* 'to help' is illustrated in Table 8.2. I do not know why there is a gap for third person acting on first person plural. It is not explained by the author and I could not find such an example sentence in the grammar. While Shuswap does have voice marking - see Section 8.1.2 - there is no overlap with the third person plural because the form in question (third person plural) is quite different from that of Halkomelem, namely *wʌ́-nwiʔ-s* (Kuipers 1974:59).

8.1.2 Voice marking and related suffixes

Transitive verbs always carry a transitive suffix. The suffix *-t* is the unmarked choice (see Example 8.4), *-nəxʷ* indicates limited control of the agent (see Example 8.5) and *-x* seems to be a rare variant of *-t* (Suttles 2004:226-228).

(4) *niʔ cən c̓eʔw-ət.*
AUX 1SG.NOM help-TR
'I helped him.' (Suttles 2004:42)

(5) *qéʔis cən niʔ k̓ʷéc-nəxʷ.*
recently 1SG.NOM AUX look-TR
'I saw him just now.' (Suttles 2004:43)

The suffix *-(ə)m* is used with intransitive verbs and indicates that the subject is performing the action, that the action has consequences for the subject or that a state applies to the subject and is thus called 'subject-centered' (Suttles 2004:229). It appears in a variety of contexts (Suttles 2004:229-231):

- on stative verbs derived from non-active roots, e.g. *q̓éq̓əƛ̓əm* '(taste) sweet' from *sq̓éq̓əƛ̓əm* 'something sweetened'
- on intransitive verbs derived from non-active roots that name processes or actions and are inherently transitive, e.g. *híləm* 'roll, fall off' from *hí'lt* 'roll sth., push sth. off'
- on intransitive verbs derived from semantically transitive roots, e.g. *pánəm* 'to plant' from *pánət* 'bury sth.'
- on denominalized verbs (this is rare and may not be productive), e.g. *q̓ə́wətəm* 'to drum' from *q̓ə́wet* 'a drum'
- on main clause passive forms

It is glossed as 'intransitive' by the author, but it does not appear on all intransitive verbs, i.e. the list above does not cover them all. Indeed, an intransitive predicate is defined as predicate without a transitive suffix (Suttles 2004:41), as is illustrated in Example 8.6. For this reason, I think that the glossing as 'intransitive' is confusing and I will avoid it in the following.

(6) *ném̓ cən ʔíməx.*
go 1SG.NOM walk
'I am going to walk. ' (Suttles 2004:41)

Indeed, Gerdts & Hukari (1998) show that *-əm* has such a wide array of functions that it evades traditional labels. Apart from its verbalizing function described above, it also attaches to transitive verbs in reflexive, antipassive and main clause passive constructions (Gerdts & Hukari 1998:167). Note that all of these are inflectionally intransitive. We will discuss each of its functions in turn, beginning with the passive.

Passive constructions are different for main and subordinate clauses. The passive in main clauses is defined as a verb form with a transitive suffix followed by the suffix *-əm* and passive person markers. Remember that third person is zero, i.e. there is no person marker (Suttles 2004:41). Interestingly, the transitive suffix stands before the person marker and *-əm* follows it, as in Example 8.7 (Suttles 2004:28).

(7) *x^w-t^{θ}íq̓^{w}-əs-n-èl-əm.*
inward-hit-face-TR-1SG.PASS-M
'I was (accidentally) hit on the face.' (Suttles 2004:28)

Comparing the active transitive clause (Example (8-a)) to its passive counterpart (Example (8-b)), note that it no longer has two direct arguments. As mentioned above in Section 8.1.1, there are special passive suffixes for first and second person. Historically, they go back to object suffixes. It thus not clear, whether the direct argument is best seen as subject or object (Gerdts & Hukari 1998:189).

(8) a. *niʔ pas-ət-əs t^{θ}ə swəy̓qeʔ t^{θ}ə speʔəθ.*
AUX hit-TR-3ERG DET man DET bear
'The man hit the bear (with a thrown object).'
b. *niʔ pas-ət-əm ʔə t^{θ}ə swəy̓qeʔ t^{θ}ə speʔəθ.*
AUX hit-TR-M OBL DET man DET bear
'The man hit the bear/The bear was hit by the man.' (Gerdts & Hukari 1998:188)

Agents can be expressed overtly and are then marked as oblique, as in Example (8-b). But, this only applies to full noun phrases, as pronouns can never be expressed as agents of passive constructions (Suttles 2004:52). In subordinate clauses, the passive is marked by the suffix *-t*. As was explained above, negative clauses are also analyzed as subordinate and thus also employ this strategy, as illustrated in Example (9-a). This does not hold, when an auxiliary is involved: in that case, the main clause passive is used, cf. Example (9-b). The auxiliary always takes a third person subordinate marker (Suttles 2004:121). Example 8.10 illustrates a positive subordinate passive clause.

(9) a. *ʔə́wə ceʔ ném̓ $k̓^w$ə́c-n-è'l-t.*
NEG FUT CERT look-TR-1SG.PASS-PASS.SUB
'I will not be seen.'
b. *ʔə́we-'ɬ niʔ-əs $k̓^w$ə́c-n-èl-əm.*
NEG-PAST AUX-3SUB look-TR-1SG.PASS-M
'I was not seen.' (Suttles 2004:121)

(10) *ʔi cən pət-əm̓ ʔəẃ c̓ew-əθ-é'l-t*
AUX 1SG.NOM ask.CONT-M COMP help-TR-1SG.PASS-PASS.SUB
'I asked if I would be helped.' (Gerdts & Hukari 1998:190)

Suttles (2004:249) hypothesizes that this suffix may be cognate with the stative marker *-t*. However, the latter is very rare and appears only in a few adjectives and nouns. In addition, it said to be part of two anomalous resultative forms, namely *sk^{w}ék^{w}əlt* 'hidden' from *k^{w}élx* 'to hide sth.' and *spépəlt* 'skimmed' from *pé'lt* 'to skim sth.' (Suttles 2004:269). Gerdts & Hukari (1998:190) rather suggest that it is derived from an earlier reflexive marker also present in the general reflexive *-θət* and the limited control reflexive *-namət*. This seems more plausible to me than the stative origin. The suffix *-m* is also used in antipassive constructions. The comparison of the patient-oriented intransitive (Example (11-a)), the transitive (Example (11-b)) and the antipassive construction (Example (11-c)) reveals interesting differences. In the antipassive construction there is no ergative, i.e. the agent is treated as S rather than A. The patient is now marked as oblique and can also be omitted (Gerdts & Hukari 1998:182).

(11) a. *niʔ q̓^{w}əl t^{θ}ə sce'ɬtən.*
AUX bake DET salmon
'The salmon cooked/barbecued.'
b. *niʔ q̓^{w}əl-ət-əs t^{θ}ə sce'ɬtən*
AUX bake-TR-3ERG DET salmon
'He cooked/barbecued the salmon.'
c. *niʔ q̓^{w}əl-əm ʔə t^{θ}ə sce'ɬtən.*
AUX bake-M OBL DET salmon
'He cooked/barbecued the salmon.' (Gerdts & Hukari 1998:179)

In addition, there is also a zero marked antipassive with agent-oriented verbs. Just like the *m*-antipassive it inflects intransitively and the patient is either omitted or expressed as an oblique (Gerdts & Hukari 1998:182). Thus, Examples (12-a) and (12-b) are identical, except that the former is an unmarked antipassive while the latter is a *m*-marked antipassive.

(12) a. *nem̓ ček^{w}x̌ ʔə k^{wθ}ə sce'ɬtən.*
go fry OBL DET salmon
'Go fry some salmon!'
b. *nem̓ ček^{w}x̌-əm ʔə k^{wθ}ə sqəw səplíl.*
go fry-M OBL DET fry bread
'Go fry some fry bread!' (Gerdts & Hukari 1998:182)

Lastly, antipassives can also be marked by *-els* and this strategy is more productive than the one with *-m*. While the inflection and argument marking is the same as described for the two other antipassives, its function is a bit different. Antipassives in *-els* generally put emphasis on the action itself, while those in *-m* serve to defocus the object, which is usually unindividualized and inanimate. The activities denoted by an *els*-antipassive refer to occupations or "when the person is playing a role in a social situation" (Gerdts & Hukari 1998:185). The same suffix is described by Suttles (2004:232) in a similar way, albeit without calling it antipassive.

(13) *naʔət q^{w}əs-əls ʔə t^{θ}ə x̌eɬəm̓ sce'ɬtən.*
AUX pour.CONT-ELS OBL DET salted salmon
'She is soaking the salted fish.' (Gerdts & Hukari 1998:184)

And that was not the last of it: the suffix *-m* can even be combined with *-els*. Gerdts & Hukari (1998:186) indicate that given their semantic differences, this is not so surprising. Their functions are simply combined: the object is no longer individualized and the activity is focused (cf. Example 8.14).

(14) *ʔi ct pəpən̓-əm̓-əls ʔə k^{w}θə sqewθ.*
AUX 1PL.NOM plant.CONT-M-AP OBL DET potato
'We are doing the planting of the potatoes.' (Gerdts & Hukari 1998:186)

Coreference, i.e. reflexivity, is marked by the invariable suffix *-θət*. This strategy cannot be used, if there is an incorporated noun whose notional possessor is co-referent with the agent. In such cases, *-m* must be used, compare Examples (15-a) and (15-b) (Gerdts & Hukari 1998:171-172). More specifically, *-m* is used when referring to a part of a person or a personal belonging, as in Example (15-c), and the author's term it is a 'personal reflexive' (Gerdts & Hukari 1998:173).

	SG	PL
1	**ʔəncá*	**nímət̓*
2	**nəwí*	**láp, *wəláp*
3	**cəníɬ*	

Table 8.3: Proto-Salish independent pronouns (Newman 1977:304)

	clitics I	clitics II	suffixes
1SG	**=kən*	**=kan*	**-an*
1PL	**=kət*	**=kat*	**-at*
2SG	**=kəxw*	**=kaxw*	**-axw*
2PL	**=kəp*	**=kap*	**-ap*
3	**ø*	**ø*	**-as*

Table 8.4: Proto-Salish subject markers (Davis 2000:500, 513)

(15) a. *niʔ ct ləx̌ʷə-θət.*
AUX 1PL.NOM cover-REFL
'We covered ourselves.' (Gerdts & Hukari 1998:171)

b. *niʔ cən iˀ^θəx̌ʷ-šén-əm*
AUX 1SG.NOM wash-foot-M
'I washed my feet.' (Gerdts & Hukari 1998:172)

c. *niʔ nem̓ xʷʔəlˀ^θ-əlqsən-əm kʷθən̓ mən̓ə.*
AUX go wipe-nose-M DET.2POSS child
'Your child went to wipe his nose.' (Gerdts & Hukari 1998:175)

A note on Shuswap:
The voice marking system seems to be very comparable to that of Halkomelem. Shuswap, too, has passive constructions. They are productive and mainly used to ensure topic continuity in discourse. As in Halkomelem, the verb is inflected intransitively and the agent, if present at all, expressed by an oblique (Gardiner 1985:46). As can be seen from Example (16-b), the suffix is the same as in Halkomelem, namely *-(ə)m*. [26] Moreover, they are also added to the transitive suffix (Boelscher 1990:63).

(16) a. *kúkpiʔ Xwe-Xwey-s-t-és re-núXwenuXw.*
chief RED-like-CAUS-TR-3ERG DET-woman
'It is the chief who is praising the woman.'

b. *Xwe-Xwey-s-t-ém re-núXwenuXw te-kúkpiʔ.*
RED-like-CAUS-TR-M DET-woman OBL-chief
'The woman was being praised by the chief.' (Gardiner 1985:47)

The suffix *-m* also expresses antipassives. Again, the construction is parallel to that in Halkomelem: intransitive inflection of the verb and demotion of the patient to an oblique (Gardiner 1985:49). This is illustrated in Example (17-b) with its active counterpart Example (17-a).

(17) a. *Íswet̓ wik-c re-steqté'q.*
PN see-TR.3ERG DET-blanket
'Iswet̓ sees the blanket.'

b. *Íswet̓ wik-ém te-steqté'q.*
PN see-M OBL-blanket
'Iswet̓ sees a blanket.' (Gardiner 1985:49)

The suffix *-t* exists as well, but is only described as a stative marker on verbal roots (Kuipers 1974:62). Neither source mentions a zero antipassive.

8.1.3 Reconstruction of the suffix *-m*

After illustrating the various functions of *-m*, Gerdts & Hukari (2006:67) conclude that "there is no single property that definitively unites all the constructions discussed (…), although there is a general sense that each construction deviates from a fully transitive counterpart." Their scenario of how the suffix came to be so multifunctional is

[26] In Gardiner's orthography, schwa is represented by *é* (Gardiner 1985:3).

	neutral		causative	
	SG	PL	SG	PL
1	**-c (<*-t-s)*	**-al*	**-mx*	**-muɬ*
2	**-ci (<*-t-si)*	**-ulm*	**-mi*	
3	**ø*		**ø*	

Table 8.5: Proto-Salish object suffixes (Newman 1979:300-301)

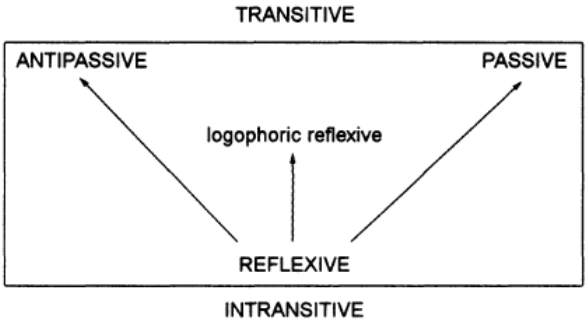


Figure 8.2: Development of the Halkomelem middle system (Gerdts & Hukari 2006:72)

summarized in Figure 8.2. The authors note that a similar range of functions is attested in other languages with 'middle' markers and that the most common source of such markers is the reflexive. Thus, they take the reflexive as the starting point and derive all functions from there (Gerdts & Hukari 2006:67-68). The first extension to the logophoric reflexive does not need further explanation, it simply involves a broadening of the co-reference notion. The development from reflexive is well attested and can be understood in terms of shared properties, like lower degree of transitivity. See Section 2.3.1 for a detailed discussion of this pathway. The antipassive can be connected to the reflexive in that both in some way down-play the patient: in the reflexive construction it is not expressed at all, because it is co-referent with the agent and in antipassives is demoted or left unexpressed. In addition, both constructions are intransitive (Gerdts & Hukari 2006:69-70).

The authors conclude that this is the most plausible scenario, for several reasons: a) the passive and reflexive function are the only productive ones and b) if the passive were the source, a development into a reflexive could not be motivated (Gerdts & Hukari 2006:71). In Table 8.3, there is an overview of the independent pronouns reconstructed for Proto-Salish and Tables 8.4 and 8.5 summarize subject and object agreement. We see that there is no number distinction for third person in either of the paradigms. Moreover, there is no element *-m* which could have been transferred to the third person plural pronoun. It thus reasonable to assume that it is indeed the 'middle' suffix *-m* that is involved. Gerdts & Hukari (2006) unfortunately do not mention anything about it. As mentioned above (Section 8.1.1), *-l* marks plurality, so it is difficult to see what *-əm* adds to that. One could speculate that *-m* did not only mark reflexivity on verbs but also on pronouns, but that still does not explain why it was interpreted as being part of the third person plural form.

To conclude, it is entirely possible that there is a diachronic connection between the voice marker *-m* and the last element of the third person plural pronoun *ƛá-l-əm*, but as long as I do not know more, it is just that: a possibility.

8.2 Comanche and Timbisha (Uto-Aztecan, Numic)

Comanche and Timbisha are two very closely related Numic languages. Comanche is spoken in Oklahoma and Timbisha further to the west in California, which means that there is considerable geographic distance between them.

8.2.1 Personal pronouns and demonstratives

Timbisha and Comanche have a fairly similar system of personal pronouns. The alignment is nominative-accusative and there are three number categories (see Tables 8.6 and 8.7). Personal pronouns *per se* only exist for first and second person, while demonstratives are used for third person reference. Again, the organization and forms of the paradigm resemble each other quite closely.

Three of the demonstrative bases have developed into third person singular object pronouns in Timbisha. There is a tendency to use *ma* for humans and *u* for non-humans, but it is not obligatory to do so. Sometimes,

Comanche		
	NOM	ACC
1SG	*nii*	*ni ~ nie ~ nieti*
2SG	*inni ~ nii*	*i ~ immi*
1DU.I	*tah ~ takwih*	*tahi*
1DU.E	*nikwih*	*nihi*
2DU	*mih ~ mikwih ~ nii*	*mihi*
1PL.I	*tanni*	*tai ~ tammi*
1PL.E	*ninni*	*nimmi*
2PL	*minni ~ mimmi*	*mii ~ mimmi*
3	*ma ~ u*	

Timbisha		
	NOM	ACC
1SG	*nü ~ nüü*	*nia ~ nü*
2SG	*ü ~ üü*	*ümmi ~ ün*
1DU.I	*tangku*	*tahi ~ tahu-*
1DU.E	*nungku*	*nuhi ~ nuhu-*
2DU	*mungku*	*muhi ~ muhu-*
1PL.I	*tammü*	*tammi*
1PL.E	*nümmü*	*nümmi*
2PL	*mümmü*	*mümmi*
3SG		*ma ~ u ~ a*

Table 8.6: Personal pronouns in Comanche and Timpisha (Dayley 1989:130, Charney 1993:98)

Comanche			
dem. bases		dem. stem formatives	
		SG.SUBJ	*ø*
near	*i-*	SG.OBJ	*-Hka*
middle	*o-*	DU.SUBJ	*-tikwih*
far	*u-*	DU.OBJ	*-hti*
scattered	*e-*	PL.SUBJ	*-tii=*
unknown	*ma-*	PL.OBJ	*-tii*

Timbisha			
dem. bases		dem. stem formatives	
		SG.SUBJ	*-tü*
right here	*i-*	SG.OBJ	*-kka*
here nearby	*e-*	DU.SUBJ	*-tungku*
there visible	*a-*	DU.OBJ	*-tuhi ~-tuhu*
there not visible	*u-*	PL.SUBJ	*-tümmü ~-tümmu*
given	*ma-*	PL.OBJ	*-tümmi ~-tummi*

Table 8.7: Demonstratives in Comanche and Timpisha (Dayley 1989:136-137, Charney 1993:99)

these forms have plural reference (Dayley 1989:130). Note that as demonstratives, they would always have a stem formative attached, i.e. the pronoun and demonstrative forms are not identical.

The demonstrative base *ma-* has a special status in both languages. As opposed to the other demonstratives, it does not indicate a degree of distance. In Comanche, it is used when the referent is unimportant or unknown, e.g. with weather verbs (Charney 1993:91). In Timbisha, *ma* indicates that a referent is given or definite and its main function is "to track topics in discourse" (Dayley 1989:136). McDaniels (2008) gives an other account: according to him, *ma* and *u* also function as a third person pronouns, just like in Timbisha. They are second position clitics (see Example 8.18), while the demonstratives appear before the verb, as in Example 8.19.

(18) *Sohoto'i-tɨ ma.*
climp-IMPF 3
'He/she/that's climbing.' (McDaniels 2008)

(19) *U-se sohoto'i-tɨ.*
DIST-DEM climb-IMPF
'He/she/that there is climbing.' (McDaniels 2008)

Note that this also holds for the 'impersonal' use described by Charney (1993). In Example 8.20, too, *ma* appears after the verb in second position.

(20) *yu?ai?-i ma.*
warm-COMPL 3
'It grew warm.' (Charney 1993:195)

8.2.2 Passive and antipassive constructions

As there is no verb agreement, it might not be immediately evident whether a voice construction is any different from the basic clause type. I will thus briefly illustrate basic intransitive and transitive clauses in Comanche. In intransitive clauses, both the pronominal and the nominal S are nominative and appear before the verb, as in Examples (21-a) and (22-a). In transitive clauses, the agent receives nominative case and the patient is unmarked, if it is a full NP, cf. Examples (22-a) to (22-c). The subject precedes the object and the verb comes last.

(21) a. *ibu nʉ? mia-ru?i.*
DIR 1SG.NOM go-UNR
'I will go this way.'

b. *wahah-tʉ-kwʉ wasáasi?-tena-nʉ-kwʉ nʉ-waka bitʉ-?i.*
two-NOM-DU Osage-man-NOM-DUAL 1SG-toward arrive-REAL
'Two Osage men arrived by me.' (Wistrand-Robinson & Armagost 1990:249)

(22) a. *ma=buni-tu?i nʉ?.*
3=see-UNR 1SG.NOM
'I will see it.'
b. *wasápe?-a kobe nʉ? puni-tu?i.*
bear-GEN face 1SG.NOM see-UNR
'I will see the bears face.'
c. *sitʉʉ kwasinaboo?-nʉʉ ma ma=nuki-kʉ-nu.*
these snake-NOM DEM 3=run-CAUS-PAST
'These snakes chased her.' (Wistrand-Robinson & Armagost 1990:250-251)

Passive constructions are not very common in Comanche, but they do exist. The most common way to form a passive is by nominalization with the suffix *-pih*, as in Example 8.23.

(23) *u-iki-piakwasu?u-tsa sihwa-pih*
her-new-coat-TOP tear-NMLZ
'Her new coat is torn.' (Charney 1993:139)

Rarely, the reflexive/reciprocal prefix is used with a passive meaning. In can co-occur with *-pih*, but it does not have to. Unfortunately, Examples (24-a) and (24-b) do not enlighten the matter much. That *na-* also has a reflexive meaning is confirmed by Wistrand-Robinson & Armagost (1990:272), who give examples like *na-buni* 'look at oneself', but do not provide full clauses.

(24) a. *na-tsaH-wo-pih u.*
NA-INST(hand)-??-NMLZ DEM
'It (a field) has been plowed.' [27]
b. *u-ka?ih-pih-tsa na-tieka-H-ti.*
his-forehead-ABS-TOP NA-paint-TEMP:ASP
'There is paint on his forehead.' (Charney 1993:126)

It should be noted that *na-* occasionally occurs as a nominalizer to express 'place where the action occurs', e.g. *na-timi* 'store' from *timi* 'buy, sell'. It is unclear how productive this construction is (Charney 1993:61).

In Timbisha, too, the passive is marked by a prefix *na-*, but in contrast to Comanche, this is a productive process. The agent cannot be expressed overly, but is implied. The S argument of the derived intransitive is generally in nominative case (cf. Example (25-a)), if it is human, and in accusative case (cf. Example (25-b)), if it is non-human (Dayley 1989:104-105).

(25) a. *Nungku atammupi kuppa na-puniha-ppühantü.*
1DU.E.NOM car in PASS-see-PAST
'We two were seen in the car.'
b. *Püe tammin tüpa-nna na-yaa-ppüh.*
already 1PL.I.POSS pinenut-ACC PASS-take-PERF
'Our pinenuts have already been taken.' [28] (Dayley 1989:105)

The prefix is also used to derive anticausative verbs (called 'mediopassive' in the grammar), i.e. it removes any notion of an agent. Unlike the passive, this function is not productive anymore. However, the number of lexicalized verbs that occur with *na-* as an anticausative suggests that it was at least semi-productive at some point (Dayley 1989:107-108).

(26) *Tüwüttümappüh na-wüttüma-wi'ah*
door PASS-close-INC
'The door is closing.' (Dayley 1989:108)

Comanche has two constructions to express an unspecified object, one with the prefix *ma-* and one with the prefix *ti-*. In both grammars, the description is quite brief and not many examples of full clauses are provided (cf. Wistrand-Robinson & Armagost 1990:272, Charney 1993:128-129). Thus, some questions will be left unanswered.

According to Charney (1993:128), the main difference between the two is that *ma-* is generally used with

[27] The glossing ?? is found as such in the grammar. Obviously the verb stem is not attested otherwise.
[28] The grammar did not provide morpheme segmentation, so there may be errors in my segmentation.

form	translation	gloss	source
ma-kwinuma	make one dizzy/drunk	not provided	Wistrand-Robinson & Armagost 1990:272
ma-kwitso?ai	save someone	not provided	
ma-tsʉbaki	glue/stick something to	not provided	
ma-kuya?a	to scare someone	ma-be.frightened	Charney 1993:128
ma-tsaH-so?i	to scratch a pan, someone	ma-INST(hand)-scratch	

Table 8.8: Examples of the Comanche prefix *ma-*

human objects and *ti-* with non-human objects. It is also mentioned that the latter is less definite than the former, but this statement is not elaborated any further.

Wistrand-Robinson & Armagost (1990:272) give a very different account: they characterize *ma-* as "having to do with some object related to activity by the hand" and *ti-* as "having to do with some object's lower end or foot". From the examples provided, both explanations seem plausible. Unfortunately, neither of the grammars mentions explicitly whether the prefixes attach to transitive and intransitive verbs or whether they have a detransitivizing effect. However, Charney (1993:129) says that "[t]he prefix *ti-* can also be attached to a verb stem to detransitivize a transitive verb (...)". This is in line with McDaniels (2014:75) discussion of purposive clauses. He mentions that transitive verbs in Comanche cannot be constructed as intransitives without further modification. They can be detransitivized by the unspecified object prefix *ti-*, as in Examples (27-a) and (27-b).

(27) a. *Tɨ-tsahani-tui nɨ.*
AP-drive-UNR 1SG.NOM
'I am going to drive.'
b. **Tsahani-tui nɨ.*
drive-UNR 1SG.NOM
intended: 'I am going to drive.' (McDaniels 2014:75)

Further evidence comes form Timbisha, which has an antipassive marker *tü-*. It is most probably the same prefix, as */ü/* represents the same vowel as */i/* in the orthography of Charney (1993). Like its Comanche counterpart, it attaches to transitive verbs to derive an intransitive with an implied object (Dayley 1989:111-112).

(28) *Nü tü-saawaha.*
1SG AP-boil.STAT
'I'm boiling (something).' (Dayley 1989)

Thus, there is sufficient evidence to claim that *ti-* marks an antipassive. Unfortunately, the status of *ma-* is much less clear. Table 8.8 summarizes all the examples provided in the grammars. It appears that the prefix attaches to both transitive and intransitive verbs. However, it does not seem that it affects the transitivity of the verb, but one cannot be sure about this. For the time being, I will call it 'unspecified object marker'. In Timbisha, the form *ma* also exists, but only as third person pronoun and demonstrative base (see Section 8.2.1).

8.2.3 On the history of *ma* and the voice markers

For Proto-Uto-Aztecan (PUA), three prefixes are reconstructed which were used to refer to an unspecified argument: **ta-* 'unspecified subject', **tɨ-* 'unspecified object' and **nɨ-* 'unspecified human subject coreferent with the object'. In the modern Uto-Aztecan languages, usually only two of these are preserved, as in Comanche (Langacker 1977:46). This means that the antipassive prefix *tɨ-*/*tü-* in Comanche and Timbisha respectively goes back all the way to PUA and even had the same or a very similar function in the proto-language. The Comanche impersonal *ta-* thus also has a transparent etymology.

A prefix **na-* is also reconstructed for PUA, but it is said to have had reciprocal function. Reflexivity was expressed by differently for most persons numbers: **nɨ-* for 1SG, **ta-* for 1PL, **ɨ-* for 2SG and **mo-* for the rest. However, these reflexive prefixes were lost in the Northern branch, to which also Numic belongs, and subsequently, *na-* has acquired a reflexive meaning as well (Langacker 1977:47). Note that Timbisha has gone one step further and innovated a pronominal strategy for marking reflexives, i.e. possessive suffixes followed by the suffix *-sün* (Dayley 1989:133). However, the verb is optionally marked by *na-*, which is also used with dual reciprocals. With plural reciprocals the prefix *anna-* is used (Dayley 1989:104).

While passive marker is reconstructable, Langacker (1977:48) remarks that **na-* has taken on this function in many UA languages, via the reflexive stage. This scenario is quite interesting from a theoretical point of view: it is generally accepted that reciprocals can develop from reflexives, but the reverse is at best uncommon (see Section 2).

The demonstrative systems are quite heterogenous in the present-day UA languages, so parts of the reconstruction are difficult. A proximal **i* and distal **u* or **ɨ* have the most support (Langacker 1977:98). Now, I finally come to *ma*: its original meaning was simply 'one', i.e. it was not a demonstrative to start with. Forms like **pɨ ma* and **a ma* are well reconstructable and meant 'that one'. Perhaps the difference between the two was in animacy. In the whole Numic branch, **ma* was integrated into a demonstrative system with more elaborate contrasts than just proximal and distal (Langacker 1977:99).

From there, it has acquired a general third person reference in both Timbisha and Comanche, apart from referring to unspecified objects. Wether it is an antipassive under the definition employed in this study cannot be decided due to insufficient description.

8.3 Kiowa and Southern Tiwa (Kiowa-Tanoan)

The Kiowa-Tanoan languages are mainly spoken in New Mexico, except for Kiowa, which is located further to the East in Oklahoma. Southern Tiwa belongs to the Tiwa-Piro branch, while Kiowa is a direct daughter of Kiowa-Tanoan. As a consequence, Kiowa is quite different from most of the other languages of the family, which is why Southern Tiwa is also included in the discussion, even though there is no overlap.

While the Tiwa-Piro languages are often said to have an active/passive alternation, this has never been claimed for Kiowa. Given the distribution of the active/passive forms and the person marking system (see Section 8.3.3), much of the discussion has revolved over whether the construction is more appropriately termed 'passive' or 'inverse' (Watkins 1996:140). As was the practice so far, this debate must not concern us. For the sake of simplicity, I will refer to it as 'passive'. Kiowa differs from the all the other KT languages in that there is no case marking of the agent whatsoever and no voice construction with SAPs (Sutton 2014:1165).

8.3.1 Person marking in Kiowa

Kiowa's person marking system is complex - even compared to other Kiowa-Tanoan languages. Quite obviously, here is not the place to discuss it in detail; the reader interested in this topic is referred to Zúñiga 2006:190-209 and Sutton 2014:762-787. There are four sets of markers, which will be introduced briefly.

Set I is usually called 'intransitive' and consists of one form for each person/number combination. The third plural distinguishes between humans and non-human. These prefixes are used in intransitive predications (Zúñiga 2006:191). They primarily appear on stative verbs (Example 8.29), change of state verbs, verbs of directed motion, verbs of position, as well as active and cognitive verbs (Example 8.30) (Sutton 2014:763).

(29) *Sân ø-k^{h}óp-dɔ́.*
child 3SG.ITR-sick-be
'The child is sick.' (Watkins 1984:136)

(30) *hɔ́pkɔ mɔ́n̨ em=k'yɔ́-ʔâ'dep*
frequently probably 2SG.ITR=romace-dream.IMPF
'You probably dream frequently about romance.' (Watkins 1984:209)

However, intransitive predicates do not have to take set I person markers: set III prefixes, referred to as 'intransitive dative', also occur. They cross-reference an animate non-agentive argument (the 'dative') and a third person object, which in the most cases is inanimate. The dative argument has various semantic roles, including possessor (Example 8.31), beneficiary and experiencer (Zúñiga 2006:193). Most predicates that take set I prefixes also appear with set III prefixes. The set is primarily used to express animates as core arguments (Sutton 2014:774). Note that an A argument is only implied and not overtly expressed (Zúñiga 2006:194).

(31) *Mɔ́:gi ɛ̨́-cán.*
grandson 3SG>1SG.DAT-arrive
'My grandson came home.' (Watkins 1984:136)

(32) *Án-gú:.*
3PL>3SG.DAT-be.clever
'She is clever.' (Watkins 1984:137)

On transitive predicates, both the A and P are indexed with set II prefixes, referred to as 'transitive'. The A argument is necessarily animate and distinguishes person and number, while the P argument is third person always and distinguishes only number. As is expected, this set is used with prototypically transitive verbs, but also with perception predicates (Zúñiga 2006:192). If both A and P are speech act participants, there are other forms with less number distinctions (cf. Table 8.9).

(33) *Zébɔ́t dé-zón-tɔ́ː.*
arrow 1SG>3COMPL-pull.out-FUT
'I will pull out the arrow.' (Watkins 1984:138)

(34) *Áːdɔ et-t^{h}êm.*
stick 3PL.H>3COMPL-break
'They broke the stick.' (Watkins 1984:138)

Plural patients also indicate unspecified entities, as in Example 8.35. Note that the verb is still fully transitive and there is no special marking of either the verb or the arguments whatsoever (Sutton 2014:773).

(35) *ę́m=ʔą́ gɔ bat=pɔ́ʔ nɔ́ʔ=ʔę́.*
2SG.ITR=come.IMPF and.SS 2SG>3PL=eat.IMPF 1=LOC
'Come and eat something at my house.' (Watkins 1984:138)

The proclitics indexing scenarios with SAP as patient are identical to the intransitive dative ones. Indeed, all other KT languages do not have such forms, but use passive constructions instead (see e.g. Southern Tiwa in Section 8.3.3). Thus, it seems reasonable to assume that the transitive forms were just taken over from set III (Sutton 2014:1126).

The fourth set indexes three participants, A and P and a dative argument. The dative argument can take on the same roles as in the intransitive-dative set and, additionally, also refer to a recipient (as in Example 8.36) of a ditransitive verb (Sutton 2014:783).

(36) *kút bágî=pǫ́-ʔɔ́ʔ.*
book 2PL>3PL>1SG=see.INC-give.IMPF
'You (pl.) show me the book.' (Watkins 1984:139)

(37) *zébɔt gɔ́=zǫ́n-tɔ́.*
arrow 1SG>3COMPL>2SG=pull.out.PFV=FUT
'I will pull out the arrow for you.' (Watkins 1984:139)

Finally, the fifth set comprises of reflexives and reciprocals. They indicate person and number, if A and P are the same (Example 8.38) or engage in the same activity (Example 8.39). There is only a single argument, i.e. the verb intransitive (Sutton 2014:766).

(38) *be-ɔ́t-yâl.*
2SG.REFL-hair-untie.IMPF
'Untie your hair.' (Watkins 1984:141)

(39) *t'ɔ'p^{h}ɔ́' én=p'âygɔ.*
buck 3DU.REFL=fight.PFV
'The two bucks fought each other.' (Watkins 1984:141)

The use of this set has been expanded, though, and now appears on various intransitive verbs denoting a change of position, bodily activities, manner of motion and movement in general. This means that set V markers are quite abundant. Formally, they are identical to set II proclitics indexing a third person human plural patient, which suggests that those are the source of the reflexive set (Sutton 2014:767).

As this brief overview suggests, there is a vast number of forms, but not all of them are relevant to the following discussion. Thus, only the intransitive and transitive paradigm (set I and II) are presented in entirety in Table 8.9. In addition, Table 8.10 gives an overview of the distribution of all person prefixes containing *gya-*, which is the form that overlaps with the antipassive marker.

The only thing common to all forms seems to be that a third person patient is involved. This interpretation may even hold - at least on a semantic level - for the intransitive form, as it only denotes non-humans, which are expected to mostly appear with non-agentive intransitive verbs. The form *gyat-* only refers to plural third persons, but the reverse is not true for *gya-*. Examples 8.40 and 8.41 illustrate an intransitive and transitive clause with *gya-*.

(40) *hólda gya-sá-dɔ.*
dress 3PL.ITR-tear-be
'The dress is torn.' (Watkins 1984:136)

(41) *gya-gún.*
1SG>3SG-throw
'I threw it away.' (Watkins 1984:141)

A/P	INTR	1SG	1DU	1PL	2SG	2DU	2PL	3SG	3DU	3PL	3HE	3COMPL
1SG	*a-*	*de-*			*ęm-*	*mɔ́ɂ-*	*bɔ́ɂ-*	*gya-*	*nęn-*	*gyat-*	*de-*	*dé-*
1NSG	*e-*	*ét-*			*gɔ-*			*é- L*	*et-*	*ét- L*	*ét-*	
2SG	*ęm-*	*ę́-*	*dɔ́-*		*be-*			*a-*	*męn-*	*bat-*	*be-*	*bé-*
2DU	*mą-*	*mą̂- L*			*mę́-*			*má- L*	*mę́n-*	*mą́n- L*	*mę́-*	*mę́n- L*
2PL	*ba-*	*bâ- L*			*bé-*			*bá- L*	*bet-*	*bát- L*	*bé-*	*bét-*
3SG	*ø-*	*ę́-*	*ę̂- L*	*dɔ́-*	*gɔ-*	*mɔ́ɂ-*	*bɔ́ɂ-*	*ø-*	*ę-*	*gya-*	*ęm-*	*é-*
3DU	*ę-*	*dɔ́-*						*ę́- L*	*ę́n-*	*ę́n- L*	*ę́n-*	
3PL	*gya-*											
3HE	*á-*							*á- L*	*et-*	*gyá- L*	*ę́m-*	*et-*
3COMPL	*e-*							*é- L*		*ét- L*	*ét-*	

Table 8.9: Kiowa transitive and intransitive agreement (Sutton 2014:764, 768, 771)

gya-	*gyat-*
3PL.NH.ITR	
1SG.A>3SG.P	1SG.A>3PL.P
3SG.A>3PL.P	
3PL.A>3PL.P	
3SG.P>2SG.DAT	3PL.P>1NSG.DAT
1SG.A>3SG.P>2SG.DAT	1NSG/3.A>3PL.P>2SG.DAT
1SG.A>3SG.P>3SG.DAT	
3PL.A>3PL.P>1SG.DAT	2/3.A>3PL.P>1NSG.DAT
3PL.A>3PL.P>3SG.DAT	

Table 8.10: Distribution of *gya*-forms in Kiowa

8.3.2 Detransitivization in Kiowa

In Kiowa, inanimates can be S or P arguments, but not A arguments. This means that there are special strategies to circumvent inanimate As if one wishes to express a sentence like 'the wind broke it', which is perfectly acceptable in English and many other languages. To express such a sentence, either the A is incorporated resulting in an intransitive verb or a coordinative construction with a detransitivized verb is used, as in Example 8.42 (Zúñiga 2006:196).

(42) *Tę́:gya ø-p^{h}í: nɔ ɔ́yhɔde e-t^{h}ém-gyá.*
ice 3SG.ITR-heavy and that 3COMPL.ITR-break-DETR
'The ice is/was heavy and that's why it (≠ice) broke.' (Watkins 1984:112)

There are several strategies to derive an intransitive verb from a transitive one. The first and most interesting for the present discussion is the suffix *-gyá*, see Example 8.42. It is composed of *-gé* and the 'intransitive perfective' *-iá* and surfaces as *-kyá* after voiceless consonants and as *-gyá* otherwise (Watkins 1984:149). Besides the coordinative constructions mentioned above, detransitivized verbs are also used to indicate that the agent is not in control. They are thus an alternative to basic intransitive constructions, describing the action as involuntary or accidental (Watkins 1984:142). The opposition is illustrated in Examples (43-a) and (43-b).

(43) a. *k'ɔáttɔ é-ót.*
dish 3SG>3COMPL-drop.PFV
'He dropped the dish (deliberately, in a fit of anger).'
b. *k'ɔáttɔ ɔ́-ót-kyá.*
dish 3SG>3COMPL.DAT-drop.PFV-DETR
'He dropped the dish (accidentally).' (Watkins 1984:142)

Furthermore, verbs derived by *-gyá* and with intransitive dative person markers (set III) are also used to indicate that there was difficulty in carrying out the action (Watkins 1984:143). Accordingly, the utterance in Example 8.44 was made by someone who had just broken their arm and as a result had difficulty with writing.

(44) *hegɔ́ yą́-gú'lya.*
now 1SG>3PL.DAT-write.IMPF.DETR
'I am managing to write now.' (Watkins 1984:143)

A/P	INTR	1SG	1DU	1PL	2SG	2DU	2PL	3A	3B	3C
1SG	*te-*	REFL			*i-*	*mẹ́n-*	*mą-*	*ti-*	*bi-*	*te-*
1DU	*ˌin-*							*ˌin-*	*imį́m-*	*kį́n-*
1PL	*i-*							*i-*	*ibi-*	*kiw-*
2SG	*a-*	*bey-*	*ku-*		REFL			*a-*	*i-*	*ku-*
2DU	*mẹ́n-*							*mẹ́n-*	*bibį́m- ~ mį́mį́m-*	*mẹ́n-*
2PL	*mą-*							*má-*	*bibi-*	*mąw-*
3SG	*ø-*	PASSIVE						*ø-*	*i-*	*u-*
3DU	*ĺn-*							*ĺn-*	*imį́m-*	*ĺn-*
3PL	*o-*							*i-*	*ibi*	*iw-*

Table 8.11: Southern Tiwa intransitive and transitive agreement (Sutton 2014:822, 828, 830-831)

Secondly, on the very few transitive roots that have a falling tone, this can be raised into a high tone creating an intransitive. This strategy can also be combined with the suffix mentioned above (Watkins 1984:150). Finally, a few stative verbs, mostly denoting qualities, can be segmented into a root and a suffix, even though the roots do not occur on their own synchronically, i.e. the process is not productive. The suffix has several phonologically conditioned allomorphs: *-bé* after oral resonants, *-mé* after nasals and nasalized resonants and *-dé* everywhere else (Watkins 1984:150-151).

8.3.3 Person marking and the passive in Southern Tiwa

Southern Tiwa, as mentioned above, differs in many respects from Kiowa. Without going in to the details, I will briefly present its person marking system, which at the same serves to illustrate voice marking as well. For a better impression of the comparability of the morphological forms, the transitive and intransitive agreement is presented in Table 8.11. [29] Evidently, there are no forms for configurations involving a third person A and a speech act participant P. Indeed, such configurations can only be expressed by a passive construction marked by the suffix *-che* and intransitive agreement (Zúñiga 2006:180-181). This also applies to ditransitive constructions. Examples (45-a) and (46-a) are basic transitive or ditransitive constructions with an SAP acting on a third person, whereas Examples (45-b) and (46-b) show the corresponding passive constructions with a third person acting on a SAP.

(45) a. *Seuan-ide ti-mụ-ban.*
man-SG 1SG>3A-see-PAST
'I saw the man.'

b. *Seuan-ide-ba te-mụ-che-ban.*
man-SG-OBL 1SG.ITR-see-PASS-PAST
'The man saw me.' (Zúñiga 2006:180)

(46) a. *Ka-khwien-wia-ban.*
1>3A>2SG.DAT-dog-give-PAST
'I gave you the dog.'

b. *Liora-de-ba in-khwien-wia-che-ban.*
lady-SG-OBL 3A>1SG.DAT-dog-give-PASS-PAST
'The lady gave a dog to me.' (Zúñiga 2006:183)

Consequently, the passive construction cannot be used when A and P are both speech act participants (Watkins 1996:142). This means that Examples (47-a) and (47-b) have no alternative expressions.

(47) a. *Bey-mụ-ban.*
2>1SG-see-PAST
'You saw me.'

b. *I-mụ-ban.*
1>2SG-see-PAST
'I saw you.' (Zúñiga 2006:181)

8.3.4 Reconstructing person and voice in Kiowa-Tanoan

The agreement forms are to some degree segmentable: the first consonant indexes person and number of a animate agent or dative argument, while the rest indicates person and number of the other arguments in complex

[29] The letters A, B and C refer to noun classes.

function	Kiowa	Proto-KT
3PL.ITR	*g-(y)a*	**i-D*
3SG>3PL		
1SG>3SG	*gya*	**ta*
1SG>3PL	*gya-t*	**ti-D*
2SG>3PL / 3H>3PL	*gyá L*	**qi-D*
2SG.DAT	*gyá*	**qa*
1>X>2SG.DAT		

Table 8.12: Tentative reconstruction of *gya*-forms (adapted from Sutton 2014:1082-1106)

	pronouns	agreement		
		ABS	ERG	
1SG	*inin*	*in-*	*nuu- ~ n-*	*w- ~ nw-*
			in- (with 3SG.ABS)	*inw-* (with 3SG.ABS)
1PL	*ojoj*	*oq-*	*qaa- ~ qa-*	*q-*
2SG	*atet*	*at-*	*aa- ~ a-*	*aaw- ~ aw-*
2PL	*ixix*	*ix-*	*ee- ~ e-*	*eew- ~ ew-*
3SG	*jaa?*	*ø-*	*ruu- ~ r-*	*r-*
			uu- ~ ø-(with 3SG.ABS)	
3PL	*ja?ee? ~ je?ee?*	*ee- ~ e?-*	*kee- ~ ki-*	*k-*

Table 8.13: Person marking in Tz'utujil (Dayley 1985:61-64)

ways. The 3PL.ITR form is a back vowel in most of the KT-languages. At first, it does not seem like the Kiowa form and the rest have something to do with each other at all. However, Watkins (1984) proposes that the Kiowa form goes back to **ia-d* and arose via metathesis and regular phonological changes. This could also be the precursor of the Tewa form and it is possible that the forms of the other languages are cognates, too (Sutton 2014:907-910). The *gya*-form of the intransitive dative paradigm seems to come from a different source. As most other languages also show a velar followed by a vowel, this reconstructed for the protolanguage (Sutton 2014:923-924). I do not fully understand, though, where the glide in Kiowa comes from. The *gyát*-form of the intransitive dative paradigm is maybe cognate with the other forms, then posing some difficulty for the other forms, or it may come from a different place. The possibility exists that it is the original third person inverse form (Sutton 2014:927-928). Even though there is no passive voice in Kiowa (or Tewa), the detransitivizing devices in the KT-languages still share some properties that make them at least partially comparable. Watkins (1996:149-150), who reconstructs the voice suffix as Proto-KT **-ia*, assumes that it was a general detransitivizer that developed into passive in Tiwa and Towa. Sutton (2014:1144-1145) suggests, without giving a reconstruction of the form, that the suffix in question had a quite restricted function: it was used to mark all configurations involving a third person A and speech act participant P, and in configurations with third person A and P when the P was more prominent. The single argument was indexed by intransitive or intransitive dative proclitics. As Tiwa and Towa most probably do not form a subgroup, the restriction to passive use would have to be a parallel innovation. According to the author, this unlikely and he thus favors the analysis presented above.

To sum up, the antipassive and the *gya*-forms marking person probably have nothing do to with each other. However, this conclusion is only preliminary nature, as the reconstructions need more work to be firmly established. The relationship between the forms in the KT are very complex and thus I might have missed something in this brief overview.

8.4 Tz'utujil (Mayan, Quichean-Mamean)

Tz'utujil, Mam and Kaqchikel all belong to the Quichean-Mamean branch, but within that to different subgroups. Mam is part of the Greater Mamean subgroup, Tz'utujil and Kaqchikel of the Greater Quichean subgroup. All three languages are spoken in Guatemala and Mexico (Hammarström et al. 2014). Kaqchikel and Mam will not be discussed in detail because they do not show an overlap between person and voice marking.

8.4.1 Agreement and personal pronouns

Pronouns in Tz'utujil have only form, i.e. they are neutrally aligned. They are mostly used in contrastive focus construction to express the involvement of a person as opposed to another. The first and second person pronouns

x-in-war-i	I slept	*x-at-war-i*	you slept	*x-war-i*	(s)he slept
x-at-nuu-choy	I cut you	*x-in-aa-choy*	you cut me	*x-in-ruu-choy*	(s)he cut me
x-in-choy	I cut it	*x-aa-choy*	you cut it	*x-at-ruu-choy*	(s)he cut you
(*x-* COMPL, *-i* PF, *war* 'sleep', *choy* 'cut')				*x-uu-choy*	(s)he cut it

Table 8.14: Singular verb forms in Tz'utujil (adapted from Dayley 1985:65)

are reduplicated forms - with minor changes - of the absolutive prefixes (cf. Table 8.13). The third person probably derives from the relative pronouns and definite article *ja* and the plural includes the plural suffix *-ee?* (Dayley 1985:61-62).

The alignment of agreement is basically ergative-absolutive, with both the A and P argument cross-referenced on the verb. The ergative prefixes have different allomorphs depending on whether a consonant (left column) or a vowel (right column) follows. The shorter forms are used with verb stems of more than one syllable (Dayley 1985:64). The absolutive prefixes precede the ergative ones.

If a first or third person singular A combines with a third person singular P (marked by *ø*), a special marker appears, of which one variant is identical to the absolutive form, cf. Table 8.13. The 3SG form *uu-* disappears before transitive stems with more than one syllable and the 1SG form *in-* does the same if preceded by the incompletive aspect prefix *n-* (Dayley 1985:63). Table 8.14 illustrates this with transitive and intransitive singular verb forms.

8.4.2 Voice marking

There are two passive constructions in Tz'utujil, which are mainly used to ensure topic continuity, i.e. in situations where the patient is given and definite, but the agent is new information. In all of them, the agent can be expressed overtly and then is marked as an oblique by the relational noun *-umaal* 'by; because of, on account of'. They inflect intransitively, i.e. with absolutive person prefixes (Dayley 1985:340).

The 'simple passive' is marked by the infix *-j-*, which appears as *-ʔ-* before *j* and as *-V-* before *ʔ*. On derived transitive verbs, it is marked by the suffix *-x* (Dayley 1985:341). It seems to be the most general of all the passive constructions. Example 8.48 illustrates its use with full noun phrases, Example 8.49 with pronouns.

(48) *Ja tzyaq x-ti-ʔ-j-i k-umal ch'ooyaaʔ.*
the clothes COMPL-eat-PASS-eat-PHF 3PL.POSS-by rats
'The clothes were eaten by rats.' [30] (Dayley 1985:341)

(49) *(Inin) x-in-ch'e-j-y aw-maal.*
1SG COMPL-1SG.ABS-hit-PASS-hit 2SG.POSS-by
'I was hit by you.' (Dayley 1985:341)

Some verbs have a passive in *-Vr*, which is not productive. It has the same function as the 'simple passive' (see Example 8.50) and similar forms appear in related languages. It it thus best thought of as a remnant of an earlier passive marker.

(50) *Ja nuu-keej x-k'am-ar eel r-mal b'ijnel yaʔ.*
the 1SG.POSS-horse COMPL-carry-PASS away 3SG.POSS-by walker water
'My horse was carried away by the river.' (Dayley 1985:342)

The 'completive passive' focuses on the termination of the action and on the affectedness of the patient, i.e. it has a resultative meaning (Dayley 1985:342). It is productive and marked by *-taj*, which has an allomorph *-Vtaj* with some positional and transitive roots. The vowel is the same as that of the root (Dayley 1985:122-123).

(51) *X-ch'ey-etaji jar iixoq r-mal r-achajiil.*
COMPL-beat-PASS.COMPL the woman 3SG.POSS-by 3SG.POSS-husband
'The woman got beaten up by her husband.' (Dayley 1985:343)

What is called 'absolutive antipassive' is primarily used to talk about a transitive activity when the patient is unknown or irrelevant. In such a construction, a patient is implied, but it is always non-specific (Dayley 1985:345-346). On non-derived transitive verbs, it is marked by the suffix *-oon*, with a variant *-uun* occurring when the root vowel is *u*. Derived transitive verbs that have a stem formative vowel take a suffix *-Vn*. The vowel is the same as the stem formative, in other words, it lengthens that vowel. It thus more informative to represent it as *-ːn*. With other derived transitives, the suffix is *-n* (Dayley 1985:115, 120).

[30] Inanimates are not usually marked for plural, i.e. it is expected that the agreement is third person singular absolutive, which is *ø*.

(52) *Ɉaa? ma xa ko? n-chap-oon-i.*
3SG a lot INCOMPL-scold-AP-PHF
'He scolds a lot.' (Dayley 1985:346)

The antipassive derivation is productive, although there are a few transitive verbs with which it does not appear. Interestingly, a few antipassive forms always have reflexive meaning, so e.g. *ch'aj-oon-em* 'to wash oneself' from *ch'ajooj* 'to wash'. Unfortunately, not other examples are presented. In addition, there are a few lexicalized intransitive verbs that are formally antipassives. In such forms, it is often not clear whether the agent or the patient is the subject, as in *puli-in-em* 'spill (of a liquid)' or 'spill/knock over' (Dayley 1985:346-347).

The 'focus antipassive voice' are not prototypical antipassive constructions, indeed they are maybe better called 'antipassive-like'. They share with the antipassive that the verb is inflected intransitively, but details are complex and will be explained below. Their basic function is to emphasize the agent, and they are used in three contexts: when the agent is in contrastive focus, when the agent is questioned and when the agent is relativized (Dayley 1985:348). Thus it seems like their function is primarily a syntactic one.

Underived transitive verbs take the suffix *-ow*, which appears as *-uw* after a root vowel *u*. If the verb does not occur phrase-finally, the suffix reduces to *-o* and *-u*, respectively (Dayley 1985:116). On derived transitive verbs, the marking is the same as for the 'absolutive antipassive' (Dayley 1985:347).

As mentioned above, person marking is somewhat peculiar. The forms are the absolutive prefixes, but in this particular case they can co-reference an A or a P. The person marker to appear on the verb is determined by a hierarchy: SAP > third plural > third singular. This means that only the higher argument is indexed on the verb regardless of its grammatical role (Dayley 1985:348). This is illustrated in Examples (53-a) and (53-b), where in both sentences the first person singular is indexed on the verb, but in Example (53-a) it is the A argument, while in Example (53-b) it is the P argument.

(53) a. *Inin x-in-ch'ey-ow-i jar aachi.*
1SG COMPL-1SG.ABS-hit-FOC-PHF the man
'I was the one who hit the man.' [31]

b. *Ɉaa? x-in-ch'ey-ow-i.*
3SG COMPL-1SG.ABS-hit-FOC-PHF
'He was the one who hit me.' (Dayley 1985:349)

If both A and P are speech act participants, yet another strategy applies: the absolutive prefix always refers to the A argument and P argument can be expressed as an oblique with the relational noun *-Vxiin* 'of, for', compare Examples (54-a) and (54-b). Apparently, this strategy can also be used with other person combinations. The author does not explain, how one chooses between those strategies. He does mention, though, that it is only rarely used with two third persons unless the patient is animate or human but the agent not, as in Examples (55-a) and (55-b) (Dayley 1985:350).

(54) a. *Inin x-in-ch'ey-o aw-xiin.*
1SG COMPL-1SG.ABS-FOC 2SG.POSS-of
'I was the one who was hit by you.'

b. *Atet x-at-ch'ey-o w-xiin.*
2SG COMPL-2SG.ABS-FOC 1SG.POSS-of
'You were the one who was hit by me.' (Dayley 1985:350)

(55) a. *Ɉa wajkax x-toq'-o r-xin Aa Lu?.*
the bull COMPL-gore-FOC 3SG.POSS-of youth Pedro
'It was the bull that gored Pedro.'

b. *Ɉa wajkax x-toq'-o Aa Lu?*
the bull COMPL-gore-FOC youth Pedro
'It was the bull that gored Pedro.' (Dayley 1985:351)

It is a very interesting phenomenon, but a further investigation lies outside the scope of this study.

8.4.3 Reconstruction and its consequences for the overlap

What are now agreement forms in most Mayan languages, go back to Proto-Mayan pronouns. [32] The system was ergative-absolutive and the pronouns were always attached to the verb (see Table 8.15). The ergative pronouns are prefixed and have two forms, one if a consonant follows (left column) and an other if a vowel follow

[31] It is glossed as FOC in the grammar and I chose to not change this, as I cannot think of a more appropriate label.

[32] Note that the Tz'utujil independent pronouns are constructed from the agreement forms and in Mam, there are no independent pronouns at all (England 1983).

	ABS	ERG	
1SG	**-in, *ni-*	**nu-*	**w-*
1PL	**-at, *at-*	**qa-*	**q-*
2SG	**ø*	**a-*	**aw-*
2PL	**-oʔŋ, *oʔn-*	**e-*	**er-*
3SG	**-eš, *eš-*	**ru-*	**r-*
3PL	**-ebʔ, *ebʔ-*	**ki-*	**k-*

Table 8.15: Proto-Mayan pronouns (Robertson 1992:53)

(right column). The absolutive forms are prefixed to the verb if there are aspect markers and suffixed otherwise (Robertson 1992:53).

A comparison of the Tz'utujil and the Mayan forms (cf. Table 8.13) reveals that Tz'utujil directly continues the latter, with minor changes such as the fixation to prefix position of the absolutive forms and some additional variants in the ergative forms. We can thus safely say that the first person singular absolutive *in-* is a direct reflex of Proto-Mayan **in-*. A 'focus antipassive voice', also called 'absolutive voice' is found in all Mayan languages to some extent, with much of details the same as in Tz'utujil. The marker is reconstructed as **-ow* (Robertson 1992:61). He also remarks, that all other voices were marked **-Vn*, but I do not fully understand, what 'all other voices' means in that context. However, Mam and Kaqchikel also have antipassives and they are marked by (presumably) the same suffix as in Tz'utujil. In Kaqchikel, the antipassive is marked by *-on* with the variant *-un*. The demoted patient can be expressed overtly by the relational noun *-ichin* and the agent is absolutive marked, instead of ergative as in a basic transitive clause (Brown et al. 2010:179-181). The antipassive construction of Mam is again very similar: the verb takes a suffix *-n*, the agent is no longer cross-referenced by an ergative agreement marker, but by an absolutive one and the patient is either left unexpressed or introduced by a plural relational noun (England 1988:532).

Not only are the constructions more or less identical, the suffix involved is too. And, indeed, an antipassive suffix **-Vn* is reconstructed for Proto-Mayan and is attested in many Mayan languages with an antipassive function (Craig 1979). This means that the antipassive suffix as well as the first person singular absolutive are well reconstructable to separate Proto-Mayan affixes and thus do not share a common history. In fact that was to some degree expected, as the overlap only concerns a phonologically triggered variant of the antipassive suffix and a diachronic connection between a voice marker and a first person singular should be rare or non-existent, anyway.

8.5 Summary

In the 11 languages of the North American macro-area, there were as many as 17 voice markers, but only four overlaps with person markers. Of these, two were shown to be unconnected, i.e. the antipassive and 1SG in Tz'utujil and an the detransitivizer and various third person patient forms in Kiowa (see Table 8.17). The large number of voice markers are due to their fusion with other categories in the Mayan languages, but it seems common for the languages of that area in general to have more than one voice marker. The Mayan antipassive suffixes, the Salish detransitivizer and the Numic passive and antipassive markers were each counted as one, because they are well reconstructable to the proto-languages and perform nearly identical functions in the languages involved. They are thus best seen as only one instance.

The remaining two overlaps are borderline cases of the person-voice overlap. In Halkomelem, the overlap only concerns a part of the third person plural, which certainly does not mark person as such. In Comanche, it is unclear whether the marker involved is really a voice marker, but it was included in the discussion nevertheless. This means that - so far as my sample goes - languages in North America in general do not strongly associate person and voice at all. A similar situation, but more extreme, is found in the Australian macro-area.

Markers	no. of overlapping VM	no. of person/voice overlaps	prob >0.4	in %
17	4	4	2	12

The association of reflexive and/or reciprocals and voice is not strong either. There is an overlap of the passive with both notions in Comanche and Timbisha and in Halkomelem of the detransitivizer and the reflexive. However, in several cases I am lacking information about reciprocal expressions, so this is not decisive. There seems to be a tendency, though, to express these concepts by verbal affixes, cf. Table 8.17.

As far as alignment is concerned, the greatest variation is - unsurprisingly - observed in agreement. NPs and pronouns have no marking for core arguments in eight out of eleven languages and accusative in one or the other in the rest. The Numic languages stand out from the others in that they do not have agreement.

Language	Pronouns	Agreement		NP	Voice
Kiowa	neutral	A and P	mixed	neutral	DETR
Northern Tiwa	neutral	A and P	mixed	neutral	PASS
Southern Tiwa	neutral	A and P	mixed	neutral	PASS
Kaqchikel	neutral	A and P	ergative	neutral	AP, PASS
Mam	neutral	A and P	ergative	neutral	AP, PASS
Tz'tutujil	neutral	A and P	ergative	neutral	AP, PASS
Choctaw	neutral	A and P	tripartite	accusative	other
Halkomelem	neutral	A and P	accusative / ergative (SAP vs. 3)	neutral	DETR, AP, PASS
Shuswap	neutral	A and P	tripartite / ergative (SAP vs. 3)	neutral	DETR
Comanche	accusative	none	neutral	accusative	AP, PASS
Timbisha	accusative	none	neutral	accusative	AP, PASS

Table 8.16: Alignment and voice marking in the languages of North America

Most languages have either a general detransitivizer or both a passive and antipassive (or all three). Thus, one cannot say that there is a connection between alignment and voice in this area.

Language	Voice		Person		Direction	Prob.	Reflexive and Reciprocal	
Kiowa	DETR	*-kyá ~-gyá*	various 3P	*-gya*		0.4	REFL	prefix for each pers./no.
Northern Tiwa (Taos)	PASS/INV	*-ya*	-				REFL	prefix for each pers./no.
Southern Tiwa	PASS/INV	*-che*	-				REFL	prefix for each pers./no.
							REC	unknown (for all three)
Kaqchikel	PASS	vowel alternation					REFL	*-i'*
	AP	*-on ~-un*	-				REC	unknown
Mam	PASS	*-eet*	-				REFL	*-n-iib'aj*
	ACCD.PASS	*-njtz*	-				REC	unknown
	ACCD.PASS	*-j ~-l*	-					
	PASS	*-b'aj*	-					
	AP	*-n*	-					
Tz'tutujil	PASS	*X-j-X ~ X-ʔ-X ~ X-V-X*	-				REFL, REC	POSS-*iiʔ*
	PASS (derived verbs)	*-x*	-					
	PASS (not prod.)	*-Vr*	-					
	PASS.COMPL	*-taj ~-Vtaj*	-					
	AP	*-oon ~-uun ~-Vn ~-n*	1SG	*in-*		0.1		
Choctaw	AP	syntactic	-				REFL	*ili-*
							REC	*itti-*
Halkomelem	DETR, REFL	*-m*	3PL	*ƛá-l-əm*	VM >PM	0.5	REFL	*-θət*
	PASS	*-t*					REC	*-təɬ*
	AP	*-əls*	-					
Shuswap	DETR	*-m ~-ém*	-				REFL	*-cút ~-st*
							REC	*-wecwt*
Comanche	AP.NH	*ti-*	-					
	UNSPEC.P/AP.H?	*ma-*	3SG.ACC/DEM	*ma-*	PM >VM	0.9	REC	also *nana-*
	PASS, REFL, REC	*na-*	-					
	IMPS	*ta-*	-					
Timpisha	PASS, ACAUS, REFL, REC (DU)	*na-*	-				REFL	pron. POSS-*sün*
	AP	*tü-*	-				REC (PL)	*anna-*

Table 8.17: Overview of the languages of North America

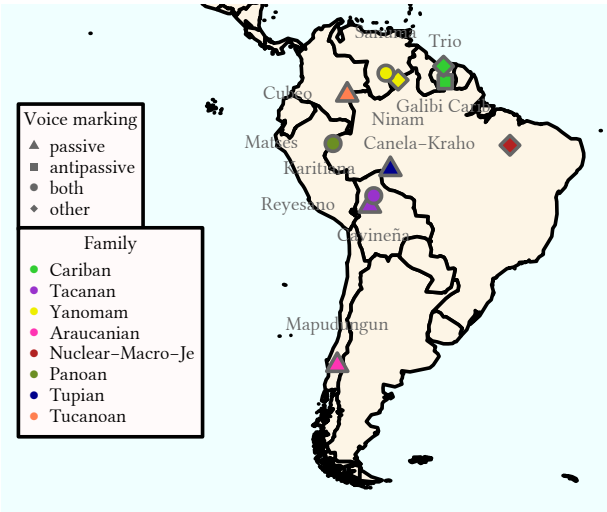


Figure 9.1: Language map of South America

1	*wï ~ wïï*	1+2MIN	*kïmë*	2MIN	*ëmë*
1+3	*añja*	1+2AUG	*kïmë-ñjamo*	2AUG	*ëmë-ñjamo*

Table 9.1: Trio pronouns (Carlin 2004:144)

9 Languages of South America

9.1 Trio and Galibi Carib (Cariban, Guianan)

Trio and Galibi Carib both belong the Guianan branch of Cariban, but within that, Trio belongs to the Taranoan subgroup while Galibi Carib is a direct daughter of Guianan. Trio is spoken on the boarder of Brazil and Suriname in the Amazon and Galibi Carib mostly in Suriname on the coast (Hammarström et al. 2014).

9.1.1 Agreement in Trio and GC

There has been quite a lively debate over how to best classify and describe the verbal agreement systems of Cariban languages (Birchall 2014:96). It will become clear from the Trio and Galibi Carib (abbr. as GC in the following) data, that it is indeed not easy to assign a traditional label to them. As I am most interested in how the forms are used and not what they are called, I will present the forms from Trio and GC and then very briefly discuss previous analyses. The Trio pronouns will also be mentioned along the way.

Trio has a so-called 'four person' system, in which the first person dual inclusive (referred to as 1+2) is also a basic person category (Meira 1999:282). This is reflected in the independent pronouns (cf. Table 9.1), as well as the agreement markers (cf. Tables 9.2 and 9.3). Pronouns only exist for first and second person and, as is often the case, demonstratives are used for third person reference. The long vowel of the first person appears when it is followed by a particle. The 1+3 pronoun *añja* has a somewhat special status as it exhibits intermediate behavior between an SAP and a third person pronoun. On the verb, it is cross-referenced by a third person, as in Example 9.1. Unlike the demonstratives referring to third person, it is not sensitive to either animacy or distance (Meira 1999:152-153). Furthermore, while the other pronouns are used for emphasis, *añja* is obligatory at all times (Carlin 2004:145-146).

The demonstratives are not presented here, because they do not show any overlap with voice markers and are thus not of interest.

(1) *anja ni-tunta.*
1+3 $3S_A$-arrive.PRES.PF
'We (excl.) have arrived.' (Meira 1999:154)

The greatest share of verbs in Trio and GC are transitive. The agreement forms are presented in Table 9.2 and example paradigms of verbs in Table 9.5. The debate has mainly revolved over whether one should analyze these forms as indexing A and P or A only with SAP's and P only with a third person agent. Gildea (1994) argues that the distribution of the forms in GC reflects a somewhat untypical direct-inverse system, i.e. in his view,

	GC	Trio		GC	Trio
SAP >SAP	*k-*	*k-*	3>3	*n-* ~ *ø-*	*n-* ~ *ø-*
1>3	*s-*	*w-*	3>1	*y-*	*j-*
2>3	*m-*	*m-*	3>2	*ay-*	*ë-*
1+2>3	*kïs-*	*k-*	3>1+2	*k-*	*k-*

Table 9.2: Galibi Carib and Trio transitive agreement

	Galibi Carib		Trio	
	S_O	S_A	S_O	S_A
1	*y-*	*ø-* ~ *w-*	*j-*	*w-*
1+2	*k-*	*kït-*	*k-*	
2	*ay-*	*m-*	*ë-*	*m-*
3	*n-*		*n-*	

Table 9.3: Galibi Carib and Trio intransitive agreement

the forms code both A and P. Meira (1999:283f.) splits them up into sets: the A-marking set, where the agent is an SAP, the P-marking set, where the agent is a third person, the SAP-only set and the NON-SAP-set. This allows him to align the intransitive forms with either A or P. He admits, though, that there are problems with both analyses and then goes on to say that he chooses an intermediate position: "The A- and O-marking prefixes are seen as referring to both participants, but with one of them being clearly dominant, in that it is preserved in non-transitive uses." (Meira 1999:285). As can be seen in Table 9.2, there is really only one form that has more than one interpretation, namely *k-* which basically codes all scenarios involving a first person inclusive. All other forms refer, in my opinion, quite unambiguously to both A and P, even though in case of the SAP>SAP configuration it is simply stated that neither A or P is a third person. The *ø*-variant of the 3>3 configuration is used whenever the patient directly precedes the verb (cf. Example (4-a) below) (Carlin 2004:481).

There is one more issue I have not touched upon until now: Meira (1999) and Carlin (2004) differ in their analysis of the alternation in the transitive forms. From the paradigms in Table 9.5, it can be seen that there is an additional *-i-* in the agreement forms preceding consonant-initial stems. While he does not say so explicitly, Meira (1999:283)'s listing of the forms indicates that he treats them as allomorphs. Carlin (2004:269), on the other hand, interprets it as a marker of transitivity. I have chosen to follow her analysis, as diphthongs beginning with */i/* are not permitted in Trio (Carlin 2004:52) and I therefore expect the transitive marker to disappear with front of vowel-initial stems. Furthermore, it occupies the same slot as the prefix *ë-* (see below). Diphthongs beginning with */ë/* are perfectly acceptable, but there are some constraints on the second vowel: it cannot be a central vowel, i.e. */a/, /ï/, /ë/* (Carlin 2004:52). The controversy goes even further with intransitive verbs, who are split into two classes: those that mark their S as more patientive and those that mark their S as more agentive (see Table 9.3). The latter form a smaller set that mostly contains verbs of motion which need an animate S. The former are more adequately seen as a subclass of transitive verbs according to Carlin (2004:266-267), even though they can never have a direct object. Firstly, they take prefixes also found in the transitive paradigm and secondly, their non-finite and nominalized forms behave exactly like those of the transitive verbs.

Meira (1999) and Gildea (1994) on the other hand, treat these as intransitives, which I favor for reasons explained below. Meira (1999:248ff.) argues against analyzing the system as 'split-S', because according to the standard definition, the split is due to the semantics of the verbs involved, with agentive intransitives like 'to go' marked as A and patientive intransitive such as 'to fall' as P. The situation in Trio and GC, however, is very different: the majority of the intransitives align themselves with P, or to be more precise, with the form where the person in question is coded as P. The small set of verbs that align themselves with A are unified not by their semantics (see the table in Meira 1999:250), but morphologically: most of them are derived from transitive verbs with the prefix *ë-* (which will be discussed below). Furthermore, the attentive reader may have noted that the S_A form for first person does not correspond to the respective transitive form in GC, but in Trio it is, as is illustrated in Table 9.6. The form used in Trio, namely *s-*, is used in GC to references 1>3 configurations. This scenario is expressed by *w-* in Trio, which is also present in GC, but only in reflexives.

To conclude, the split in intransitives is, as Meira (1999) puts it, 'epiphenomenal' and best viewed as the result of a historical process which is poorly understood until now.

Number is marked separately by suffixes for SAP and by a clitic for third person. In intransitives, the plural marker refers to the S. In transitives, plural is always marked for SAP irregardless whether they are A or P. If P is animate, plural is usually marked and if there are two plural markers, the clitic comes after the suffix, as expected. When both A and P are third person, *-ti* marks plurality of the agent, while the clitic refers to the patient (Carlin

	PRES	FUT	IM.PAST	REST
SAP	*-ti*	*-:h-ki*	*-ti*	*-të*
third	*=to ~-ti* for A in 3>3 configurations			

Table 9.4: Verbal plural markers in Trio (Carlin 2004:282)

	Galibi Carib		Trio	
	kupi 'bathe'	*aroo* 'take'	*suka* 'wash'	*ene* 'see' / *eta* 'hear'
1>2 / 2>1	*kï-kuupi-ya*	*k-aroo-ya*	*k-ï-suka-e*	*k-ëne*
1>3	*s-i-kupi-ya*	*s-aroo-ya*	*w-i-suka-e*	*w-ene*
2>3	*m-i-kupi-ya*	*m-aroo-ya*	*m-i-suka-e*	*m-ene*
1+2>3	*kïs-i-kupi-ya*	*kïs-aroo-ya*	*k-i:-suka-e*	*k-e:ne*
3>1	*kuupi-ya-ñ*	*y-aroo-ya*	*j-i-suka-n*	*j-eta*
3>2	*a-kupi-ya-ñ*	*ay-aroo-ya*		*ë-eta*
3>1+2	*kï-kupi-ya-ñ*	*k-aroo-ya*		*k-eta*
3>3	*kï-nii-kupii-ya-ñ*	*n-aroo-ya*	*n-i-suka-e*	*n-eta-n*
	kuupi-ya-ñ	*aroo-ya-ñ*	(*-ya/-e*: TAM, *-ñ/-n*: EVID)	

Table 9.5: Transitive paradigms in Galibi Carib (Gildea 1994:193-195) and Trio (Carlin 2004:272f.)

2004:283-284).

To sum up and to better understand the following discussion, person marking in Trio is briefly illustrated by a few basic transitive and intransitive clauses with first and third person subjects. Note that the basic word order in Trio is OVS (Carlin 2004:477). Intransitive clauses are straightforward: the S argument is cross-referenced on the verb, as in Examples (2-a) and (2-b).

(2) a. *n-erana-ø-n wëri.*
3-laugh-PRES-NCERT woman
'The woman is laughing.'
b. *j-ereta-ø-e.*
1-rest-PRES-CERT
'I am resting.' (Carlin 2004:478)

Transitive clauses with a first (and second) person agent take the appropriate person marker, regardless of whether the patient precedes or follows the verb, cf. Examples (3-a) and (3-b).

(3) a. *j-ekï w-apë-i.*
1POSS-pet 1>3-take-PAST
'I caught my pet.'
b. *w-ene-ø ë-emi.*
1>3-see-PAST 2POSS-daughter
'I saw her, your daughter.' (Carlin 2004:480-481)

As already mentioned above, third person acting on third person is *ø-* when the patient appears immediately before the verb and this is true with both vowel- and consonant-initial verb stems, compare Examples (4-a) and (5-a). Otherwise, the prefix *n-* appears, as in Examples (4-b) and (5-b).

(4) a. *katari ø-enee-ja-n wëri-ton.*
basket 3>3-bring-PRES-NCERT woman-PL
'The women are bringing baskets.'

Galibi Carib			Trio		
wonuky-ja	climb-TAM	I climb	*w-eh-ta-e*	1-be-FUT-NF	I will be
y-anỳta-ry	1-become.ill-TAM	I became ill	*j-ereta-e*	1-rest-NF	I am resting
w-ase-ene-ja	1-REFL-see-TAM	I see myself	*s-e-suka-e*	1-REFL-wash-NF	I am washing myself

Table 9.6: Some Galibi Carib (Courtz 2008) and Trio (Carlin 2004) first person intransitive and reflexive verb forms

Table 5.6
Some examples of detransitivization with different surviving arguments.
'Self' in the gloss = both 'oneself' (reflexive) and 'each other' (reciprocal).

S_A = (A = O) ('Reflexive')		S_A = O ('Medio-passive')		S_A = A ('Antipassive')	
e-pï	'bathe self'	**e-pahka**	'break'	**ët-amorehtë**	'dream'
ë-ene	'see self'	**e-rowaka**	'open'	**ëh-puunë(pï)**	'think'
ë-eta	'hear self'	**e-pïïma**	'get ashamed'	**ë-ehtë**	'plan'
ët-aarama	'adorn self'	**e-turuka**	'spill (grains)'	**et-ainka**	'run'
ët-ona(mï)	'hide self'	**ë-entama**	'spill (liquids)'	**ët-uru**	'talk'
e-tuuka	'hit/beat self'	**e-tohka**	'explode'	**ëh-kï**	'grate'
ë-eku	'have sex with self'	**ët-amï(tï)**	'snap'[20]	**ëës-e**	'cook'

Figure 9.2: Examples of the semantic effects of the prefix *ë-* in Trio (Meira 1999:257)

b. *kïrï n-arë-ø-n katari.*
man 3>3-take-PRES-NCERT basket
'The *men* are carrying the baskets.' (Carlin 2004:480-481)

(5) a. *wïtoto ø-i-pijo-ja-n pahko.*
human.being 3>3-TR-whip-PRES-NCERT 1POSS.father
'My father is beating the Amerindian.'
b. *wïtoto n-i-pijo-ja-n pahko.*
human.being 3>3-TR-whip-PRES-NCERT 1POSS.father
'The Amerindian is beating my father.' (Carlin 2004:481)

9.1.2 Voice and related phenomena in Trio

Not only do the two grammars disagree over the appropriate analysis of the agreement forms, they do so also on detransitivization. While Meira (1999:254) ascribes a detransitivizing function to the prefix *ë-* and its allomorphs, verbs marked by the same prefix are described as a subclass of transitives by Carlin (2004:87). Below, I will have a closer look at its distribution before discussing whether it is possible to favor one analysis over the other.

First of all, there are several allomorphs depending on the initial segment of the following stem. As the orthographies are somewhat different, both are presented below to avoid confusion. The second column indicates the initial segment of the stem:

Carlin 2004:170		Meira 1999:255	
ë-	*e-*	*ë-*	*e-*
ët- REFL / *et-* MIDDLE	*a-*	*ët-*	*V-* except for *e-*
ëi- REFL / *e-* MIDDLE	*C-*	*ëi-/e-*	*C-*
ëis-	*j-*	*ëës-/e-*	*j-*

Interestingly, Carlin (2004:170)'s analysis suggests that there are two separate morphemes, but the author goes on to say that is lexically determined whether a verb takes the reflexive or the middle prefix. The middle verbs usually indicate that the action affects the entire body or mind of person in question (Carlin 2004:268-269). Meira (1999:257) assigns the verbs marked by *ë-* to three groups, depending on which argument of the transitive base is the new S argument, illustrated in Figure 9.2. He goes on to say that the meaning of the derived stem is not predictable and different functions are attested on the same verb, cf. Examples (6-a) and (6-b). This seems to contradict Carlin (2004)'s statement above, but my interpretation is that she refers to differences in person marking (which actually only exist in first person) and not functions as such. Indeed, a short survey of the grammar reveals that the first person marker *s-* only co-occurs with *e-* and *t-* only with *ë-*. Figure 9.2 suggests that *ë-* can have the following functions: reflexive, reciprocal, passive and antipassive. A discussion with examples of full clauses is provided below.

(6) a. *n-ët-apëë-ja-n=to.*
3-E-catch-PRES.IMPF-DBT=3PL
'They are grabbing each other/they are fighting/they are having sex.'
b. *ët-apëh-kë aapëi=pë.*
E-catch-IMP 2POSS.seat=AD
'Hold on to your seat!' (Meira 1999:258)

Reflexive and reciprocal:
Apart from the forms in isolation in Figure 9.2, two clausal examples are provided in Examples 9.7 and 9.8. The third person prefix *n-* is not very telling, as it appears in both intransitives and transitives. However, the patient

agreement						
A/P	1	1+2	2	3	S I	S II
1			*k(ɨ)-	*c(ɨ)	*w(ɨ)-	*u(y)-
1+2				*kɨc(ɨ)-	*kɨc(ɨ)-	*k(ɨ)-
2	*k(ɨ)-			*m(ɨ)-	*m(ɨ)-	*a(y)-
3	*u(y)-	*k(ɨ)-	*a(y)-	*n(ɨ)-	*n(ɨ)-	

possessive prefixes	
1	*u(y)-
1+2	*k(ï)-
2	*a(y)-
3	*y(ï)-
3LR	*t(ï)-

Table 9.7: Proto-Carib agreement and possessive prefixes (Gildea 1994:201-202)

is case-marked as instrumental in Example 9.7, i.e. demoted to an oblique which hints at an interpretation as an intransitive. Example 9.8 is indecisive.

(7) *nërë-ke n-ë-ewe-ja-n.*
3AN-INSTR 3-E-eat-PRES-NCERT
'He eats that one (lit.: He nourishes himself with that).' (Carlin 2004:65)

(8) *namo=ro n-ë-emeta-nï-ja-n*
3=ASSERT 3-E-transform-CAUS-PRES-NCERT
'They are transforming themselves.' (Carlin 2004:156)

The reciprocal meaning is also attested in full clauses, but note the particle *ëikarë*. This is used to express reflexivity as well as reciprocity (thus my glossing as co-participation marker). It is often used together with *ë-* to reinforce the reflexive meaning (Carlin 2004:162). It is not clear to me, whether *ë-* alone can indicate reciprocity or not, as the only examples I have found contain the particle *ëikarë* as well.

(9) *kokoinjarë=to n-ët-uru-ø ëikarë.*
yesterday=PL 3-E-talk-IM.PAST COPART
'They spoke to each other yesterday.' (Carlin 2004:283)

Passive and antipassive:
I have not been able to find examples of finite forms with the 'medio-passive' type, only Example 9.10. Thus, I have too little information to say whether *ë-* also has a passive function or not.

(10) *t-e:-pahka-e n-a-ø-i i-maanini.*
COREF-E-break-NF 3-be-PRES-NCERT 3POSS-ankle
'His ankle is broken.' (Carlin 2004:432)

For the 'antipassive' type, I was able to locate several examples, admittedly all with the same verb: *uru* 'to talk'. In Example 9.11, there is no patient expressed at all, while there is a locative phrase in Example 9.12. Again, as the agent is third person, one cannot know whether the verb is inflected transitively or intransitively.

(11) *añja n-ët-uru-ja-e*
1+3 3-E-talk-PRES-CERT
'we are talking (doing business)' (Carlin 2004:280)

(12) *n-ët-uru-ja-n ë-pë.*
3-E-talk-PRES-NCERT 2-LOC
'They are talking about you.' (Carlin 2004:185)

9.1.3 On the history of the prefix *ë-*

The 2>3 marker *ë-* most probably is a direct reflex of Proto-Cariban **a(y)* with the same function, see Table 9.7. In GC, the reflex is *ay-* and as all the other agreement forms seem to be cognate in the two languages, it is perfectly acceptable to propose this for the 2>3 marker, too. While the exact form of the detransitivizer in Cariban could not be reconstructed up to date (Meira 2000), the allomorphs in Trio and the forms of other Cariban languages (cf. Table 9.8) suggest that maybe a consonant /t/ was involved. I do not want to engage in further speculation at this point, but considering all the facts, the most sensible conclusion is that the person and voice marker are unconnected and their formal identity a result of coincidence. This is further supported by Galibi Carib, which does not have this overlap. On the functional side, it is not clear what the status of *ë-* is. As was mentioned above (Section 9.1.1), it plays an important role in the formation of the 'split-S' system. Gildea (2015) proposes a diachronic scenario for the evolution of *ë-* and its cognates in the whole Cariban family, with the following stages:

Galibi Carib	*ot- ~ os- ~ o- ~ e-*
Wayana	*ət- ~ əh- ~ ə- ~ e-*
Apalaí	*ot ~ os- ~ at- ~ o- ~ e-*

Table 9.8: The detransitivizing prefix in other Cariban languages (Meira 2000)

case	person	SG	DU	PL
ABS (S/O)	1	*i-ke*	*ya-tse*	*e-kwana*
	2	*mi-ke*	*me-tse*	*mi-kwana*
	3	*tu-ke*	*ta-tse*	*tu-na*
	3PROX	*riya-ke*	*re-tse*	*re-na*
ERG (A)	1	*e-ra*	*ya-tse-ra*	*e-kwana-ra*
	2	*mi-ra*	*me-tse-ra*	*mi-kwana-ra*
	3	*tu-ra*	*ta-tse-ra*	*tu-na-ra*
	3PROX	*riya-ra*	*re-tse-ra*	*re-na-ra*

Table 9.9: Pronouns in Cavineña (Guillaume 2004:77, 596)

1. reflexive/reciprocal semantics only
2. reflexive extends to anticausative semantics by elimination of the agent
3. anticausative extends to passive via use with inanimate patients who clearly could not have done the action, i.e. introducing the notion of an agent

This leads to a lexically restricted passive without the possibility of expressing the agent overtly. It is unclear, whether Trio has reached the third stage or not and more research on the subject is needed for a more detailed proposal. As of now, it looks like Cariban is an example of the well-attested reflexive > anticausative > passive pathway.

9.2 Cavineña and Reyesano (Tacanan)

Cavineña and Reyesano are two out seven Tacanan languages. Cavineña is a direct daughter of Tacanan and is spoken in Bolivia in the Amazon. Reyesano is part of the Takanik branch and was spoken in roughly the same area as Cavineña (Hammarström et al. 2014). Today, only older speakers remain, i.e. the language is moribund.

9.2.1 Person marking

The pronominal systems are quite in different in Cavineña and Reyesano, not only in terms of categories, but also considering alignment and distribution. Cavineña has an ergative-absolutive system: the agent of a transitive clause is in ergative case, which is *-ra*. Third person has a distance-neutral and proximal form (see Table 9.9). In general, the first morpheme indicates person and and to some extent number. The singular is unmarked, *-tse* marks the dual and *-kwana/-na* the plural (Guillaume 2004:590-591). Aside from root allomorphy, the forms are quite transparent.

The forms shown in Table 9.9 occur both as independent pronouns and as enclitics. The cliticized forms have a fixed position as the second element in the clause, i.e. they are in Wackernagel position. They are phonologically bound to the preceding word and can co-occur with independent pronouns. Furthermore, bound pronouns are restricted to certain types of main clauses (Guillaume 2004:78-79).

When there are several bound pronouns, they are ordered according to the following person hierarchy: 1 > 2 > 3. Lower position on the hierarchy indicates closer position to the host word (Guillaume 2004:603-604). This is illustrated in Example 9.13, where the third person pronouns comes before the first person.

(13) *Kwadisha-ya=tu-ke=e-ra=e-kwe encomienda.*
send-IMPF=3SG-ABS=1SG-ERG=1SG-DAT package
'I am sending a package to my relatives.' (Guillaume 2004:595)

In Reyesano, things work quite differently. Alignment of independent pronouns is neutral and there are obligatory prefixes indexing first and second person on the verb. The system is hierarchical, i.e. in transitive clauses only the higher argument is co-referenced, irregardless of its syntactic function (Guillaume 2012a:524). The hierarchy goes as follows: 2 > 1 > 3, see Examples (14-a) and (14-b). With intransitive verbs, the prefix refers to the S argument. For third person, the situation is a little bit different: the suffix *-ta* obligatorily marks any third person

	pronouns	agreement
1SG	*eme*	*m-*
1PL	*ekama*	*k-*
2SG	*mi(w)e*	*mi-*
2PL	*mika(we)*	*mik-*
3SG	*tu(w)e*	*-ta (A)*
3PL	*tuna(we)*	*-ta (S/A)*

Table 9.10: Pronouns and agreement in Reyesano (Guillaume 2012a:204, 215)

in A function and third person plural in S function. It never refers to a third person patient (cf. Example (14-b)) (Guillaume 2012a:526).

(14) a. *mi-a-ba*
2SG-PAST-see
'you (sg.) saw him/her/it/them *or* I/we saw you (sg).'
b. *m-a-ba-ta*
1SG-PAST-see-3A
'he/she/it/they saw me.' (Guillaume 2012a:524-525)

9.2.2 From third person to passive and a note on antipassive constructions

Before moving on to the passive, a brief presentation of reflexives, reciprocals and antipassives in Cavineña and Reyesano will be provided. In Cavineña, the circumfix *k(a)-X-ti* marks reflexivity, reciprocality, 'benefactive reflexivity' and 'patientless reflexivity' (Guillaume 2004:270). All of these are illustrated (in that order) in Examples (15-a) to (15-d).

(15) a. *Señora ka-peta-ti-wa espejo=ju.*
lady.ABS KA-look-TI-PF mirror=LOC
'The lady looked at herself in the mirror.'
b. *Ekwana=bakwe ka-peta-ti-bare-kware.*
1PL.ABS=CONTR KA-look-TI-DISTR-REM.PAST
'And we looked at each other.'
c. *Señora ka-peta-ti-wa tu-ja chapa ushuri=ke.*
lady.ABS KA-look-TI-PF 3SG-GEN dog.ABS skinny=LIG
'The lady examined her skinny dog carefully.'
d. *Ka-peta-ti-ya=mi-ke.*
KA-look-TI-IMPF=2SG-FM
'You are watching!' (Guillaume 2004:271-272)

What is common to all these construction is that agent is expressed as an S argument, i.e. in the absolutive case. The 'benefactive' and 'patientless reflexive' are actually not reflexives at all, but antipassives. This is quite clear for the 'patientless reflexive', as in Example (15-d), where the patient is simply omitted. In the 'benefactive reflexive', the patient is unmarked as expected, but according to Guillaume (2004:276) it is not an object as such, as it cannot be replaced by a bound pronoun.

The situation seems to be quite similar in Reyesano, even though the description is much briefer. The circumfix has the form *a-X-ti* and is used to express reflexivity (Example (16-a)) and reciprocality (Example (16-b)). It does not mark antipassive, but instead is also used as an anticausative marker (Example (16-c)) (Guillaume 2012a:208-209).

(16) a. *M-a-wucha-ti-a=beu te kwati=du.*
1SG-A-warm.up-TI-PAST=PF BM fire=LOC
'I warmed myself up at the fire.'
b. *K-a-turu-ti te jiawe.*
1PL-A-hit-TI BM now
'Let's fight (lit.: let's hit each other).'
c. *A-tubu-ti-a=pa te beta=du=be ichu akwi*
A-break-TI-PAST=REP BM two=LOC=PF that stick
'The stick broke into two parts.' (Guillaume 2012a:208-209)

	-tana	*-ta*
semantics	passive and anticausative	passive
discourse use	generic customary practices and procedures	specific events in narratives
productivity	full	restricted

Table 9.11: Comparison of the two Cavineña passives (Guillaume 2012b:116-117)

	intr.	status	tr.	status
Reyesano	3PL.S	obligatory	3A	obligatory
Tacana	3PL.S	obligatory	3A	obligatory
Ese Ejja	3PL.S	rare	3A	obligatory
Araona	3PL.S	rare	3A	optional?
Cavineña	3S IMPS?	one verb	PASS	not productive

Table 9.12: Meaning and productivity of *-ta* in Tacanan (adapted from Guillaume 2011:530)

Cavineña has two passive markers *-ta* and *-tana*. They both attach to transitive verbs and derive an intransitive with original patient as S argument. The agent cannot be expressed overtly (Guillaume 2004:258). While they overlap quite considerably both in form and function, they are still two distinct morphemes, as Guillaume (2012b) was able to demonstrate in a recent paper. The differences are summarized in Table 9.11.

Both have a passive meaning, but *-tana* is also used as an anticausative and to express generic events (cf. Examples (17-a) and (17-b)). The suffix *-ta*, on the other hand, can only refer to specific events (see Example 9.18). As will become clear, this is linked to the diachronic origin of the markers.

(17) a. *Ikwene=dya=tu e-duku=ju rure-tana-ya.*
first=FOC=3SG.ABS NPFX-inside=LOC carve-PASS-IMPF
'First, (the canoe) is carved on the inside.'

b. *Ekwe karusune iyakwake utsa-wa=ju dyuru-tana-chine.*
1SG.GEN pants new[ABS] was-PF=DS shorten-PASS-REC.PAST
'(The women) washed my new pants and they shrunk.' (elicited) (Guillaume 2012b:119)

(18) *Peadya señora=tu kweja-ta-ya.*
one woman=3SG.ABS inform-PASS-IMPF
'A woman is being informed.' (elicited) (Guillaume 2012b:121)

As the attentive reader may have noted, the suffix *-ta* also exists in Reyesano, where it co-references a third person. Indeed, this is the case in several Tacanan languages, as the comparative overview in Table 9.12 demonstrates. Before I move on the historic details, a note about the intransitive use of *-ta* in Cavineña is in order. In his corpus, Guillaume (2011) found two examples of *-ta* with the intransitive verb *maju-* 'die'. It is not clear, what it means, but it does seem to carry a notion of impersonality.

(19) *Ejeke=kwana=tu maju-ta-ya.*
INT=NCERT=3SG.ABS die-PASS-IMPF
'Someone (unindentified) is going to die.' (Guillaume 2011:528)

Based on this evidence, Guillaume (2011) proposes the following diachronic developments for *ta*:

- Proto-Tacanan: **-ta* marking third person plural S and A on verbs (obligatory or optional)
- Reyesano, Tacana, Ese Ejja, Araona: *-ta* remained a third person plural marker, but only for S
- Cavineña:
  - *-ta* maybe developed an impersonal meaning with intransitives
  - *-ta* developed into passive marker, probably via impersonal stage
- with transitive verbs in all languages: *-ta* lost its plural meaning, marking any third person agent

The origin of the more productive passive marker *-tana* is less clear. It is very productive and only occurs in Cavineña, both of which points to a recent origin. In addition, it resembles the presumably older passive suffix *-ta*, so one could think that the former is a reinforcement of the latter as it is gradually falling out of use. There is a motion suffix *-na* 'COME' (indicates that the action denoted by the verb takes place in the direction of the speaker), but there is no evidence to support this. The anticausative semantics of *-tana* poses a problem to this approach, as the extension from anticausative to passive is attested, but the reverse not. However, Cavineña speakers are bilingual with Spanish, were the same construction is used for to express a passive and anticausative, so this

	long form		short form	
	ABS	ERG	ABS	ERG
1SG	*kamisa*	*kamisanö*	*sa*	
1PL.I	*kamakö*	*kamakönö*	*makö*	*ma*
1PL.E	*kamisamakö*	*kamisamakönö*	*samakö*	*sama*
2SG	*kawa*	*kawanö ~ kaonö ~ kaunö*	*wa*	
2PL	*kamakö*	*kamakönö*	*makö*	*ma*
3SG	*kama*	*kamanö*	*a ~ te*	
3DU	*kama tökö ~ kama kökö*		*tökö ~ kökö*	
3PL	*kama töpö ~ kama pö*		*töpö ~ pö*	

Table 9.13: Sanuma pronouns (Borgman 1990:149)

could be attributed to contact (Guillaume 2012b:127). It is also possible that *-tana* arose completely independent from *-ta*.

To sum up, there is sufficient evidence to claim that the Proto-Tacanan third person plural marker developed into a passive marker in Cavineña. This is thus a further example of that quite well attested pathway. Usually, an impersonal use of the third person plural is involved and this also plausible for Cavineña, even though it cannot be proven.

9.3 Sanuma (Yanomam)

Sanuma is one of five Yanomam languages. It is spoken in Brazil and Venezuela in the Amazon (Hammarström et al. 2014).

9.3.1 Pronouns and possibly agreement

Sanuma has long and short forms of personal pronouns and no verbal agreement. The first person distinguishes inclusive and exclusive forms, with the former identical to the second person plural. The variants of the second person are interchangeable, some speakers prefer one and some the other. Alignment is basically ergative-absolutive and the long pronouns add the ergative case marker *-nö* when functioning as agents. Only third person singular does not make that distinction. These long forms are mainly used for emphasis, but not only: with the postposition *niha* 'to' and in identificational clauses, the long form is obligatory. The short forms are the default choice for all other environments and also co-occur with the long forms (Borgman 1990:149-150).

The subject is often not expressed overtly, the object almost always is, but neither are obligatory (Borgman 1990:29, 197). While not explicitly stated, this would suggest that the short forms are not agreement. Examples (20-a) and (20-b) illustrate the same transitive clause, once with the patient expressed by a full noun phrase, once with a pronominal form. The pronominal form *töpö* is also present alongside the full and NP and it occurs after the pronoun referring to the agent. The short forms can also occur alone as in the intransitive clause in Example 9.21. Example 9.22 presents the co-occurrence of a long and short pronoun.

(20) a. *kamisamakö-nö hama sama töpö se kite.*
1PL.E.-ERG visitor 1PL.E.ERG 3PL hit FUT
'We will hit the visitors.'
b. *sama töpö se kite.*
1PL.E.ERG 3PL hit FUT
'We will hit them.' (Borgman 1990:29)

(21) *sa inamo-ti kule.*
1SG play-CONT PRES
'I am playing (continually).' (Borgman 1990:150)

(22) *kamakö-nö ma te mö hãto asa-ö.*
2PL-ERG 2PL.ERG 3SG look.at secretly exclusively-NONASP
'Only you secretly look at it.' [33] (Borgman 1990:151)

A different analysis is provided by Ferreira (2012), who interprets these forms as agreement. Not only are the forms he presents slightly different, but also their distribution.

[33] There is no list of glosses in Borgman 1990 and I unfortunately do not know what NONASP or some of the other glosses refers to.

	S	P	A
1SG	*sa=*		*sa= (3) ~ ø= (2)*
1PL	*sama=*	*sa=kɨ=*	*sama=*
2SG	*wa=*		*wa= (3) ~ ø= (1)*
2PL	*ma=*	*wa=kɨ=*	*ma=*
3SG	*ø= ~ a=*		*ø=*
3DU	*kɨkɨ=*		
3PL	*pɨ=*		

Table 9.14: Agreement in Sanuma (Ferreira 2012)

	ABS	ERG
1SG	*kami=sa*	*kami=sa=nɨ*
1PL.E	*kami=sama=kɨ*	*kami=sama=kɨ=nɨ*
2SG	*ka=wa*	*ka=wa=nɨ*
2PL / 1PL.I	*ka=ma=kɨ*	*ka=ma=kɨ=nɨ*

Table 9.15: A second look at Sanuma first and second person pronouns (based on (Ferreira 2012))

(23) a. *kami=sa=nɨ wa=helu=pali=ke.*
1=1SG=ERG 2SG=push=PF=PAST
'I pushed you.'
b. *ka=wa=nɨ sa=helu=pali=ke.*
2=2SG=ERG 1SG=push=PF=PAST
'You pushed me.'
c. *kii=t^{h}ə=pɨ=nɨ sa=helu=pali=ke.*
that=CLN=PL=ERG 1SG=push=PF=PAST
'Those ones pushed me.' [34] (Ferreira 2012)

What is more, the examples suggest that the independent pronouns are segmentable. This segmentation is presented in Table 9.15.

9.3.2 Is there a passive and an antipassive?

In Siewierska (2013) and Polinsky (2013), it says that Sanuma has both a passive and an antipassive. Thus, a closer look at those constructions is in order.

The references concerning the antipassive take us to Borgman (1990:26-28)'s discussion of 'semitransitive clauses'. Such clauses are characterized by "their distinctive feature of the obligatory goal constituent which indicates transitivity, together with the idea of intransitivity indicated by the absence of an object or a transitive type verb". Examples 9.24 and 9.25 confirm that the patient is marked as an oblique by the postposition *niha/ha* and the translation suggests that it is not completely affected by the verb. So far, that fits very well with what is expected of an antipassive. However, there is no special marking on the verb, which means that for the purpose of this study it does not count as an antipassive.

(24) *au nii te ha tholopo a ia-ti-i.*
2SG.POSS food 3SG at mouse 3SG eat-CONT-NASP
'The mouse keeps eating at your food.' (Borgman 1990:27)

(25) *ipa sai ha ipa silaka ha sa kali-palo-ti kule.*
1SG.POSS house at 1SG.POSS arrow at 3SG work-REP-CONT PRES
'I am working on my arrow at my house.' (Borgman 1990:27)

Borgman (1990:46-47) discusses two constructions of which he says that they could be interpreted as passives. Firstly, there is the so-called 'receptive' construction with the clitic *=so*. This is discussed below together with its other functions. Secondly, the subject can be omitted under certain circumstances and the interpretation is then similar to a passive. However, Borgman (1990:46) remarks that the construction is identical to a basic transitive clause, just omitting the subject (cf. Example 9.26). If it were considered passive, there would be no active construction in Sanuma.

[34] No list of glosses is provided, thus I do not what CLN refers to.

(26) *a se=pa=lö=ma.*
3SG kill=EXT=FOC=COMPL
'(Someone) killed him. *or* He was killed.' (Borgman 1990:47)

The clitic *=so* derives dynamic verbs from stative ones and denotes "a process leading to a new state or action " (Borgman 1990:186). With motion verbs, it emphasizes departure (Borgman 1990:190). It also attaches to transitive verbs, deriving a so-called 'receptive verb', in which the focus lies on the receptor or reception of an action (Borgman 1990:191, 199-200). It is in such contexts that a passive analysis suggests itself. Borgman (1990:46) objects that the clitic also appears with intransitive verbs (cf. Example 9.27), where it cannot be interpreted as passive and therefore clauses like Examples (29-a) and (29-b) are not passive either. A further complication arises because, as in many other languages, the ergative and instrumental are both marked by *=nö*. This means that, while the author claims that the agent is expressed as instrumental in such derivations, I cannot know whether this is the case or not. It thus possible that Example (29-b) more literally means 'the big pole hit *him*' with emphasis on the patient. In addition, Helder Ferreira (p.c.) reports that there are no passive constructions in Yanomami languages.

(27) *sa hĩso opa halu=so kupi.*
1SG angry INTENS at.night=SO REC.PAST
'I became really angry at night.' (Borgman 1990:188)

(28) *pumotomö a tokö=so=lö=ö.*
opossum 3SG flee=SO=DIR=NASP
'The opossum flees.' (Borgman 1990:190)

(29) a. *a se=pa=so=ma.*
3SG hit-EXT=FOC=COMPL
'He got killed (accidentally by person with a pole).' (Borgman 1990:192)
b. *hi ti pata=nö a se=pa=so kupi.*
wood CL AUG=ERG 3SG hit=EXT=FOC REC.PAST
'He got hit by a big pole.' (Borgman 1990:200)

To conclude, a more thorough analysis reveals that there do not seem to be voice constructions in Sanuma at all. I will still briefly mention the strategies involved in expressing reflexives and reciprocals.

The reflexive has no specific marker, but is expressed by a construction. This involves a verb suffixed by *-so* and accompanied by the adverb *kõ/ko* 'return, again'. In addition, there must be either the adverb *sapa* 'turn around and go back' (cf. Example (30-b)) or the emphatic pronoun (Example (30-b)) or both. Note that the agent/patient is not marked with the ergative clitic *=nö* (Borgman 1990:43).

(30) a. *kama nia ko=pa=so=ma.*
3SG.ABS shoot return-EXT-FOC-COMPL
'He shot himself.'
b. *wa nia sapa ko=pa=so matimö*
2SG shoot reverse return=EXT=FOC maybe
'You might shoot yourself.' (Borgman 1990:44)

There is also a causative-reflexive construction, in which the verb is marked by *-mo*, cf. Example 9.31. With a few verbs, the causative component is absent and the meaning is just reflexive, as in Example 9.32. The two other examples of this include the verbs for 'eat' and 'see' (Borgman 1990:45).

(31) *i naha kawa hole kuu hini-mo mi sai.*
REL like 2SG fake say hear-MO NEG really
'Like that you faker really don't cause yourself to be heard.' (Borgman 1990:45)

(32) *wa sanu-mo waiki=o ke?*
2SG wash-MO already=PUNCT IP
'Did you already bathe?' (Borgman 1990:45)

This same morpheme functions as an intransitivizer in Yanomama and a reflexive marker in southern Ninam (H. Ferreira, p.c.). However, as it does not overlap with any person marker, I will not discuss this in more detail.

To form a reciprocal, the verb is suffixed by *-so* and optionally accompanied by the adverb *kõ/ko* 'return, again'. According to the author, this marker is distinct from the 'receptive' marker *=so* discussed above, as the former can occur with *kule* which is not possible for the latter (Borgman 1990:46).

	free ERG	bound ABS
1SG	*ɨ̃n*	*ɨ-*
1PL.I	*ɨ:tʃa*	*ɨj-*
1PL.E	*ɨ:ta*	*ɨta-*
2SG	*ãn*	*a-*
2PL	*a:tʃa*	*aj-*
3	*i*	*ø-*

Table 9.16: Independent and bound pronouns in Karitiana (Everett 2006:303)

(33) *waika töpö nia-so kule.*
waika 3PL shoot-SO PRES
'The Waika are shooting each other. ' (Borgman 1990:46)

As the discussion above has shown, Sanuma does not have voice marking - at least not according to the definition used in this study. I even doubt that the constructions described should be called voice marking at all, but for valid statement of this kind more research on Sanuma and the Yanomam languages has to be carried out. As there is no voice marking, there cannot be an overlap with a person marker either.

9.4 Karitiana (Tupian, Arikemic)

Karitiana is part of the large Tupian family and is spoken in western Brazil in the Amazon. The Arikemic branch consists of only two languages, Karitiana and Ariken, which is unfortunately extinct by now (Hammarström et al. 2014).

9.4.1 Pronouns, basic clause types and the passive

Karitiana has one set of prefixes that indexed the absolutive argument on the verb. They are also used as possessive prefixes on nouns, as is the case in many Tupian languages. Free pronouns can appear before and after the verb, though the default position is preverbal (Everett 2006:303). The way in which free pronouns are sensitive to grammatical roles is quite complex and will be outlined very briefly below. First of all, a basic understanding of Karitiana clause types is necessary, because these are relevant to the distribution of pronouns. They are discussed by Everett (2006) as 'voice', but I am not convinced that this is the most fortunate term and thus will not use it in the following.

An overview is presented in Table 9.17. The copular construction will not be discussed, because it is not relevant for voice marking. In the speech act participant construction (SAPC in the following), the verb is marked by one of the prefixes *na(ka)-* or *ta(ka)-*. The shorter variants typically occur adjacent to unstressed syllables. Intransitive verbs with a third person S generally take *na(ka)-* (cf. Example (34-a)), but with a first or second person S *ta(ka)-* is preferred (Everett 2006:286-287). Previous analyses suggest that these prefixes are declarative or affirmative makers and that their distribution depends on whether there is an absolutive prefix on the verb, in which case one would use *ta(ka)-*, or pronoun marking the agent, in which case one would use *na(ka)-*. However, this does not hold, as is shown by Example 9.36. Rather, the prefixes are triggered by the status of the absolutive argument, i.e. S or P. If said is a speech act participant, *ta(ka)-* is used, if it is a third person, *na(ka)-* is used. While this is reminiscent of direct-inverse systems, there is an important difference: the distribution of prefixes in Karitiana does not depend on the A argument at all (compare Examples (35-a) and (35-b)). Direct-inverse systems, however, usually react to the outranking of a agent argument by a patient argument. Moreover, as mentioned above and illustrated in Examples (34-a) and (34-b), the alternation is also present in intransitive clauses, while this is typically not so in direct-inverse systems (Everett 2006:409-412). To sum up, *na(ka)-* and *ta(ka)-* are simply absolutive agreement markers which only distinguish between SAP and third person.

The SAPC seems to represent the basic clause type in Karitiana, as it applies both to transitive and intransitive verbs and has a neutral pragmatic structure. In addition, it is the most frequent of the four constructions (Everett 2006:408).

(34) a. *ø-na-ɨɾɨ-t.*
3ABS-3P-arrive-NFUT
'He arrived.' (Everett 2006:287)

b. *aj-ta-ɨɾɨ-ø.*
2PL.ABS-1/2P-arrive-NFUT
'You guys arrived.' (Everett 2006:414)

ĩn i-pomã-t	I played.	ĩn i-soʔo:t	I saw.
ĩn i-pekera-t	I floated.	ĩn i-opiso-t	I heard.
ĩn i-peka-t	I swelled.	ĩn i-ahi-t	I drank.
ĩn i-pipop	I was burnt.	ĩn i-a:pi-t	I fought.
ĩn i-ambo-t	I laid down.	ĩn i-põn	I hunted.
ĩn i-nĩ:ɾĩɲã-t	I woke up.	ĩn i-terep	I visited.
(a)		(b)	

Figure 9.3: Some verbs marked by *i-* in Karitiana (Everett 2006:245)

(35) a. *Nelson naka-o:t-ø ɨpsõɲ.*
PN 3P-catch-NFUT piranha
'Nelson caught the piranha.'
b. *Nelson a-taka-o:t-ø.*
PN 2SG.ABS-1/2P-catch-NFUT
'Nelson caught you.' (Everett 2006:411)

(36) *i na-oków-i i-ɲõɲõ.*
3 3P-break-FUT 3GEN-arm
'She's going to break his arm.' (Everett 2006:410)

The valence construction (VC), a semantically intransitive verb is marked by the prefix *i-*, as in Example 9.37. Transitive verbs can only take this prefix in negative clauses. According to the author, *i-* marks semantic intransitivity and he illustrates this with Example (38-a), pointing out that the mango is marked as an oblique, but that patients are usually unmarked. (Everett 2006:241-244). Some twenty pages earlier, Everett (2006:225) discusses the need for a clear-cut distinction between semantic and syntactic transitivity. While I agree with him, I am quite puzzled by his use of the term 'semantic intransitivity' in the present context. He presents a quite extensive list with 'semantically intransitive' verbs (see the excerpts Figure 9.3), some of which I would clearly consider semantically transitive. For example, I find it difficult to imagine 'to hunt' without hunting something. Thus, in my opinion, the prefix *i-* marks syntactic intransitivity and not semantic. Note that the verbs marked by *i-* can also appear without it, like in Example (38-b).

(37) *i i-nẽŋã-t.*
3 I-lie.down-NFUT
'He laid down.' (Everett 2006:242)

(38) a. *ĩn i-diwɨt-ø manga-tɨ.*
1SG I-forget-NFUT mango-OBL
'I forgot the mango.' (Everett 2006:243)
b. *a-ta-diwɨt-ø (ãn).*
2SG.ABS-1/2P-forget-NFUT (2SG)
'You forgot.' (Everett 2006:302)

The verb focus construction (hence VFC) is described as 'passive-like' because the agent is demoted, i.e. only S and P are present at all. However, the main function of the VFC is to emphasize the predicate as such. Verbs marked by *pɨ(ɾ(ɨ))-* can only appear clause-initially. Interestingly, such clauses can either appear with free or bound pronouns or both, cf. Examples (39-a) and (39-b). VFC are particularly common as answers to polar questions (Everett 2006:424-426).

(39) a. *ɨ-pɨ-pɨʔĩ-n*
1SG.ABS-VF-eat-NFUT
'I ate.'
b. *pɨ-pɨʔĩ-n ĩn.*
VF-eat-NFUT 1SG
'I ate.' (Everett 2006:425)

In summary, the prefixes are strictly absolutive referring only to S and P. The preverbal independent pronouns, on the other hand, are to interpreted as ergative in SAPC, but in post-verbal position and other clause types, they can refer to S as well (Everett 2006:391-392).

Karitiana has a an agentless passive construction marked by the prefix *a-*. Its main function is to demote

term	type of predicate	verb prefix	person marker
valence construction	intr. only	*i-*	free
speech act participant construction	intr. and tr.	*na(ka)- ~ ta(ka)-*	bound and free
copular construction	copula + pred. adj./noun	*na-*	free
verb focus construction	intr. and tr. (?)	*pɨ(ɾ(ɨ))-*	bound and free

Table 9.17: Affirmative clause types in Karitiana (Everett 2006:241f.)

1SG	*ičé*
1PL.I	*jané*
1PL.E	*oré*
2SG	*eré*
2PL	*pe … é*

Table 9.18: Proto-Tupí-Guaraní pronouns (Jensen 1998:498)

the agent, which is unknown or unimportant. The verb is detransitivized: it usually takes the prefix *i-* when passivized. Moreover, the passive can also occur in the verb focus construction, where also only argument is allowed, as in Example 9.41 (Everett 2006:430-432). As is expected, the absolutive prefixes are used to mark the S, see Example 9.42.

(40) *bola i-a-pɨdnã-t.*
ball ITR-PASS-kick-NFUT
'The ball was kicked.' (Everett 2006:432)

(41) *pɨɾ-a-miŋgɨdn-ĭn kinda oti ʔap.*
VF-PASS-swallow-NFUT thing pain medicine
'The medicine was swallowed.' (Everett 2006:434)

(42) *ɨ-pɨtãŋã sogŋ ɨ-ta-a-kĭno-t.*
1SG.ABS-steal because 1SG.ABS-SAP-PASS-arrest-NFUT
'Because I stole, I was arrested.' (Everett 2006:432)

In addition, there is also an antipassive-like construction, but it is not morphologically marked. Rather, the patient is simply left unexpressed with a transitive verb and is then interpreted as unspecified, like in Example 9.43. Note that agent is marked in the same way as in the basic transitive clauses (Everett 2006:438-439).

(43) *ĭn na-bɨpõm-ø.*
1SG NSAP-kiss-NFUT
'I kissed (someone).' (Everett 2006:439)

A brief note on reflexives:
There are special reflexive pronouns formed with the absolutive prefixes and an element *-ʔaso:ta*. Reflexive constructions are intransitive, i.e. they can occur with *i*-marked verbs and the 'patient' is expressed as an oblique, if it present at all (Everett 2006:447-448). There is no information about reciprocals and no example expressing reciprocality in the grammar.

(44) *ɨ-ʔaso:ta ɨ-taka-mĩ:-t (ɨn-tɨ).*
1SG-REFL 1SG.ABS-SAP-hit-NFUT (1SG-OBL)
'I hit myself.' (Everett 2006:448)

9.4.2 On the lack of reconstruction and the overlap

Unfortunately, there are no materials on the other Arikemic language, Arikem, which is extinct. Furthermore, Tupian is a large family consisting of over seventy languages, which belong to seven branches (with two outliers) and linguistically quite diverse. Most diachronic work has been done on Tupí-Guaraní, which is the largest branch and internally quite uniform (Aikhenvald 2012:36-37).

A reconstruction of Proto-Tupian is still on the wish list, so I am stuck with the synchronic materials for Karitiana. Indeed, a quick look at the Proto-Tupí-Guaraní pronouns (Table 9.18) reveals that the differences are not to be underestimated.

The most we can say about the overlap of the passive marker *a-* and the second person singular absolutive *a-* is that they are identical in form and that there is a possibility that they are diachronically related, though one

	Retuarã		*Barasano*		*Macuna*		*Tukano*		*Siona*	
	Sing	*Plur*	*Sing*	*Plur*	*Sing*	*Plur*	*Sing*	*Plur*	*Sing*	*Plur*
1 Excl	yi?i	yiha	yʉ	yʉa	jɨ	gɨa	ję̣ę̣	ügsa [2]	yĩ	yĩkĩ.
1 Incl		bãrã		bãdi		bãdi		manı̄		
2	bĩ?ĩ	bĩ?ã	bʉ̃	bʉa	bĩ	bĩa	mę̣ę̣	mę̣gsa	mwĩ.	mwĩŋsạrę̣
3 Masc	i?ki	i?rã	ĩ	ĩdã	ĩ	ĩdã	kę̣ę̣	naa	xãı̯̃.	xãĩŋwãı̯̃.
3 Fem	i?ko		so, sõ		iso		koo	aha [3]	xãõ̯	xę̣kõwãı̯̃.
3 Neut	i?ka		ti		iti [4]					

Figure 9.4: Pronouns in other Tucanoan languages (Cysouw 1998)

would not know in which direction.

A possible scenario involves the generic use of the second person singular which is often found when giving instructions. However, as the form in question is absolutive and not ergative, it is less clear whether this plausible or not. Verbs with the prefix *i-* never take the absolutive prefixes but only free pronouns, which may be seen as an impediment to the hypothetical connection.

9.5 Cubeo (Tucanoan, Eastern Tucanoan)

Cubeo is an Eastern Tucanoan language spoken on the border of Colombia and Brazil in the Amazon (Hammarström et al. 2014). Its personal pronouns can only refer to animates, for inanimates other deictics are used. There is an exclusive/inclusive distinction in first person and a gender distinction in third person. The plural is formed by adding the associative clitic *=hã*. The pronouns behave like full NPs and refer to an S, A or P argument (Chacon 2012:311-312).

Cubeo marks evidentiality on the verb and has different agreement sets for that category. The first two, 'neutral I and II', are used when the speaker had first-hand experience or does not make a statement about evidentiality at all. Class I refers to the present tense with stative verbs and to the recent past with dynamic verbs, while class II has no time reference with stative verbs and refers to the remote past with dynamic verbs (Chacon 2012:270-271).

There are two sets used when something is assumed, one for stative verbs with present tense reference and one for dynamic verbs with a remote past interpretation. The set used with inferred evidentiality also refers to the recent past and has a perfect aspect implication (Chacon 2012:271-272). In addition, there are future paradigms, but these basically contain of the same elements and thus are omitted here. The only person that is regularly different from all others and maintains a number distinction is the third person. In the neutral I and inferred paradigms, there is only one form covering all speech act participants and third person plural inanimate. The same forms are unknown so for in the assumed stative paradigm. In the assumed dynamic set, the forms for first and second person are the same, but number and gender distinctions are maintained. In the neutral II paradigms second person, first person exclusive and third person inanimate are conflated, see Table 9.19. As a side note, it is interesting that the agreement forms are in most cases longer than the pronouns. Usually the opposite is the case.

The agreement forms only cross-reference S and A, i.e. the alignment is nominative-accusative (Chacon 2012:276). Noun phrases are marked by *-de* (glossed as OBL) when functioning as P or as an oblique, thus exhibiting the same alignment. An intransitive clause is presented in Example 9.45 and a transitive one in Example 9.46.

(45) *apu hedewa-kobe-i 'dũ-bi.*
PN outside-hole-LOC stand-3SG.M
'Alfonso is standing by the door.' (Chacon 2012:277)

(46) *bɨ 'hi-hẽbẽ=bo-de ã-debu.*
2SG my-paca=CL.OVAL-OBL eat-3PL.INAN.INF
'You ate my paca!' (Chacon 2012:282)

9.5.1 Passive nominalizations

Cubeo does not have passive constructions with finite verbs, but passive nominalizations. The forms consist of a verb stem, a time reference morpheme and a passive morpheme, which is sensitive to categories for noun classes,

	pronouns	agreement (NOM)				
		neutral I	neutral II	assumed dyn.	assumed stat.	inferred
1SG.M	*ʾjɨ*	*-wĩ*	*-kakɨ*	*-jɨbũ*	?	*-debu*
1SG.F			*-kako*	*-jobũ*		
1PL.I	*bã=hã*		*-awɨ̃*	*-jarãbũ*		
1PL.E	*jɨ=hã ~ jɨ̃=hã*		*-karã*			
2SG.M	*ʾbɨ*		*-awɨ̃*	*-jɨbũ*		
2SG.F				*-jobũ*		
2PL	*bɨ̃=hã*			*-jarãbũ*		
3SG.M	*ʾɨ*	*-bi*	*-ãbe*	*-jɨbẽ*	*-kɨbe(bẽ)*	*-kɨbe*
3SG.F	*ʾõ*	*-biko*	*-ako*	*-jobẽ*	*-kobe(bẽ)*	*-kobe*
3PL.AN	*ʾdã*	*-bã*	*-ibã*	*-jarãbã*	*-rãbã*	*-dãbã*
3PL.INAN	-	*-wĩ*	*-awɨ̃*	*-iebu*	?	*-debu*

Table 9.19: Pronouns and agreement in Cubeo (Chacon 2012:270-271, 311)

CATEGORY	TIME REFERENCE MORPHEMES	PASSIVE MORPHEMES
INANIMATE COUNT AND COUNT GENERIC	*-i-* 'stative, simultaneous time reference' -ST-	*=dõ* CNT
INANIMATE MASS	*-wa-* 'past passive' -PST.PAS-	*=e* MSS
ANIMATE PLURAL		*-bãrã* PAS.AN.P
ANIMATE MASCULINE	*-ki-* 'future' -FUT-	*-bɨ̃* PAS.MSC
ANIMATE FEMININE	*-rãhi-* 'future animate plural' -FUT.AN.P	*-bõ* PAS.FEM

Figure 9.5: Passive nominalizations in Cubeo (Chacon 2012:301)

such as gender and animacy (Chacon 2012:301). The forms are their functions are summarized in Figure 9.5.

There is no single morpheme signaling nominalization, rather there are portmanteaus usually encoding temporal reference, aspect and properties of the referents at the same time (Chacon 2012:295). Passive nominalizations can be derived from stative as well as dynamic verbs. The temporal reference is relative to the tense of the finite verb and indicates either simultaneity, anteriority or posteriority (Chacon 2012:296). Unfortunately, the section does not contain examples of full clauses, but I was I able to find Examples (47-a) and (47-c) at other places in the grammar.

(47) a. *kari-de ã-i-bãrã ea-kɨbe.*
now-OBL eat-ST-PASS.NMLZ.AN.PL find-3SG.M.INF
'He found several game animals.' (Chacon 2012:227)

b. *aruka borika-kɨ bãhẽ boa-wa-bɨ̃?*
where.is aracu.fish-M 1PL.I kill-PAST.PASS-PASS.NMLZ.M
'Where is the Aracu fish we caught?' (Chacon 2012:355)

c. *ʾhi kãrɨ ða-wa-di=do*
my cocoa.support make-PAST.PASS-NMLZ=CL.CONVEX
'The cocoa plate that I had done before' (Chacon 2012:255)

This does not count as passive in the definition, but I still presented it here because the masculine nominalizer is identical to the second person pronoun. A connection between the two does not suggest itself, though, as masculine forms often involve an */i/*, while feminine forms often involve an */o/*. This holds for the most part for pronouns and agreement (cf. Table 9.19), e.g. the 1SG assumed dynamic form is *-jɨbũ* for a man and *-jobũ* for a woman. This alternation is also found in nouns, e.g. *ʾbã-kɨ* offspring-M 'son' vs. *ʾbã-ko* offspring-F 'daughter' (Chacon 2012:236).

The alternation of the nominalizers *-bɨ̃* and *-bõ*, for masculine and feminine gender respectively, is thus completely regular. One could hypothesize that the second person form is the masculine that was extended to be used with feminine referents as well. A closer look at Table 9.19 reveals that the gender distinction in second person singular is only present in the assumed dynamic paradigm - and there the forms are identical to those of

	ABS	ERG
1	*ubi ~ ëbi*	*umbi ~ ëmbi*
1+2	*nuki ~ iki*	
2	*mibi ~ bibi*	*mimbi ~ bimbi*
2PL	*mitso ~ miki*	
3	*ø*	
COREF	*abi*	*ambi*

Table 9.20: Matses pronouns (Fleck 2003:243)

	agreement (NOM)		clitics	
	IND	INTERROG	1S	*=bi*
1	*-k*	*-ø*	1A	*=mbi*
2	*-k*	*-ø*	1P	*=bi* (2A)
3	*-k ~-ş h*	*-k ~-ş h*	1P	*=ş h-i* (3A)

Table 9.21: Agreement and pronominal clitics in Matses (Fleck 2006:548)

the first person. To sum up, in my view it is not very plausible that the second person pronoun and the masculine passive nominalizer are related to each but it can also not be excluded.

9.6 Matses (Panoan, Mayoruna)

Matses, a Panoan language of the Mayrouna, is spoken in Peru on the Brazilian boarder. Some of the more theoretical aspects have already been discussed in Section 2.2. This section is dedicated to a more detailed description of the language itself.

9.6.1 Person marking

Pronouns do not systematically distinguish number and follow a split pattern concerning alignment: most persons are ergatively aligned, but first person inclusive, second person and third person have a neutral system. The second person plural form, however, is only used by older people and in myths (Fleck 2006:544). If one compares the absolutive and ergative forms, one notices that the latter are characterized by a nasal (cf. Table 9.20). There are, however, good reasons not to segment these forms synchronically, which are discussed in Fleck (2003:248-252). Personal pronouns are obligatory, except in imperatives, questions about the second person and subordinate clauses with equi-deletion. In addition, there are no labile verbs in Matses, which means that if an expected argument is not present, the third person interpretation is mandatory, which justifies rendering it as *ø* (Fleck 2006:544). The *ë*-variants in first person are used by older speakers and the variants of the second person are dialectal (Fleck 2003:243).

Matses has agreement suffixes, but as we can see from Table 9.21 they only distinguish third person from first and second, and sometimes even that distinction is absent. The variants in third person are non-past vs. recent past forms. Contrary to the pronouns, agreement follows a nominative-accusative pattern only cross-referencing S and A (Fleck 2006:546). Clitic forms only exist for first person, strictly speaking, even though there are two forms for the patient depending on whether the A is second or third person. They occur with some inflections replacing independent pronouns. Usually, they appear in place of the agreement suffixes, although they can attach to some particles, adverbs and adverbial clauses as well. This means that they are currently transitioning from clitic pronouns to agreement forms and thus evade a categorization in those terms (Fleck 2006:547-549).

(48) a. *debi uş h-o-ş h.*
Davy.ABS sleep-PAST-3
'Davy slept.'
b. *debi-n mibi kues-o-ş h.*
Davy-ERG 2ABS hit-PAST-3
'Davy hit you.' (Fleck 2006:547)

Examples (48-a) and (48-b) illustrate the ergative alignment of full noun phrases and pronouns: Davy has an ergative case marker as an agent, but is in absolutive form as S argument of the intransitive clause. The second person pronoun referring to the patient is also in the absolutive case. Agreement, on the hand, is nominative-accusative: Davy is cross-referenced on the verb in both clauses.

(49) a. *ubi uṣh-o-k.*
1ABS sleep-PAST-1/2.IND
'I slept.'
b. *uṣh-e=bi.*
sleep-NPAST=1ABS
'I'm going to sleep.' (Fleck 2006:547)

(50) a. *debi kues-e=mbi.*
Davy.ABS hit-NPAST=1ERG
'I am going to hit Davy.'
b. *debi-n kues-e=bi.*
Davy-ERG hit-NPAST=1ABS
'Davy is going to hit me.' (Fleck 2006:547)

Examples (49-a) and (49-b) show the difference between the agreement suffixes and the clitics in first person in an intransitive clause. The clitics are ergatively aligned: the form of the S argument is the same as that of the P argument (see Example (50-b)), but when the first speaker is the agent a different form is used, cf. Example (50-a).

A note on the reflexive, reflexive-passive and reciprocal:
In Section 9.6.2, only the antipassive will be discussed in more detail, but it is worth mentioning that Matses also expresses other notions, including a reflexive-passive by verbal suffixes. However, non of these are associated with person in any way.

There is a suffix *-ad* marking reflexives and reflexive-passives (i.e. get-passives). The constructions are identical, which means that both readings are possible in Example 9.51 (Fleck 2003:914).

(51) *chështe-n debi cues-ad-o-sh.*
machete-INSTR Davy.ABS strike-AD-PAST-3
'Davy cut himself with a machete. *or* Davy got himself cut with a machete (that someone else was swinging).' (Fleck 2003:914)

Reciprocal expressions involve the suffix *-nan* and, unsurprisingly, require the S argument to be plural (Fleck 2003:909).

(52) *opa pe-nan-e-c.*
dog.ABS bite-REC-NPAST-IND
'The dogs are biting each other.' (Fleck 2003:909)

9.6.2 Antipassives and the interpretation of the demoted patient

There is an antipassive in Matses marked by the suffix *-an.* It attaches to transitive verbs, which can also be derived, to derive an intransitive verb (cf. Example 9.54). The agent is then marked as absolutive and the demoted patient cannot occur overtly (Fleck 2006:559). Interestingly, there are two possibilities regarding the interpretation of the demoted P: it is either an indefinite (which is what is expected) or a first person, see Example (53-b). Even more, the first person reading is more frequent and unrestricted, while the indefinite patient reading occurs only in generic statements, present habitual and to a lesser extent in the past habitual (Fleck 2006:560). It thus appears that the first person patient interpretation is the default.

(53) a. *aid opa-n matses pe-e-k.*
that.one dog-ERG people.ABS bite-NPAST-IND
'That dog bites people.'
b. *aid opa pe-an-e-k.*
that.one dog.ABS bite-AP-NPAST-IND
'That dog bites. *or* That dog always bites/is always biting me/us. ' (Fleck 2006:559)

(54) *taë-n bed-ta se-me-an-enda ke-kin.*
foot-LOC grap-IMPS pierce-CAUS-AP-PROH say-while
'…saying: Grab his foot! Don't let him shoot me (with an arrow).' (Fleck 2006:559)

Note that the antipassive marker is homophonous with an inceptive/inchoative marker. As the latter does not decrease the valency of the verb and has other semantics, the two can be readily distinguished in most contexts (Fleck 2006:572, fn.6). The basic function of the antipassive in Matses is the backgrounding of the patient and simultaneous foregrounding of the agent. With the indefinite reading, this follows quite naturally, as the patient is unknown, indefinite, generic or the like. The first person reading can only be explained in terms of emphasizing

the agent. Obviously, a first person is neither indefinite nor unknown. The backgrounding here rather signals that the patient is not or only marginally imported to the discourse (Fleck 2003:934-936).

This illustrated by comparing the basic transitive sentence in Example (55-a) and its antipassive counterpart in Example (55-b). Matses speakers indicated that "one would use Example (55-b) when talking about scorpions and the fact that they sting, confirming this knowledge by a first-hand experience. (…) Example (55-a) would be good, when one is telling about the things that happened to him while a past episode" [35] (Fleck 2003:936).

(55) a. *chicun-n se-onda-şh-i.*
scorpion-ERG sting-DIST.PAST-3-1P
'A scorpion stung me.'
b. *chichun se-an-onda-şh.*
scorpion.ABS sting-AP-DIST.PAST-3
'A scorpion stung me.' (Fleck 2003:936)

There are some semantic restrictions on verbs which take an *an*-antipassive: only verbs with human patients can have a first person reading and only verbs denoting an action that significantly affects the patient can have an indefinite reading. In addition, the first person reading is blocked with first person agents, as a reflexive must be used to express coreference (Fleck 2006:564-565). This includes the reflexive suffix *-ad* as illustrated in Example 9.56.

(56) *dëd-ad-onda-bi.*
cut.with.ax-REFL-DIST.PAST-1ABS
'I cut myself with an axe.' (Fleck 2006:565)

The antipassive marked by *-an* is not a very frequent construction in Matses. This is probably attributable to competing strategies for the demotion of the patient. As these have very similar properties to the antipassive, I will briefly discuss them in the following.

Some verbs end *-ka* when transitive and have an intransitive counterpart ending in *-ke*. There are several semantic relations possible, but the two most common are that the S of the intransitive corresponds to the P or A of the transitive. The latter situation is semantically very close to the antipassive. Even more, the possibilities concerning the interpretation of the unexpressed patient are exactly the same: it can either be indefinite or a first person (cf. Example (57-b)) (Fleck 2006:561).

(57) a. *debi-n çhuşhka-o-şh.*
Davy-ERG reprimand-PAST-3
'Davy reprimanded/was reprimanding him.'
b. *debi çhuşhke-o-şh.*
Davy.ABS reprimand-PAST-3
'Davy was reprimanding. *or* Davy reprimanded me. *or* Davy complained/was complaining.' (Fleck 2006:561)

Finally, the patient can also be omitted to achieve a similar effect. This is possible, because third person is zero for both absolutive and ergative when used anaphorically. It can be interpreted as given (anaphoric function) or refer to an indistinct and/or generic referent (Fleck 2006:562).

(58) *adekbidi poshto-bi-mbo-en-bi-di çhëşhëid-n inkuente-n ø*
likewise.ITR woolly.monkey-like-AUG-MANR.TR-EMPH-SAME spider.monkey-ERG tail-INST 3ABS
bed-e-k.
grab-NPAST-IND
'In the same manner as woolly monkeys, spider monkeys also grab on [to things] with their tails.' (Fleck 2006:562)

The details and explanation of how and why the antipassive can and frequently is interpreted with a first person patient was already given in Section 2.2. It is interesting to note that this is also true for the *-ke/-ka* alternation.

9.7 Summary

Of the ten languages surveyed, two were re-analyzed to not have morphological voice markers at all (Sanuma and Canela-Kraho) and the status of the prefix in the two Cariban languages is unclear. All of the languages, except for Mapudungun, are spoken in the Amazon and in that region it is common to have more valency-increasing

[35] Of course, example numbers are adjusted to be coherent.

Language	Pronouns	Agreement		NP	Voice
Mapudungun	neutral	A and P	tripartite / acc. (rest vs. X >3LS)	neutral	PASS
Trio	neutral	A and P	mixed	neutral	DETR?
Galibi Carib	neutral	A and P	mixed	neutral	DETR?
Canela-Kraho	neutral	A or P	mixed	neutral	other
Matses	ergative / neutral (rest vs. 1NSG/3N)	A only	accusative	neutral	AP, PASS
Reyesano	neutral	A or P	mixed	neutral	PASS
Cavineña	ergative	none	neutral	neutral	AP, PASS
Cubeo	neutral	A only	accusative	neutral	other
Karitiana	ergative	none	neutral	neutral	PASS
Sanuma	ergative / neutral (SG/3PL vs. rest)	none	neutral	ergative	other

Table 9.22: Alignment in the languages of South America

devices than valency-decreasing devices (Aikhenvald 2012:226). It is thus not surprising that the number of voice markers found in this macro-area is on the lower end.

The association of person and voice is too not common: there are only four overlaps and one of these (in Trio) is unlikely, see Table 9.23.[36] Of the three overlaps that are at least possible, two follow patterns attested in other languages: Cavineña is an example of the 3PL to passive development and Matses of the antipassive to first person plural development. Karitiana would be a very interesting case, with an overlap of second person singular absolutive and passive, but unfortunately too little is known at present to say anything more. There is one more overlap, namely in Trio, but it is very unlikely that it has a historical background. According to my sample, there is a 33% chance for a voice marker in South America to be diachronically associated with a person marker:

Markers	no. of overlapping VM	no. of person/voice overlaps	prob. >0.4	in %
9	4	4	3	33

In general, the picture is quite heterogenous, but that it to some degree expected as mostly only one language per family could be selected.

There seems to be a tendency to express reflexivity and reciprocality by verbal affixes and separately from each other. The association of either one of these notions with voice marking is observed in Matses, the two Tacanan languages and, depending on the analysis, in the Cariban languages. All the languages in the sample but Sanuma have neutral alignment for full NPs, see Table 9.22. Four languages have (partially) ergative alignment in pronouns, but there is no pattern considering their voice marking. Most of the language have intricate systems of alignment, which are not easily classified in traditional terms, and all of these have neutral alignment in both pronouns and NPs. Again, there is no consistent pattern.

To sum up, the South American languages do not exhibit a strong association of person and voice marking, nor of reflexive/reciprocal and voice marking and the association between voice and alignment is not evident either. However, more in-depth studies of single languages and language families - which will hopefully be conducted in the future - may change that view.

[36] The markers and the overlap of Cubeo is not taken into consideration for the discussion, as this study is limited to verbal voice marking. It is shown in Tables 9.22 and 9.23 for the sake of completeness.

Language	Voice		Person		Direction	Prob.	Reflexive and Reciprocal	
Mapudungun	PASS	*-nge*	-				REFL, REC	*-w*
Trio	AP?, PASS?, REFL, REC	*ë- ~ ët- ~ ëi- ~ ëis-*	2S, 3>2	*ë-*		0.1		
Galibi Carib	AP?, PASS?, REFL, REC	*ot- ~ os- ~ o- ~ e-*	-					
Canela-Kraho	AP	syntactic						
Matses	AP	*-an*	1PL.P	*-an*	VM >PM	0.9	REC	*-nan*
	GET.PASS, ACAUS, REFL	*-ad*						
Reyesano	ACAUS, REFL, REC	*a-X-ti*	-					
Cavineña	PASS	*-ta*	3DU.ABS	*ta-tse*	PM >VM	0.9		
	PASS, ACAUS	*-tana*	-					
	AP, REFL, REC	*k(a)-X-ti*	-					
Cubeo	PASS.PL.AN nom.	*-bãrã*	-				REFL	construction with *bahu* ‘body’
	PASS.M nom.	*-bɨ̃*	2SG	*’bɨ̃*		0.4	REC	adv. *bahi*
	PASS.F nom.	*-bõ*	-					
Karitiana	PASS	*a-*	2SG.ABS	*a-*		0.5	REFL	pron. POSS-*ʔaso:ta*
							REC	unknown
Sanuma	AP	syntactic					CAUS.REFL	*=mo*
							REC	construction with -so

Table 9.23: Overview of the languages of South America

Voice	total VM	overlapping VM	VM with a conn.	in %
AP	20	15	10	50
PASS	39	14	7	18
DETR	6	5	2	33
ACAUS	5	2	1	20
Total	70	36	20	29

Table 10.1: Number of markers, overlaps and connections per voice

10 Summary

In Section 1, I formulated three questions and I will now summarize the findings of the previous sections according to those questions. The first concerned the overall frequency of the phenomenon and whether this is better explained by an underlying functional tendency or language-specific factors or an interaction of two. The second question asked about areal patterns and the third about the association of specific person markers with either passives or antipassives. I will now try to give tentative answers to these questions in turn.

In sections Sections 4 to 9, I have examined 70 voice markers form 59 languages. Out of these, 36 show an overlap with one or more person markers which leads to a total of 42 overlaps. With exactly half of these, a historical connection is possible. This means that roughly 30% of the voice markers could have a person marker as a source or develop into one (see Table 10.2). The number as such is not very telling, though based on intuition, I would have expected it to be higher. After all, the sample was designed specifically to find such diachronic connections. Moreover, if only the markers with an estimated probability of over 50% are included, then only fourteen (20%) are left (see Table 11.6). I chose to include the chance-level ones as well, because at this point it is important to take into account all of the possible attestations. However, the 21 instances found so far indicate that the phenomenon is not marginal either and worth of further investigation.

A closer look at the distribution of the overlaps across voice markers reveals interesting differences between the passive and the antipassive, cf. Table 10.1. Over half of the collected affixes are passives and under a third antipassives, but this discrepancy is expected as passives are more frequent than antipassives in general.[37] Concerning the association with person markers, the situation is exactly reverse: nearly half of the antipassives have one, while it is only found in about a fifth of the passive markers. This suggests that, as a preliminary finding, antipassives and person forms have a stronger connection than passives and person forms. It was already mentioned in Section 2.2 that the development of antipassives is less well understood than that of passives. In many cases there has not been any work on the reconstruction of these markers until now, so it cannot be ruled out that the discrepancy, or at least part of it, is due to lack of in-depth diachronic studies. From the perspective that the association between person and passive is often seen as a case of the grammaticalization of tendencies observed in discourse, I would have expected the proportion of diachronic connections with passives to be just as high – or maybe even higher – as that of antipassives. This means that also from a theoretical point of view, further cross-linguistic research on the subject is very important. Detransitive markers do not seem to be common; I have found only six instances. Equally rare are anticausatives, but that was expected as this function is often covered by the passive marker.

The second question that was posed in Section 1 concerned the distribution of person-voice overlaps across macro-areas. The numbers are presented in Table 10.2. The span of possible connections reaches from six in Africa to zero in Australia, with the rest falling in between. There are a few impressionistically interesting things. North America has the highest number of voice markers, but the second lowest of possible overlaps and subsequently a very low proportion of historical connections (i.e. 12%). Africa, together with the Pacific, has the second highest number of voice markers and also the highest number of possible connections. The rest of macro-areas all have the same amount of voice markers, i.e. nine.

Australia is the 'odd one out' lacking possible connections altogether. Eurasia and Africa exhibit the highest proportion of diachronic associations, with about half of the overlaps having a possible historical explanation. South America and the Pacific take up the middle, with both possible connections amounting to about thirty or forty percent of the voice markers. Given this distribution across macro-areas, it seems that North America and Australia differ quite remarkably from the rest in disfavoring diachronic connections between person and voice marking.

In Section 2.4, I predicted on the basis of previous research that overlaps with first and third person plural should be the most frequent and such with a first person singular absent altogether. Table 10.3 provides an overview of the distribution of person markers in the sample. For a better impression, the total number of cases

[37] Compare the numbers in WALS: out of 211 languages 162 (77%) have a passive (Siewierska 2013), but out of a 146 languages only 48 (25%) have an antipassive (Polinsky 2013).

	VM	overlapping VM	all overlaps	est. prob. > 0.4	in %
Africa	13	7	12	6	46
Eurasia	9	7	8	5	56
Pacific	13	11	11	5	38
S America	9	4	4	3	33
N America	17	4	4	2	12
Australia	9	3	3	0	0
Total	70	36	42	21	30

Table 10.2: Number of overlaps per macro-area

Person/number	all overlaps	est. prob. > 0.4
1SG	6	1
1NSG	15	5
2SG	5	3
2NSG	0	0
3SG	4	2
3NSG	8	7
2	1	0
3	2	2
other	3	1
Total	44	21

	person only	
	all overlaps	est. prob. > 0.4
1	21	6
2	6	3
3	14	11
Total	41	20

Table 10.3: Number of overlaps per person/number

is given as well as those with a possible diachronic explanation.

In the right hand table, all the person forms were collapsed into only distinguishing first, second and third person. Third person is indeed the most frequent, followed by first person which outnumbers it considering all the overlaps in the sample. Second person seems to be less prevalent. In the left hand table, the category of number was added. The distribution is more balanced than one would expect from the predictions. Even so, the three most frequent forms among the possible overlaps are indeed third person non-singular (7 cases plus 2 with no number distinction), first person non-singular (5 cases) and second person singular (3 cases).

Second person plural forms are lacking completely and there is only one second person form without a reference to number. As already mentioned above, the sample is quite small, so this may be coincidence. At least, I do not have an explanation of why it should be absent altogether. There is one first person singular among the possible connections, although it is a simplification to call it a first person marker: the prefix *ine-* in Chukchi marks 2>1SG and 3SG>1SG scenarios. It it thus not purely a first person marker, so the prediction in some sense still holds. Note that there are six first person singular forms exhibiting an overlap with a voice marker, but none except the Chukchi turned out to have a plausible diachronic connection.

The final question concerned the association of specific person markers with voice markers. From previous research and theoretical considerations, it was expected that passives are primarily associated with third person plurals and antipassives with first person plural. To answer this question it is necessary to take a closer look at the possible diachronic connections for each voice separately.

There are ten antipassive-person connections, which are at least possible and seven of these have estimated probabilities of 70% or more (cf. Table 11.1). Only eight languages are involved, though, as Chukchi has two antipassives that also mark person and the antipassive in Mandinka overlaps with two person markers because these are nearly identical. Chamorro is a borderline case, as the marker in question does not refer to person *per se*, but only to number. North America and Australia are the only two regions that do not have a possible connection between antipassive and person marking, though from a purely synchronic point of view they do have (partially) overlapping forms.

The distribution of person/number forms is quite diverse, but the first person non-singular is the most frequent with five out of ten forms, though the Chukchi form *-tku* also involves a second person. In addition, there is one second person singular form (in Mandinka), one third person singular and plural form (in KSS and Mandinka, respectively) and the plural number marker in Chamorro. The person markers either index patients explicitly or do not refer to semantic roles or grammatical relations at all. It does seem as the prediction that antipassives only develop into first person plural markers may hold: The non-first person plural forms are either estimated to only have chance probability, do not mark person as such (Chamorro) or may have the reflexive as an intermediate

stage (Mandinka). However, only a better understanding of the forms involved will provide us with a clearer answer.

The odd one out in this case is Chukchi: the antipassive prefix *ine-* also marks first person singular patients and that is not expected. However, this restriction to singular number is probably a recent development that has to do with the introduction of the suffix *-tku* into the paradigm. It was mentioned in Section 5.3 that *-tku* is a recent addition to the agreement paradigm, probably in order to make a number contrast in first person patients. It it thus reasonable to assume that *ine-* originally referred to first person patients in general and Chukchi is therefore in line with the predictions so far. Concerning the direction of the development, both are attested, but the pathway from voice marker to person marker is more frequent, especially with the connections with a higher probability (see Table 11.1).

There are seven passive-person overlaps that possibly have a historical connection and for five the estimated probability is high. The cases are spread over four macro-areas (see Table 11.3), excluding North America and Australia just like the antipassive. Four of the connections are with third person non-singular, namely in Itelmen, Natügu, Chamorro and Cavineña. There is also a first person plural form in Finnish and two second person singular forms in the Jola languages and Karitiana. The distribution of person forms is thus mostly as expected, with the third plural the most frequently occurring. The second person singular forms are both odd, in the sense that neither of them refers to agents: the Jola form is an accusative marking patients only and the Karitiana form is absolutive, marking sole arguments and patients. However, in both cases the estimated probability of a historical connection is only 50%, due to lack of reconstruction and diachronic research in general. It can only be hoped that further research will be undertaken in this direction. From a theoretical point of view it is not evident - at least not me - how a patient marker would develop into a passive marker (or vice versa). Concerning the direction of the development, it was expected that the person marker develops into the voice. The evidence is mixed though: out of the five highly probable connections, three take the opposite pathway and two the expected one. This means that a theory should be able to account for both.

In many languages, anticausatives are marked by the same morpheme as the passive. If they are not, an overlap with a person marker is not expected: from all that is known, the anticausative can either develop from a reflexive and into a passive marker. It has never been associated with person marking so far. Indeed, the diachronic connection of an anticausative marker with a person form was found in only two cases, see Table 11.4. One of them, Saliba, is highly unlikely as both prefixes have transparent etymologies. The other involves the two languages Jola-Fonyi and Banjal. Their anticausative suffix, which is almost certainly cognate and thus was only counted as one instance, overlaps with third person inanimate forms in both languages. While the anticausative suffix is reconstructable for the proto-language, the addition of a suffix to the noun class markers both in pronouns and agreement is best considered an innovation. This means that if there is a historical development behind it, the voice marker is the source of the person marker. However, with what is known so far, this scenario only has a chance probability. Further investigation is needed for a more detailed assessment. As it has been found in one family only, or to be more precise, in one subgroup of a branch of a family, this could be a group-specific development.

Only four detransitive markers overlap with a person marker. In Savosavo and Trio, though, chances are very low that there is a historical connection, which leaves only Soninke and Halkomelem. In both of these, the detransitivizer also expresses reflexivity, a factor that should be taken into consideration. The Halkomelem form is the only in the North American macro-area to reach a probability of 50% and this only concerns a part of the person marker.

To sum up, the antipassive overlaps generally conform more closely to the predictions formulated in Section 2.4 than the passive overlaps. The survey has shown that person-voice overlaps are not confined to one macro-area, rather they are present in five out of six though to varying degrees. The complete absence of diachronic connections in Australia is interesting, though it may be attributed to the extensive contact languages in that area had with each other, which lead to close parallelism of form and function concerning the voice markers. It is also remarkable that in general related voice and person markers are only found in one of two or three languages of the family. This suggests that it is not a feature that is retained from the proto-language, but rather develops in certain languages due to factors which in many cases are unknown. In Kiranti, it was shown that the political history of the region and the close contact with Maithili speakers have set the development of antipassives into first person plural forms into motion (Bickel & Gaenszle 2015). Ultimately, only such detailed studies combining historical, cultural and linguistic aspects will provide a better understanding of this phenomenon.

10.1 A side note on alignment and voice marking

In Section 2.3.3 it has been mentioned that voice is generally believed to interact with the alignment of full NPs in a language, such that passives are more frequent in languages with a nominative-accusative system and

antipassives in such with ergative-absolutive systems.

It was also pointed out that Siewierska (2010) arrived at an opposite conclusion regarding the development of bound third person plural impersonals to passives: she found that the pathway is expected to be most frequent with ergative and active-stative systems. In the summaries of the previous sections, I have briefly mentioned whether the languages of the sample reflect such tendencies or not. A summary of all the languages is provided in Table 11.7.

In terms of the alignment of full noun phrases and voice markers,the languages in Australia and Eurasia correspond closest to the predictions, while the correspondences in the four other macro-areas are less pronounced. Most of the languages with only an antipassive voice indeed have ergative alignment for full NPs, but they are also all located in Eurasia and Australia, which have been noted to follow the predictions most closely. The situation is quite different considering pronominal systems, which are predominantly accusative, and verbal agreement, which is mostly absent. The languages with passives are mostly divided into those with accusative alignment and those with neutral alignment, with the former prevalent in Australia and Eurasia and the latter in the rest of the world. Detransitivizers seem to be most common with languages that have neutral alignment both in pronouns and full NPs. While the tendencies do confirm to the predictions, none of the connections is exclusive. I will leave it to further research to either confirm or disprove this on a world-wide scale.

11 Conclusion

The previous sections have hopefully shown that the cross-linguistic investigation of diachronic relationships between voice and person markers is a worthwhile undertaking. The various questions that have arisen from the study prove that is a fruitful area of research. Even though all I could provide was tentative answers and estimated probabilities, the results raise a lot of further questions which I will present below.

I also found that grammars often provide interesting details, but many times their authors are not aware of parallel developments in other places of the world, which might help to illuminate complicated and at first view unexpected patterns. Studies of this kind are thus not only valuable to typologists and historical linguists, but also to scholars describing and documenting single languages.

From a cross-linguistic point of view, it would be interesting to know whether the discrepancy of Australia, which has no diachronic connections between person and voice at all, and North America, which has very few, versus the rest of the world persists in a larger and more diverse sample. Considering the genealogical diversity of languages in the North American macro-area and the comparatively low number of families in Australia, it is reasonable to assume that the results will be recurrent with the latter, but not with the former.

Concerning Australia, another factor should be taken into consideration. While I did not systematically investigate all the features of the passive and antipassive clauses in the sample, it is still noticeable that in antipassives constructions found in Australia the demoted patient is present as an oblique in many cases. Conversely, in Matses, the Southern Kirant languages and Muna, in which a development to a first person patient interpretation is attested, the patient cannot be expressed overtly. It is perfectly comprehensible that an overt patient blocks a first person interpretation and thus a first person reading can only emerge from clauses without it. My findings suggest that even the possibility of overtly expressing the demoted patient blocks the development to a person marker. My impression is that the same is not true concerning the connection of passives and person markers.

In Section 10 I have noted the complete absence of overlaps between voice markers and second person non-singular forms. Especially from a theoretical point of view it is important to know whether such connections have simply been missed by the sample or whether the gap is real and in need of explanation. Conversely, the strong association of antipassives with person markers as compared to the rather low numbers in passives was not expected and merits a second look.

A further point of interest are markers that function both as antipassives and passive, i.e. the detransitivizers. Though they do not seem to be common, it would be worth investigating whether they all developed from a reflexive via extension, as is suggested for Halkomelem and 'middle voice' markers in general or if other pathways are also imaginable.

From a wider perspective, a cross-linguistic survey as well as detailed language- and family-internal studies of voice markers, their origin and subsequent development are called for. Ideally, they should be based on a full parametrization of the phenomenon, including information about the transitivity of the verb and clause, the status of the promoted argument, the option to express the demoted patient or agent, restrictions to certain tenses or aspects and many more. Any one of these aspects might be influenced by the source of the marker in question or influence its further evolution.

A first hint in this direction is that the alignment of full NPs is not a very good predictor of what kind of voice marker a language will have, nor is the type of voice marking a good predictor of alignment, at least not outside of Eurasia and Australia. In general, pronouns, agreement and full NPs do not have the same system and any of

these may also be split internally. It thus more interesting to investigate the relationship of voice marking with the alignment of certain constructions in a language. After all, it is well known that arguments are preferably expressed only by agreement or pronouns or not at all, while full NPs are in many languages almost absent in discourse. I thus expect that the alignment of pronouns and verbal agreement forms is just as important – if not more important – as that of full NPs.

A further aspect that merits closer investigation is whether certain semantic classes of verbs have an affinity for occurring with either passives or antipassives and how that influences the possible sources of the markers in question. A semantic class that is associated with both could provide bridge constructions for the development of detransitivizers.

The previous lines have shown that many questions regarding the diachronic origins and their subsequent development of voice markers still remain open and are worth of further investigation. Their interaction with person markers constitutes only one aspect, but one that is not only interesting in itself but has also broadened our view of the history of voice markers in general. Research including both passives and antipassives will hopefully provide us with valuable insights into both domains in the future.

Language	Macroarea	PM.form	PM.function	PM.kind	VM.form	VM.function(s)	Direction	Est. prob.
Chukchi	Eurasia		2>1SG 3SG>1SG	AGR	*ine-*	AP	VM >PM	0.9
Puma	Eurasia	*kha-*	1NSG.P	AGR	*kha-*	AP	VM >PM	0.9
Muna	Pacific	*fo-*	1PL.I.P	AGR	*fo-*	AP	VM >PM	0.9
Matses	South America	*-an*	1PL.P	AGR	*-an*	AP	VM >PM	0.9
Chukchi	Eurasia	*-tku*	2>1PL	AGR	*-tku*	AP	VM >PM	0.8
Mandinka	Africa	*í=*	2SG	PRO	*-i*	AP, REFL	PM >VM	0.7
Chamorro	Pacific	*man-*	PL.S	AGR	*man-*	AP/A-ORIENT	VM >PM	0.7
Koyraboro Senni Songhay	Africa	*a*	3SG	PRO	*-a*	AP		0.5
Mandinka	Africa	*i=*	3PL	PRO	*-i*	AP, REFL	PM >VM	0.5
Saliba (PNG)	Pacific	*kai*	1PL	PRO	*kai-*	AP	PM >VM	0.5
Kiowa	North America	*gya-*	several	AGR	*-gya- -kya*	AP		0.4
Bandjalang	Australia	*ngali*	1PL.E	PRO	*-li*	AP, REFL, REC		0.2
Warungu	Australia	*ngali*	1DU	PRO	*-gali -li*	AP, REFL, ACAUS		0.2
Yidiny	Australia	*ŋanḏi*	1PL.NOM	PRO	*-ḏi*	AP, REFL		0.2
Tz'utujil	North America	*in-*	1SG.ABS	AGR	*-in*	AP		0.1
Kosraean	Pacific	*-yuh*	1SG.ACC	AGR	*-yuhk*	AP		0.1
To'abaita	Pacific	*kwai*	1SG.NOM.FUT/IMPF	PRO	*kwai-*	AP, REC		0.1

Table 11.1: Antipassive overlaps

Language	Macroarea	PM.form	PM.function	PM.kind	VM.form	VM.function(s)	Direction	Est. prob.
Soninke	Africa	*i=*	3PL	PRO	*-i*	DETR, REFL	PM >VM	0.7
Halkomelem	North America	*ƛ́á-l-əm*	3PL	PRO	*-əm*	DETR, REFL	VM >PM	0.5
Savosavo	Pacific	*za*	3PL.ACC	PRO	*-za*	DETR		0.2
Trio	South America	*ë-*	3>2SG	AGR	*ë-*	DETR, REFL		0.1

Table 11.2: Detransitive overlaps

Language	Macroarea	PM.form	PM.function	Person	PM.kind	VM.form	VM.function(s)	Direction	Est. prob.
Finnish	Eurasia	*-tAAn*	1PL.NOM	1NSG	AGR	*-tAAn*	PASS, IMPS	VM >PM	0.9
Itelmen	Eurasia	*n-*	3PL.A	3NSG	AGR	*n-*	PASS	PM >VM	0.9
Natügu	Pacific	*në-X-CF*	3AUGM	3NSG	AGR	*në-*	PASS	VM >PM	0.9
Cavineña	South America	*ta-tse*	3DU	3NSG	PRO	*-ta*	PASS	PM >VM	0.9
Chamorro	Pacific	*ma-*	3PL.ERG	3NSG	AGR	*ma-*	PASS/P-ORIENT	VM >PM	0.7
Jola	Africa	*-i*	2SG.ACC	2SG	AGR	*-i*	PASS	PM >VM	0.5
Karitiana	South America	*a-*	2SG.ABS	2SG	AGR	*a-*	PASS		0.5
Beja	Africa	*-t-*	2NOM	2	AGR	*-t-*	PASS, REFL		0.3
Armenian (Eastern)	Eurasia	*-av*	3SG.NOM	3SG	AGR	*-v*	PASS, ACAUS, REFL		0.3
ǁAni	Africa	*ǁé*	1PL.M	1NSG	PRO	*-e*	PASS		0.1
Beja	Africa	*-t-*	F	other	AGR	*-t-*	PASS, REFL		0.1
Jola	Africa	*(n)i-*	1SG.NOM	1SG	AGR	*-i*	PASS	PM >VM	0.1
Evenki	Eurasia	*-v*	1SG.NOM	1SG	AGR	*-v*	PASS, CAUS		0.1
Udihe	Eurasia	*-u*	2SG.NOM	2SG	AGR	*-u*	PASS, CAUS		0.1
Itelmen	Eurasia	*n-*	1PL.S/A	1NSG	AGR	*n-*	PASS		0.1
Tukang Besi North	Pacific	*to-*	1PL.NOM.REAL	1NSG	AGR	*to-*	PASS		0.1

Table 11.3: Passive overlaps

Language	Macroarea	PM.form	PM.function	PM.kind	VM.form	VM.function	Direction	Est. prob.
Jola-Fonyi & Banjal	Africa	*NCL-o ~ NCL-ɔ*	3INAN	PRO				0.5
Jola-Fony & Banjal	Africa	*-NCL-o ~-NCL-ɔ*	3INAN.ACC	AGR	*-o ~-ɔ*	ACAUS	VM >PM	0.5
Jola-Fonyi	Africa	*-ɔ(l)*	3SG.ACC	AGR				0.1
Saliba (PNG)	Pacific	*ta-*	1PL.I	AGR	*ta-*	ACAUS		0.1

Table 11.4: Anticausative overlaps

Language	Macroarea	VM form	VM Function 1	VM Function 2	VM Function 3	PM Form	PM Function	Direction	Est. prob.
Chukchi	Eurasia	*ine-*	AP			*ine-*	2>1SG 3SG>1SG	VM >PM	0.9
Finnish	Eurasia	*-tAAn*	PASS	IMPS		*-tAAn*	1PL.NOM	VM >PM	0.9
Itelmen	Eurasia	*n-*	PASS			*n-*	3PL.A	VM >PM	0.9
Comanche	North America	*ma-*	AP/UNSPEC.OBJ.H			*ma*	3SG.ACC	VM >PM	0.9
Natügu	Pacific	*në-*	PASS			*në-X-CF*	3AUGM	VM >PM	0.9
Muna	Pacific	*fo-*	AP			*fo-*	1PL.I	VM >PM	0.9
Matses	South America	*-an*	AP			*-an*	1PL.P	VM >PM	0.9
Cavineña	South America	*-ta*	PASS			*ta-tse*	3DU	PM >VM	0.9
Chukchi	Eurasia	*-tku*	AP			*-tku*	2>1PL	VM >PM	0.8
Mandinka	Africa	*-i*	AP	REFL (2/3)		*í=*	2SG	PM >VM	0.7
Soninke	Africa	*-i*	DETR	REFL		*i=*	3PL	PM >VM	0.7
Chamorro	Pacific	*man-*	AP/A-ORIENT			*man-*	PL.S	VM >PM	0.7
Chamorro	Pacific	*ma-*	PASS/P-ORIENT			*ma-*	3PL.ERG	VM >PM	0.7
Saliba (PNG)	Pacific	*kai-*	AP			*kai*	1PL	PM >VM	0.6
Jola-Fonyi and Banjal	Africa	*-o*	ACAUS			*NCL-o*	3	VM >PM	0.5
Jola-Fonyi and Banjal	Africa	*-o*	ACAUS			*-NCL-o*	3NH.ACC	VM >PM	0.5
Koyraboro Senni Songhay	Africa	*-a*	AP			*a*	3SG		0.5
Mandinka	Africa	*-i*	AP	REFL (2/3)		*i=*	3PL	PM >VM	0.5
Jola-Fonyi and Banjal	Africa	*-i*	PASS			*-i*	2SG.ACC	PM >VM	0.5
Halkomelem	North America	*-əm*	DETR	REFL		*ƛá-l-əm*	3PL	VM >PM	0.5
Karitiana	South America	*a-*	PASS			*a-*	2SG.ABS		0.5
Kiowa	North America	*-gya- -kya*	AP			*gya-*	several		0.4
Beja	Africa	*-t-*	PASS	REFL		*-t-*	2NOM		0.3
Armenian (Eastern)	Eurasia	*-v*	PASS	ACAUS	REFL	*-av*	3SG.NOM		0.3
Yidiny	Australia	*-:dji*	AP	REFL		*ŋanḍi*	1PL.NOM		0.2
Savosavo	Pacific	*-za*	DETR			*za*	3PL.ACC		0.2
Jola-Fonyi	Africa	*-ɔ*	ACAUS			*-ɔ(l)*	3SG.H.ACC		0.1
ǁAni	Africa	*-è -ɦè*	PASS			*ǁé*	1PL.M		0.1
ǁAni	Africa	*-è -ɦè*	PASS			*-ǁè*	1PL.M.P		0.1
Beja	Africa	*-t-*	PASS	REFL		*-t-*	F		0.1
Jola-Fonyi and Banjal	Africa	*-i*	PASS			*(n)i-*	1SG.NOM	PM >VM	0.1
Bandjalang	Australia	*-li*	AP	REFL	REC	*ngali*	1PL.E		0.1
Warungu	Australia	*-gali -li*	AP	ACAUS	REFL	*ngali*	1DU		0.1
Puma	Eurasia	*kha-*	AP			*kha-*	1NSG.P	VM >PM	0.1
Evenki	Eurasia	*-v*	PASS	CAUS		*-v*	1SG.NOM		0.1
Itelmen	Eurasia	*n-*	PASS			*n-*	1PL.S/A		0.1
Udihe	Eurasia	*-u*	PASS	CAUS		*-u*	2SG.NOM		0.1
Tz'utujil	North America	*-in*	AP			*in-*	1SG.ABS		0.1
Saliba (PNG)	Pacific	*ta-*	ACAUS			*ta-*	1PL.I		0.1
Kosraean	Pacific	*-yuhk*	AP			*-yuh*	1SG.ACC		0.1
To'abaita	Pacific	*kwai-*	AP	REC		*kwai*	1SG.NOM.FUT/IMPF		0.1
Tukang Besi North	Pacific	*to-*	PASS			*to-*	1PL.NOM.REAL		0.1
Chamorro	Pacific	*-in-*	PASS/P-ORIENT			*in-*	1PL.E		0.1
Trio	South America	*ë-*	DETR	REFL		*ë-*	3>2SG		0.1

Table 11.6: Summary of all the overlaps of the sample

Language	Macroarea	Stock	Pronouns	Agreement		Full NPs	Voice
Warungu	Australia	Pama-Nyungan	accusative	none	neutral	ergative	AP
Bandjalang	Australia	Pama-Nyungan	accusative	none	neutral	ergative	AP
Djabugay	Australia	Pama-Nyungan	accusative	none	neutral	ergative	AP
Yidiny	Australia	Pama-Nyungan	accusative	none	neutral	ergative	AP
Chukchi	Eurasia	Chukotko-Kamchatkan	ergative	A and P	mixed	ergative	AP
Itelmen	Eurasia	Chukotko-Kamchatkan	neutral	A and P	mixed	ergative	AP
Puma	Eurasia	Sino-Tibetan	ergative	A and P	mixed	ergative	AP
Koyraboro Senni	Africa	Songhay	neutral / accusative	none	neutral	neutral	AP
Kosraean	Pacific	Austronesian	accusative	none	neutral	neutral	AP
Comanche	North America	Uto-Aztecan	accusative	none	neutral	accusative	BOTH
Timpisha	North America	Uto-Aztecan	accusative	none	neutral	accusative	BOTH
Mandinka	Africa	Mande	neutral	none	neutral	neutral	BOTH
Kaqchikel	North America	Mayan	neutral	A and P	ergative	neutral	BOTH
Mam	North America	Mayan	neutral	A and P	ergative	neutral	BOTH
Tz'tutujil	North America	Mayan	neutral	A and P	ergative	neutral	BOTH
Chamorro	Pacific	Austronesian	ergative / neutral	A only	tripartite / accusative	neutral	BOTH
Muna	Pacific	Austronesian	neutral	A and P	accusative	neutral	BOTH
To'abaita	Pacific	Austronesian	neutral	A and P	accusative	neutral	BOTH
Canela-Kraho	South America	Nuclear-Macro-Je	neutral	A or P	mixed	neutral	BOTH
Reyesano	South America	Tacanan	neutral	A or P	neutral	neutral	BOTH
Yakkha	Eurasia	Sino-Tibetan	neutral	A and P	mixed	ergative	DETR
Soninke	Africa	Mande	neutral	none	neutral	neutral	DETR
Kiowa	North America	Kiowa-Tanoan	neutral	A and P	mixed	neutral	DETR
Shuswap	North America	Salishan	neutral	A and P	tripartite / ergative	neutral	DETR
Savosavo	Pacific	Isolate	accusative	P only	accusative	neutral	DETR
Dieri	Australia	Pama-Nyungan	tripartite / accusative	none	neutral	split	DETR
Halkomelem	North America	Salishan	neutral	A and P	accusative / ergative	neutral	DETR, BOTH
Mapudungun	South America	Araucanian	neutral	A and P	tripartite / accusative	neutral	DETR?
Trio	South America	Cariban	neutral	A and P	active-stative / ergative	neutral	DETR?
Kabardian	Eurasia	Abkhaz-Adyge	neutral / ergative	A and P	ergative	ergative	NONE
Ubykh	Eurasia	Abkhaz-Adyge	neutral	A and P	neutral / ergative	ergative	NONE
Choctaw	North America	Muskogean	neutral	A and P	tripartite	accusative	OTHER
Galibi Carib	South America	Cariban	neutral	A and P	active-stative / ergative	neutral	OTHER
Cavineña	South America	Tacanan	ergative	none	neutral	neutral	OTHER
Karitiana	South America	Tupian	ergative	none	neutral	neutral	OTHER
Alaba-K'abeena	Africa	Afro-Asiatic	accusative	A only	accusative	accusative	PASS
Beja	Africa	Afro-Asiatic	accusative / neutral	A and P	accusative	accusative	PASS
Kurrama	Australia	Pama-Nyungan	accusative	none	neutral	accusative	PASS
Martuthunira	Australia	Pama-Nyungan	accusative / neutral	none	neutral	accusative	PASS
Kayardild	Australia	Tangkic	accusative	none	neutral	accusative	PASS
Lardil	Australia	Tangkic	accusative	none	neutral	accusative	PASS
Armenian (Eastern)	Eurasia	Indo-European	accusative	A only	accusative	accusative	PASS
Nanai (Kilen)	Eurasia	Tungusic	accusative	A only	accusative	accusative	PASS
Udihe	Eurasia	Tungusic	accusative	A only	accusative	accusative	PASS
Evenki	Eurasia	Tungusic	accusative	A only	accusative	accusative	PASS

Finnish	Eurasia	Uralic	accusative	A only	accusative		accusative	PASS
Tukang Besi North	Pacific	Austronesian	neutral	A and P	accusative		ergative	PASS
Sanuma	South America	Yanomam	ergative / neutral	none	neutral		ergative	PASS
Banjal	Africa	Atlantic-Congo	neutral / accusative	A and P	accusative		neutral	PASS
Jola-Fonyi	Africa	Atlantic-Congo	neutral	A and P	accusative		neutral	PASS
ǁAni	Africa	Khoe-Kwadi	neutral	P only	accusative		neutral	PASS
Kxoe	Africa	Khoe-Kwadi	neutral	none	neutral		neutral	PASS
Tondi Songway Kiini	Africa	Songhay	neutral	none	neutral		neutral	PASS
Northern Tiwa	North America	Kiowa-Tanoan	neutral	A and P	mixed		neutral	PASS
Southern Tiwa	North America	Kiowa-Tanoan	neutral	A and P	mixed		neutral	PASS
Natügu	Pacific	Austronesian	accusative	A and P	accusative		neutral	PASS
Saliba (PNG)	Pacific	Austronesian	neutral	A and P	accusative		neutral	PASS
Matses	South America	Panoan	ergative / neutral	A only	accusative / ergative		neutral	PASS
Cubeo	South America	Tucanoan	neutral	A only	accusative		neutral	PASS

Table 11.7: Overview of the alignment of pronouns, agreement and full NPs in the sample

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