

A TYPOLOGY OF ANTIPASSIVES, WITH SPECIAL REFERENCE TO MAYAN

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAII AT MĀNOA IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

LINGUISTICS

MAY 2017

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Keywords: antipassive, typology, Mayan, Kaqchikel

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ACKNOWLEDGMENTS

As a typological study, this dissertation is not only the result of my own research, it also is a product of decades of scholarly work by hundreds of individuals who have spent huge amounts of time and effort understanding and documenting the languages of the world. I am acutely aware that in creating this document I stand on the backs of many great fieldworkers and data analysts, without whom no work in cross-linguistic comparison would be possible. So, I first thank everyone I have cited for the data included here. Your contributions are greatly valued.

I am also very thankful for the conversations I have had with the following individuals, whose expertise on individual languages and families I have benefitted from while putting together this database. Thanks to all of you for sharing your data and insights: Alice Harris, Ana Bugaeva, Ana Kondic, Andrea Berez, Anna Belew, Bob Blust, Brad Rentz, Bryn Hauk and Dmitry Egorov, Carolina Aragon, Catherine Lee, Conor Quinn, Danny Hieber, Gary Hotlon, Gilles Authier, Katharina Haude, Gwen Hyslop, Jason Jackson, Jessica Coon, Judith Maxwell, Kamil Deen, Katarzyna Janic, Kevin Baetcher, Lyle Campbell, Marianne Mithun, Melody Ann Ross, Nozomi Tanaka, Peter Arkadiev, Peter Schulke, Sabina Cruz de la Cruz, Sasha Vovin, Shobhana Chelliah, Spike Gildea, Tyler Heston, Victoria Chen, and Yuko Otsuka.

With respect to my own fieldwork, over the past six years I have met so many incredible people without whom this dissertation would not have been possible. To my consultants in Guatemala: not only have you shared your language and your time with me, you also shared your food, your homes, your livelihoods, your laughter and your stories. I am so proud to call many of you my friends, and I hope to see all of you again, in happiness and in health, when I next return.

To Ixnal and family: without you, I would not have continued working in Guatemala. Your generosity in everything, as well as your constant and unwavering help with all the questions I always seem to have, has gotten me to where I am today. I cannot express how much I value your friendship.

To Igor, Kari, and Angela: you have taught me so much about Kaqchikel, and also about language politics in Guatemala. Knowing you has helped me become both a better researcher and a better ally to the Mayan community. Thank you so much for your hospitality and your friendship.

To the teachers and students at Oxlajuj Aj over the years: I have learned so much from all of you, and I will always cherish the time we all spent in and out of the classroom together. Thank you for introducing me to the wonderful things about Guatemala, and for your continuing friendship. Special thanks to Becca Forte, Caitlin Baird, and Sarah Saffa for all the adventures and moral support.

Töq xik'oje' pa Iximulew, xinwetamaj kiwäch k'iy winaqi' janila ki' kik'u'x. Manta xinkito', manta xink'is re samaj re'. Ninb'ij chke: Janila nink'awomaj chiwe roma itzij, roma xisipaj iramaj chwe, roma xijunumaj iwochoch, iway, itze'en, ik'aslemal wik'in. Nikikot wanima iwoma rix wachib'ila'. Xtiqatz'ët qi' jun chik q'ij apo.

Ixnal: Nink'awomaj chawe chuqa ri awach'alal, iwoma rix xitikir ninb'an ronojel re samaj re'. Ronojel xisipaj chwe, ronojel ri ito'ik, ronojel ri iwachib'ilal, ja la nım nım rejqalem pa nuk'aslem, yixinwajo'.

Q'aq'awitz, Kari, chuqa Ya Angela: Rix k'iy xik'üt chi nuwäch chi rij ri rub'eyal ri kib'anob'al kik'aslemal ri qawinaq pa Iximulew, ke ri' chuqa ri achike yojtikir nqab'an richin

nqato' ri taq Maya ch'ab'äl. Nink'awomaj chiwe roma xijäq iwochoch chwe, chuqa roma ito'ik rik'in nusamaj.

Chike ri tijonela', tijoxela' pa Oxlajuj Aj: Xitik ri ija'tz richin yisamäj pa Iximulew, roma re' nink'awomaj chiwe. xojtze'en junam, xojetz'an junam, xojb'eb'iyaj b'a junam, jantape nink'uxlaj ri xqajunumaj. Xik'üt ri b'ey chwe, rix wachib'ila'.

I also have many people to thank for my academic training, including my instructors in the UHM linguistics department and the Tulane linguistics and anthropology departments. Special thanks to the following people:

To Judie Maxwell: I think it is fair to say that you are the reason I ended up (and stayed) in linguistics. Your classes and later your mentorship gave me the foundations which I have been building from ever since. You have taught me so many things about how to be a well-rounded scholar, about community-based research, and about language-learning in general. I've always admired you for your strength and dedication.

To Lyle Campbell: I cannot thank you enough for all the help you have given me these past five years, from involving me in your projects, to the hours of conversations we have had about anything and everything, to the helpful and candid comments you have always given me on my work. Thank you for your support, and I am proud to have been your student.

To William O'Grady and Kamil Deen: You both have been continually supportive of my ideas since I first arrived in Hawaii, and you have been instrumental in developing them in ways I would not have been able to on my own. You have helped me become a better and more well-rounded scholar, and to see the world through the eyes of an experimentalist. Thank you for always being available to discuss ideas and share results, and I have benefited immensely from studying with both of you.

I would also like to thank my family—my mother and father, my brother, my grandparents, my great grandparents, my aunts and uncles and cousins—for their unwavering support and encouragement. Thank you for giving me everything I need to excel at anything. You taught me to value education and hard work and new experiences, such that I never once doubted that I would finish this project. Your love and guidance is incredibly important to me, and I love all of you.

To Josh: You have been here for all of it, through travel and work and writing and feeling guilty about putting off writing to do something fun. You have helped me stay happy and sane, and you have given me so many opportunities to participate in the world outside of linguistics when I most needed it. Your indirect contribution to the completion of this dissertation is enormous. You are my best friend, my biggest support, and the person that makes me happy every single day. Thank you for everything.

I would also like to thank my many friends who have provided support in a wide variety of ways. First, to the dissertation group—Katie Gao, Melody Ann Ross, Victoria Chen, Samantha Rarrick, and Eve Okura—for holding me accountable to deadlines. A special thanks is due to Brad Rentz for helping me with the statistics and maps with went into this dissertation. Thanks also to all of my fellow UH linguists for many exchanges of ideas and good times in general (in no particular order, in addition to those already mentioned): James Grama, Joelle Kirtley, John Van Way, Nozomi Tanaka, Stephanie Witkowski, Hyunah Ahn, Bryn Hauk, Claire Stabile, Colleen Patten, Brenda Clark, Brittany Wilson, Anna Belew, Kavon Hoosiar, Sejung Yang, Yen-ling Chen, Ryan Henke, Catherine Lee, John Elliot, Alex Smith, Sean Simpson, Peter Schuelke, Thomas Kettig, Darren Flavelle, and Danni Yarborough, among many others. Thank you all for your support.

Last but not least, I would like to thank a number of other people who have influenced me and improved my life over the past several years, including Patricia Anderson (tikahch!), Nancy Van Way, Todd Davis, Dan Smith, Casey Teeters, Codi Wong, Maria Finen, Austin Larsen, Brock Ladd, Aaron von Bokhoven, Christine Cobeen, Kathryn Mykleseth, Tina Cheng, Mike Prickett, and Josh Strickland.

Finally, the research for and writing of this dissertation was funded by the Bilinski Educational Foundation. Without their support, this dissertation could not have had the breadth and therefore the impact that it has. Thank you.

ABSTRACT

This dissertation presents the results of a typological study that investigated the global distribution of antipassive constructions, as well as the distribution of the relevant antipassive-related features. The sample includes data from 445 languages, which represent 144 language families and isolates. This larger study is informed by an in-depth analysis of Kaqchikel antipassives, and how this influences our understanding of antipassives of Mayan languages.

The goals of this study are (1) to provide a more comprehensive look at antipassives and antipassive-type structures than had previously been attempted; (2) to provide an updated account of antipassives in Mayan languages, based on primary data; (3) to discover which other typological factors relate to the existence of antipassives in a particular language (4) to discover the types and distribution of features in antipassive-type constructions cross-linguistically, and (5) to establish guidelines for the identification and description of antipassive-type constructions in a wide variety of languages.

Among other discoveries, findings show that about 25% of the world's language have antipassive constructions. Antipassives tend to exist in languages with ergative-absolutive verb alignment, although there are also non-ergative languages which have antipassives. Additionally, while there is on some level a division between antipassives which serve primarily syntactic functions and those which serve primarily pragmatic functions, the more consistent distinction is between antipassives which allow the patient to be expressed in an oblique phrase and those which do not. There are also a small number of languages which can be said to have more than one antipassive.

Mayan languages are known for having a rather large number of voice distinctions, including passives and antipassives. I identify five morphosyntactically distinct agent-preserving

detransitivizing constructions in Kaqchikel, two of which I considered to be antipassives. I also look at several issues involving the markers for these constructions, the syntactic contexts in which they appear, and how they differ in terms of their function. The facts for Kaqchikel are also compared with what is known about other K'ichean and non-K'ichean languages.

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ABBREVIATIONS

1	1 st person
2	2 nd person
3	3 rd person
3II	3 rd person bound pronoun expressing the patient or possessor with a distinct reference from the A argument in the same clause (Abui)
A	Set A agreement (Cherokee)
A	Agent argument of a transitive verb
ABL	Ablative
ABS	Absolutive
ABSENT	Absential
ABSTN	Abstract noun
ACC	Accusative
ACT	Active
ACTIV	Activity
ADD	Additive
AF	Agent Focus
AFFCT	Affected argument
AGNT	Agent
AGR	Agreement
AGT	Agentive
AI	Animate intransitive (Algonquian)
AI+O	intransitive inanimate verbs which have expressed patients (Algonquian)
ALT	Alternative
AN	Animate
ANA	Anaphoric demonstrative
AOR	Aorist
AP	Antipassive
ART	Article
ASP	Aspect
ASSR	Assertive
ASTAT	Absolute state
AUG	Augmentative
AUGN	Augmented number
AUX	Auxiliary
AV	Agent voice
AVS	Affect verb suffix
B	Set B agreement (Cherokee)
BN	Bound noun
CAUS	Causative
CHAR	Characteristic action
CLF	Classifier
CLT	Clitic
CLS	Clause

COLL	Collective
COM	Complementizer
COMP	Comparative
COMPL	Completive
COND	Conditional
CONJ	Conjunction
CONN	Connective
CONN1	Discourse connective 1
CONT	Continuous
CONTACT	Contact
CONTEMP	Contemporative
CONTR	Contrast
CV	Converb
COP	Copula
COREF	Coreferential
CS	Change of state
CTL	Control
D	'D-element' (Athabaskan-Eyak-Tlingit)
DABS	Differential absolutive
DAT	Dative
DECL	Declarative
DEF	Definite
DEIC	Deictic
DEM	Demonstrative
DEP	Dependent
DES	Desiderative
DET	Determiner
DETR	Detransitivizer
DIM	Diminutive
DIR	Directional
DISCONT	Discontinuity, temporal or other
DIST	Distal
DISTPST	Distant past
DISTR	Distributive
DLV	Direct light verb
DM	Discourse marker
DOM	Differential object marking
DR	Direct
DS	Different subject
DU	Dual
DUR	Durative
DVN	Deverbal noun stem
ELCat	Catalogue of Endangered Languages
EMPH	Emphatic
ENC	Intonational phrase enclitic
ERG	Ergative

EP	Epenthetic segment
EVID	Direct evidential
EXCL	Exclusive
EXP	Experienced
FEM	Feminine
FM	Formative
FOC	Focus
FORMAL	Formal register
FUT	Future
FV	Final element
GEN	Genitive
H.CLF	“H classifier” (Athabaskan)
HABIT	Habitual
HON	Honorific
HORT	Hortative
HUM	Human
IMP	Imperative
INAN	Inanimate
INC	Incorporative verb suffix (Mayan)
INCEPT	Inceptive
INCH	Inchoative
INCL	Inclusive
INCOMPL	Incompletive
IND	Independent
INDEF	Indefinite
INDIC	Indicative
INF	Infinitive
INFR	Inferential evidential
INGR	Ingressive
INST	Instrumental
INTEN	Intensifier
INTR	Intransitive
INTERROG	Interrogative
INV	Inverse
IO	Indirect object
IP	Independent pronoun
IPFV	Imperfective
IRR	Irrealis
ITR	Iterative
LAT	Lative
LK	Linker
LOC	Locative
LOG	Logophoric, person of the protagonist
LV	Light verb
MANNER	Manner
MASC	Masculine

MID	Middle
MIN	Minimal number
MKCASE	Marked case
MOD	Modal
N	“n registration”, an object morpheme that only appears with an overtly present animate primary object, see Rhodes and Valentine (2015:1212, fn. 6).
NCTL	Non-control
NEG	Negation
NEUT	Neuter
NFUT	Non-future
NHUM	Non-human
NMLZ	Nominalizer
NOM	Nominative
NON3	Non-3 rd person
NP	Noun phrase
NPARTIC	Non-particular
NPF	Noun prefix
NPOSS	Non-possessed
NPRET	Neutral preterit
NPST	Non-past
NREF	Non-referential
NSG	Non-singular
O	Patient argument of a transitive verb
OAP	Oblique antipassive
OBJ	Object
OBL	Oblique
OBV	Obviative
OTI	Transitive inanimate verbs which lack patients (Algonquian)
P	Patient (see O)
PART	Partitive
PARTIC	Particular
PASS	Passive
PERL	Perlative
PF	Phrase-final
PFV	Perfective
PL	Plural
POL	Polite
POSD	Possessed noun suffix
POSS	Possessive
POSIT	Positional
POT	Potent
PTN	Potential
PRED	Predicative
PREP	Preposition
PERT	Pertensive
PRO	Pronoun

PROG	Progressive
PROL	Prolative
PROSP	Prospective
PRF	Perfect
PREV	Preverb
PROX	Proximal
PRV	Pre-radical vowel
PRS	Present
PST	Past
PTCL	Particle
PTCP	Participle
PURP	Purposive
PV	Patient voice
QUOT	Quotative
REAL	Realis
REC	Recent past
RECIP	Recipient
RECP	Reciprocal
REDUP	Reduplication (various functions)
REF	Referential
REFL	Reflexive
REL	Relative
REM	Remote past
REP	Reportative evidential
PRED	Relational predicate
S	Single argument of an intransitive verb
SBJ	Subject
SG	Singular
SOC	Sociative
SPK	Speaker-related
SS	Same subject
STAT	Stative
STR	Semitransitive
STRONG	Strong verb form (Dravidian)
SUB	Subordinate
SUBJN	Subjunctive
SUF	Suffix
SUPRL	Superlative
TA	Transitive animate (Algonquian)
THM	Thematic
TNS	Tense
TOP	Topic
TR	Transitive
TRACE	Trace
TS	Thematic suffix
UNERG	Unergative

UNM	Unmarked
UNSPEC	Unspecified
UW	Unwitnessed
VBLZ	Verbalizer
VCL	verb stem closure
VOC	Vocative
WALS	World Atlas of Language Structures
WEAK	Weak verb form (Dravidian)
WH	<i>Wh</i> word

OTHER NOTES ON SYMBOLS:

Roman numerals index noun/gender class number

~ Reduplication

- Morpheme boundary

= Clitic boundary

< > Infix

> ‘Acts on’, for portmanteau personal pronouns

. Separates portmanteau elements and multi-word glosses

/ Indicates either multiple uses of the same morpheme (MID/AP) or a portmanteau person marker
(3/3)

CHAPTER 1. INTRODUCTION AND CONCEPTS

In this dissertation I bring together and analyze examples from languages across the world to provide a comprehensive understanding of antipassivization as a transitivity-decreasing phenomenon. Through this work I contribute to the understanding of antipassives cross-linguistically and to their role in language typology and linguistic theory. This larger study is informed by an in-depth analysis of Kaqchikel antipassives, and how it influences our understanding of antipassives of Mayan languages.

The primary aim of this study is to undertake a typological investigation of antipassivization cross-linguistically. I also examine connections between antipassives and other typological factors including alignment, basic word order, locus of grammatical marking, and valency orientation, as well as genetic affiliation and geographical location. The language sample for the study was designed to be comprehensive both with respect to geographical area and to genetic affiliation, and includes 445 languages from 144 language families (including isolates). Specific attention is given to minority and endangered languages, as well as those that are not well-represented in the existing antipassive literature. Detailed information about sampling and how the dataset was constructed is given in Chapter 3. A summary of the information collected for the study can be found in Appendix A, Appendix B, and Appendix C.

In addition to the typological study of antipassivization, this dissertation also includes the findings of extensive research on the morphosyntactic facts surrounding antipassive-type constructions in Kaqchikel (Mayan). These facts are then compared to the types of constructions found in older texts, as well as to related constructions in other Mayan languages. Findings shed light on how these detransitivized structures are used, how their properties and distribution may have changed, and how this compares with the structure and function of antipassive-like constructions cross-linguistically. As such, the in-depth discussion of detransitivizing processes in Kaqchikel and Mayan generally enriches the findings of the larger typological study, which is based primarily on information from broader primary descriptions of various languages. The contemporary data on Kaqchikel were collected between 2013 and 2016 using picture elicitation and interview methods with more than 80 native Kaqchikel speakers in Guatemala. These data are complemented by an analysis of both texts which I collected and texts which are publicly available in the Archive of the Indigenous Languages of Latin America (AILLA).

The results are presented in a functional-typological framework. However, when work involving antipassive constructions that was cast in another theoretical framework is considered, I have discussed the findings in their theory of origin, where applicable. This is necessary both to avoid possible misunderstandings in “translating” from one approach to another, and also to be able to engage the claims in the literature on its own grounds.

This dissertation consists of fourteen chapters. The foundational concepts referenced throughout the rest of the dissertation are discussed here in Chapter 1. The first half of the chapter provides an introduction to the linguistic concepts necessary for discussing antipassives, namely transitivity, voice, and valency. The second half of the chapter looks at other detransitivizing constructions and the characteristics which differentiate them from the core meaning of ‘antipassive’. Chapter 2 serves as an introduction to the antipassive, and the history of the literature on antipassives and related concepts. It also includes a summary of antipassives in diachrony. In Chapter 3 I compare various existing definitions for antipassives, and assemble a working definition for what constitutes an antipassive cross-linguistically for use throughout this dissertation.

The focus shifts in Chapter 4 to an outline of the typological study and the structure of the dataset. Then in Chapter 5 I investigate possible typological correlations between antipassives and other factors such as basic word order, region, family, locus of grammatical marking, and valence orientation. Here I also evaluate claims involving the relationship between antipassivization and passivization, differential object marking, and switch-reference.

Possible correlations between antipassives and ergativity, as well as ergativity and other relevant typological factors, are discussed in Chapter 6. Chapter 7 continues the investigation of antipassives and alignment type, but with respect to all common non-ergative alignments.

In Chapter 8 I discuss in detail the eleven features of antipassives tracked in this study, and how different combinations of features describe a wide variety of structures, often with similar functions. Then a discussion of the most common feature patterns across the dataset in Chapter 9, and I propose several different ways to look at what constitutes a ‘prototypical’ antipassive. Finally, in Chapter 10 I develop a typology for languages which have multiple antipassives, based on differences in structure and function.

In the remaining chapters, the focus shifts to Mayan languages. An overview of relevant features in Mayan languages to the study of detransitivizing constructions is given in Chapter 11.

In Chapter 12 I present novel data on five different antipassive-type structures in Kaqchikel, and compare these structures both to patterns found in colonial texts and to related structures in other K'ichean languages. Chapter 13 includes a discussion of my research on associated issues, describing the functional, morphological, and syntactic distribution where it was previously unclear. Finally, a summary is provided in Chapter 14 of the findings from both the Mayan data and the broader typological study.

1.1 CONCEPTS: TRANSITIVITY, VALENCY, AND VOICE

The aim of this section is to discuss briefly some of the concepts which are foundational to any discussion of voice alternations. As these are broadly relevant topics in linguistics, there are several book-length treatments of each already in existence. This section therefore does not seek to be comprehensive, but rather to summarize the core aspects of these phenomena to the extent necessary for further discussion of antipassivization.

1.1.1 TRANSITIVITY

All the phenomena discussed in this chapter deal in some way with the relationship between morphosyntax and verbal semantics, and arguably the most fundamental concept is transitivity. Transitivity is a property of an entire clause, which consists of a verb and its arguments. While transitivity often gets discussed in terms of patterns or frames (intransitive, transitive, ditransitive, etc.—see below), transitivity is more properly viewed as a scalar property, as enumerated most notably in Hopper and Thompson (1980). While a transitive event prototypically involves two participants which are distinct from each other, and where the action is transferred from one participant to the other (Hopper and Thompson 1980:251, Næss 2007:29-30), the transitivity of the clause can be reduced by a variety of factors. Hopper and Thompson (1980) identify ten different parameters which affect transitivity, which collectively define how transitive a particular clause is. The interaction of each of these elements creates a continuum of transitivity values across construction types. The characteristics which define highly transitive vs. less (low) transitive clauses are reproduced below from Hopper and Thompson (1980:252).

<u>High transitive</u>	<u>Low transitive</u>
2 or more participants, A and O	1 participant
Action	Non-action
Telic	Atelic
Punctual	Non-punctual
Volitional	Non-volitional
Affirmative	Negative
Realis	Irrealis
A high in potency (agency)	A low in potency (agency)
O totally affected	O not affected
O highly individuated	O non-individuated

Hopper and Thompson (1980:284-285) also discuss the fact that there are discourse correlates of transitivity, where a greater number of highly transitive features are more prevalent in clauses that are foregrounded (focused), while fewer are present in backgrounded clauses.

A reduction in transitivity is often indicated by morphosyntactic means. In Finnish, for example, fully affected patients in transitive clauses typically receive accusative case. However, when the action is imperfective/atelic (i.e., less transitive), the patient receives partitive case instead of accusative case. This change in case marking morphologically indexes the decrease in semantic transitivity.

(1.1a) Liikemies kirjoitti **kirje-en** valiokunna-lle
 businessman wrote letter.ACC committee-to
 ‘The businessman wrote a letter to the committee’

(1.1b) Liikemies kirjoitti **kirje-ttä** valiokunna-lle
 businessman wrote letter.PART committee-to
 ‘The businessman was writing a letter to the committee’ (Hopper and Thompson 1980:262)

Other, more recent discussions of transitivity expand upon this framework, or conceptualize it slightly differently. For example, Kittilä (2002:15-16) describes morphological transitivity as the formal expression of semantic transitivity. Næss (2007) delineates the prototypical transitive (akin to Hopper and Thompson’s ‘high transitives’), as a clause which maximally distinguishes two (separate) participants. Then, in cases where the agent and the patient are less distinct (under those circumstances listed above as contributing to decreased transitivity), “this is reflected in linguistic structure by the use of constructions which do not accord equal formal prominence to both participant NPs” (2007:47). Lazard (2003), who

attempts to formalize discussions of transitivity, likewise takes a scalar view and proposes a very similar transitive prototype, which is “an effective volitional discrete action performed by a controlling agent and actually affecting a well individuated patient” (2003:152).

A scalar view of transitivity in which deviations from (high) transitive morphosyntax often reflect a decrease in transitive features for pragmatic, semantic, and/or discourse purposes is generally adopted here. However, it is also the case that there are distinct grammatical divisions between transitive and intransitive structures which show up in a wide variety of languages, identifiable by language-internal criteria (although there may still be gradients of transitivity within each category). Some languages very rigidly categorize all verbs as transitive or intransitive, while others have only transitive patterns for some verbs, but not for others. As such, transitivity is partly lexical, and also partly depends on verbal aspect (e.g., inherently telic or atelic).

Languages additionally may categorize most verbs at one end of the transitivity spectrum, rather than having comparable numbers of transitive and intransitive verbs. For example, in Zenzontepec Chatino, most verb roots are monovalent/intransitive, with small numbers of polyvalent (having more than one associated argument) and equipollent roots (which are natively neither transitive nor intransitive) (Campbell 2015:1395). There are also languages which allow almost all verbs to appear in both transitive and intransitive frames, without any additional morphology (ambitransitives). So although transitivity is relevant in the grammars of all languages, it may be more or less of a central operating principle in an individual language, in terms of the morphosyntax (Dixon and Aikhenvald 2000:27). This idea is elaborated upon with respect to antipassives in section 5.2.3.

Rough prototypes for intransitives, ditransitives, and ambitransitives (common transitivity classes) are given below, modified from Dixon and Aikhenvald (2000:3-5). The prototype for a transitive proposition (e.g., *She hugged her mother*) is omitted as it has already been discussed above, and other types of detransitivized constructions are discussed in section 1.3.

Intransitive: A verb with a single core argument. This argument may have a variety of semantic roles, including agent or patient (e.g., *she slept, we colluded*).

Ambitransitive(/labile): A verb may appear without any additional marking in either a transitive or an intransitive clause. The single argument of the intransitive may

correspond either to the agent or to the patient of the corresponding transitive pattern (e.g., *he closed the door* vs. *the door closed*; *I ate the cheese* vs. *I ate*).

Ditransitive: A verb which takes three arguments, typically an agent, a patient, and a recipient. The object of the verb may be either the patient or the recipient (with the other argument in a dative/oblique phrase), or both may be coded as objects (e.g., *they gave her the book*, *they gave the book to her*).

Clearly, there is a relationship between the antipassive and transitivity, since the antipassive alternates with a transitive coding of a two-participant event. Hopper and Thompson (1980:254) claim that some languages use devices like noun incorporation or the antipassive to code dyadic predicates with low transitivity as intransitive. They describe the features of ergative (transitive) clauses vs. antipassive clauses as follows, although it is important to note that they define ‘antipassive’ loosely, as any instance where A is not ergative and O is not absolutive (they also limit their discussion to ergative languages) (Hopper and Thompson 1980:268).

<u>Ergative</u>	<u>Antipassive</u>
Verb codes two participants	Verb codes only one participant
Perfective aspect	Imperfective aspect
Total involvement of O	Partitive O
Definite O	Indefinite O
Kinetic/volitional V	Stative/involuntary V
Active participation of A	Passive participation of A

In a number of cases, this generalization that detransitivizing operations appear when a dyadic verb is being used in contexts with low transitivity features indeed applies. For example, noun incorporation patterns in Chukchi are coded as intransitive, even though the patient still appears in the clause. Additionally, noun incorporation results in a concomitant shift from perfective to imperfective aspect.

(1.2a) ənan qaa-t qərir-ninet
 3SG.ERG deer-ABS.PL see-3SG.A/3PL.O
 ‘He looked for (the) deer’

(1.2b) əlton **qaa-rer-gʔe**
 3SG.ABS **deer-see**-3SG.S
 ‘He was looking for the deer’ (Kozinsky et al. 1988:652)

However, the generalization is not without exceptions. In Mayan languages, for example, the patient of the antipassive construction may be definite and totally affected, it may appear in non-incompletive aspects, and the agent is an active, volitional participant. Although the verb ‘look for’ in (1.3) from K’ichee’ is not particularly high in transitivity, the antipassive may also regularly occur with highly transitive verbs, e.g., ‘hit’.

- (1.3) X-Ø-ul-tzuku-n-a rii achih chee lah
 COMPL-3SG.ABS-come-look.for-AP-INTR DET man OBL 2SG(FORMAL)
 ‘The man came to look for you’ (Mondloch 1981:175)

1.1.2 VALENCY

Antipassives are generally considered both intransitivizing and valency-decreasing. Valency is simply the number and kind of arguments a particular predicate can take (Comrie 1989a:57). Although valency is most commonly discussed as a verbal feature (it is verbs which have valency), some also discuss valency with respect to nouns and adjectives (e.g., Herbst and Schüller 2008). The discussion of valency here will be restricted to the domain of verbs and their arguments, as that is the aspect most relevant to the issues taken up in the rest of this dissertation.

Verbs may be monovalent (having a single associated single argument, e.g., *I squirm*), bivalent (having two associated arguments, e.g., *I eat cake*), trivalent (having three associated arguments, e.g., *I gave Jeff the hat*), or polyvalent (having multiple associated arguments). While this is a seemingly straightforward characterization, ‘valency’ has been used to describe a set of related but different concepts. As noted by Kulikov, Malchukov, and de Swart (2006:vii), valency may refer to a particular valency pattern, where, for example, a given verb appears with two arguments. It may also refer to a verbal category which marks a change in valency, e.g., the causative, a valency-increasing operation (for more discussion of valency change see section 1.1.3 on voice). In addition, valency is generally regarded as a lexical property (e.g., Faulhaber 2011:3-4), since verbs have an inherent or basic valence (cf. Comrie’s (1989a:57) example of ‘give’ taking three arguments).

Not only is there a range of concepts covered by the term valency, but also the distinction between valency and transitivity is not always clear, or applied in the same way by different authors. Kulikov, Malchukov, and de Swart (2006:vii) claim that the relationship between valency and transitivity is that transitivity refers to a specific valency pattern. However, they note

that this relationship has been obscured by scalar views of transitivity, where transitivity does not correspond directly to any particular pattern. Other examples of the inconsistent application of the distinction between valency and transitivity come from the descriptions of individual languages. For example, Van der Voort (2004:355) discusses valency as a lexical property in Kwaza, a language isolate of South America, and transitivity as a set of grammatical categories: "...verbs need not be subcategorized for a specific number of arguments. Although a number of verbs are neutral or unmarked with respect to **valency**, many verbs can be explicitly **transitivised** or **detransitivised** through suffixes" (bolding mine).

Other authors have attempted to clarify matters by making distinctions between 'semantic' and 'syntactic' valency and/or transitivity. For example, Thomason and Everett (1993:324) discuss what they call the antipassive in Kalispel (Salishan) as a valency-decreasing, intransitive construction which, "unlike ordinary intransitives, these are **semantically transitive** constructions" (bolding mine). The same use of syntax vs. semantics terminology but with respect to valency is found in Huber's (2011) description of Makalero (Timor-Alor-Pantar), where she states:

Valency classifies verbs according to the number of arguments associated with them. **Semantic valency** concerns the number of participants logically involved in a given action, while **syntactic valency** examines the syntactic positions associated with a given verb. The two types of valency do not necessarily overlap. In Makalero, they are in fact quite distinct. (2011:141, bolding mine)

To confuse matters further, Kulikov, Malchukov, and de Swart (2006:xv) also refer to valency as "lexical transitivity."

There are a number of factors at play in the above statements. First, there are grammatical factors, in that the idea that the number of places associated with a predicate is based on how participants are coded. There are also semantic factors, in terms of how many arguments a verb takes natively, and finally there are construction-based factors, in that the number of semantic arguments expressed (and how they are expressed) depends on how information is being structured in a given context. It can also be said in general that transitivity, as already discussed, is scalar, while valency is discrete (a predicate does not take 2.5 arguments). While I think most would accept this distinction and treat valency as discrete, there are instances where people have discussed valency as a scalar concept. For example, Vaa (2013:435) in his description of Engdewu (Oceanic) states that, "In this respect it could even be argued that the semantic valency

of semitransitive verbs is **reduced** compared to the transitive verbs from which they are derived because they usually occur with generic objects” (bolding mine).

In order to deal with these issues and to endorse a systematic difference between valency and transitivity, transitivity will be discussed in this dissertation as a scalar concept which, in some languages, is grammatically categorical (i.e., they make a clear transitive/intransitive division). Valency, per Herbst and Götz-Votteler (2007:10), is considered a property of lexical units in relation to constructions, meaning that the valency of the verb relies on the construction it is in. For example, while a prototypical passive involves a two-place predicate, it is both intransitive and monovalent. In contrast, the number of semantic arguments a verb takes regardless of immediate context (e.g., ‘give’ takes three arguments) is here discussed as monadic, dyadic, etc. as opposed to monovalent, bivalent, etc.

Under this schema, the differences in terminology are clear. For example, differential object marking is a strategy which decreases the transitivity of a dyadic verb without affecting its valency (see section 1.3.1). The reflexive, however, involves a decrease in the transitivity of dyadic verbs (often to the point of reflexives being coded as an intransitive), as well as a decrease in valency, since there is only one participant as opposed to two (see section 1.3.2). The contrast also holds for instances of valency increase. A number of languages can causativize dyadic predicates, which results in an increase in valency from two to three participants, but the verb often remains grammatically transitive. This is illustrated in Turkish in example (1.4), where the causee is coded as a dative argument instead of as another (accusative) object.

- (1.4) Dişçi mektub-u müdür-e imzala-t-tı
dentist.NOM letter-ACC director-DAT sign-CAUS-PST
‘The dentist got the director to sign the letter’ (King 2010:40)

1.1.3 VOICE

In its most distilled and basic form, voice deals with the mapping of semantic roles onto syntactic functions between a verb and its arguments (Klaiman 1991:1, Kulikov 2010:369, *inter alia*). Voice is considered a verbal category/property (Klaiman 1991:1), and as such voice marking is typically found on the verb, although patterns in case marking, agreement, or word order may also play a role in the identification of a particular voice (Kulikov 2010:369).

Some consider different voices to be different patterns that a particular verb may take, without necessarily any relation between those patterns, or consider voices to be oppositions (most commonly active vs. passive). However, since the advent of transformational frameworks, the active transitive pattern is often considered basic, with other voice patterns derived from it. Although many of those who write about voice and describe voices in various languages do not necessarily adhere to a transformational-type theoretical framework, they often continue to discuss voice phenomena in terms of derivation and demotion/promotion (see e.g., Tsunoda 1988b). More recently, others have conceptualized the relationship between voices similarly, but in other terms. For example, Kulikov (2010) describes verbs as having a ‘neutral diathesis’ (i.e., inherent or lexical valency, here dyadic vs. monadic) which can then be “modified” to yield other voice patterns (2010:371).

Just as it was necessary to clarify the relationship between transitivity and valency, it is also necessary to clarify the relationship between valency and voice. Definitionally they are quite distinct: voice is the relationship/configuration between the argument(s) of a verb and their syntactic roles, while valency (as defined in the previous section) is the number of core (non-oblique) arguments in a clause. However, valency is clearly related to voice, as voice alters the marking and number of arguments associated with the predicate. Klaiman (1991:4) claims that voice plays a role in determining the valence of the verb. Kulikov (2010:371) makes a similar statement, that “voice is a regular encoding of diathesis (valence patterns) through verbal morphology.” Under such a view, where voice is reliant on verbal morphology, valency can be modified without involving voice. Kulikov (2010:373) gives the example of ambitransitive/labile verbs, which in languages in general may be monovalent or bivalent, without any additional morphology (see section 1.3.2 for examples). Indeed, ambitransitivity is generally not considered to be an instantiation of voice.

However, depending on the scholarly tradition in a particular region or language family, some valency-changing structures may be called ‘voices’ while others are not. For example, in Mayan the antipassive and the passive are treated as voices, but the causative is not. In fact, King (2010:37) notes that in general, while valency-decreasing processes tend to be called voices, valency-increasing processes do not. This difference brings up a continuing question in the study and definition of voice, noted in Kulikov, Malchukov, and de Swart (2006:xv), namely, should valency-changing operations be treated differently from more widely-accepted voices like

passive and antipassive. Kulikov, Malchukov, and de Swart argue that such a distinction cannot be maintained, given the wide-spread polysemy of voice morphology. For example, in some languages, e.g., Mocoví (Juárez and Álvarez-González 2016), the same morpheme identifies the causative and the antipassive (compare (1.5b) and (1.5c)), which makes it difficult to argue that at least in some languages causatives are not part of the voice system.

Transitive:

- (1.5a) So pyog i-ta-tak so yale
 CLF dog 3.TR-sniff-PROG CLF man
 ‘The dog is sniffing the man’

Antipassive:

- (1.5b) So pyog re-ta-**gan**
 DET dog 3.INTR-sniff-AP
 ‘The dig is sniffing’

Causative:

- (1.5c) So nonot i-da-**gan**-tak so qopag
 DET wind 3.TR-move-CAUS-PROG DET tree
 ‘The wind moves the tree’ (Juárez and Álvarez-González 2016)

Kulikov (2010:395) makes a different distinction between voice and valency patterns, where voice in a strict sense is limited to those operations which remap the semantic participants to the grammatical structure without altering the number of participants (represented by a prototypical passive, with both an agent and a patient). A broader view of voice would include all valency patterns, namely those which increase or decrease the number of semantic participants, e.g., reflexives and reciprocals for valency-decreasing constructions, and causatives and applicatives for valency-increasing constructions. However, after considering this difference, Kulikov states that this distinction cannot be maintained for the same reason given above, that the same morphological form is often used both for operations which do not alter the number of participants and those which do. For example, it is relatively common for the same morpheme to be used for passive (with a by-phrase) as is used for the anticausative or middle (which are typically monovalent).

From this discussion of valency patterns and voice, it seems to be the case that valency (the number of arguments a verb takes) is not voice (the system that maps arguments onto grammatical roles), but valency patterns (at least overtly marked ones) are not consistently

distinguishable from voices. Additionally, at least in the view adopted in Kulikov (2010:393), the verb form itself conveys the voice of the predicate, such that various valency patterns may be represented by the same voice in a particular language. An excellent example of multiple patterns taking the same voice morpheme comes from Russian, where *-sja* may be middle/reflexive (permitting one overt argument, (1.6a)), passive (permitting two overt arguments (1.6b)), and antipassive (permitting one overt argument (1.6c)).

(1.6a) Rebenok pomy-l-**sja**
 child.NOM wash-PST-**DETR**
 ‘The child washed (himself)’ (modified from Comrie 1985:327)

(1.6b) Kartoshk-a sobira-jet-**sja** soldat-ami
 potato-NOM gather-3SG.PRS-**DETR** soldier-INST.PL
 ‘The potatoes are being gathered by soldiers’ (Dmitry Egorov and Bryn Hauk, p.c. 2015)

(1.6c) Kur-y nes-ut-**sja**
 hen-NOM.PL lay-3PL.PRS-**DETR**
 ‘Hens lay’ (modified from Comrie 1985:316)

Examples of various voice phenomena other than those given in this section can be found throughout this chapter. See section 1.2.1 for background on the antipassive, section 1.2.2.1 for a discussion of the passive, and section 1.3.2 on middle and reflexive/reciprocal constructions.

1.2 RELATED STRUCTURES

As there are many different types of valency-decreasing and transitivity-decreasing operations, it is necessary to discuss how antipassives fit into the larger picture of mechanisms for decreasing both valency and transitivity. Although some definitions of the antipassive are so broad as to subsume these other operations under the same heading, discussing the differences between antipassives and other named valency-decreasing derivations helps get at the core of what is antipassive. Those constructions and operations most similar to (and which may overlap with) the antipassive include patient omission/zero object constructions, indefinite object constructions, differential object marking, the conative, noun incorporation, semitransitive constructions, reflexive/reciprocals, and middles. A brief profile of each of these constructions is given in this section, which can then be contrasted with the definition of ‘antipassive’ given in

Chapter 3. The groupings here as pertaining primarily to patient marking, valency, or voice is simply for ease of reading and organizational purposes.

1.2.1 CONSTRUCTIONS HAVING TO DO WITH PATIENT MARKING

A number of constructions achieve effects similar to the antipassive, in that they decrease the transitivity of the predicate (although often without coding it as fully intransitive) through some type of non-canonical patient marking (i.e., not involving the usual case/agreement pattern for direct objects). An English-speaking audience can relate most easily to the example of the English conative, where a subset of verbs may take a patient marked by ‘at’. These verbs are typically verbs of both motion and contact (Levin 1993:8), such that *she scratched her arm* and *she scratched at her arm* are acceptable, but *he touched the screen* cannot as easily be rendered **he touched at the screen*. The conative is used to indicate an attempted action which was not realized or not entirely realized. By making the patient the object of the preposition *at*, the transitivity of the predicate is decreased.

Similar constructions, also called ‘conatives’, are discussed for some Australian languages. For example, the conative alternation in Warlpiri involves an ergative-dative case pattern in imperfective aspects (1.7b), which alternates with the more traditional ergative-absolutive pattern in completive aspects (1.7a). Although the ergative-dative pattern is clearly a reflection of a decrease in transitivity, it is not coded as a fully intransitive construction (which would have an absolutive-marked agent, as in (1.7c)).

(1.7a) Ngarrka-**ngku** ka marlu luwa-rni
 man-ERG PRS.IPFV kangaroo.ABS shoot-NPST
 ‘The man is shooting the kangaroo’

(1.7b) Ngarrka-**ngku** ka-rla-jinta marlu-**ku** luwa-rni
 man-ERG PRS.IPFV-3.DAT-3.DAT kangaroo-DAT shoot-NPST
 ‘The man is shooting at the kangaroo’ (Hale et al. 1995:143, cited in Legate 2006:170)

(1.7c) **Ngaju**-rna parnka-ja
 1.ABS-1SG run-PST
 ‘I ran’ (Legate 2006:144)

Similar constructions which bear consideration here are semitransitives. The ‘semitransitive’ label is used in the descriptions of a number of languages to refer to a range of

constructions which fall somewhere between fully transitive and fully intransitive. Often the patient argument does not receive canonical object marking, but is not omissible. Alternately, certain lexical items simply take a case frame which is not canonically transitive, but which does not alternate with a more prototypically transitive structure. ‘Semitransitive’ may also describe intransitive roots which can take an oblique goal argument, e.g., ‘listen’ vs. ‘listen to’. Some examples of constructions termed ‘semitransitive’ are also discussed in section 1.3.2 below as they more closely resemble noun incorporation.

Semitransitives in Garrwa (Garawan, Australia) have two overt arguments, one nominative and one dative, where the dative argument is typically a beneficiary, goal, or recipient. While some verbs which are typically intransitive can appear in a semitransitive construction, other dyadic predicates like ‘hunt’ in (1.8b) almost always occur with a dative patient, and cannot take a non-dative patient (Mushin 2012:187).

(1.8a) Daba=yi juka-**wanyi** nanda bajangu
 hit=PST boy-ERG that dog
 ‘The boy hit that dog’ (Mushin 2012:186)

(1.8b) Kujba=yili nurru wada-**nyi**
 hunt=HABIT 1PL.EXCL.NOM food-DAT
 ‘We would hunt for food’ (Mushin 2012:66)

The final phenomenon reminiscent of the antipassive and primarily related to the status of the patient is differential object marking (henceforth DOM). DOM is found in a wide variety of languages from all over the globe and generally describes instances where patients systematically receive different marking based on factors such as animacy and definiteness (cf. Bossong 1985), with no other change in the sentence. A typical example comes from Persian (Indo-European), where definite objects receive a marker (as in (1.9a)), while indefinite objects tend not to (as in (1.9b)).

(1.9a) Kimea ketâb-**o** xund
 Kimea book-**OBJ** read
 ‘Kimea read the book’

(1.9b) Kimea ketâb xund
 Kimea book read
 ‘Kimea read a book/books’ (Key 2012:241)

DOM is similar to the antipassive in that it typically indicates a decrease in the transitivity of the predicate, often when the patient is inanimate or indefinite. In terms of marking (at least of the sort seen in cases like Persian where the inanimate/indefinite patient lacks overt marking), the antipassive is almost the inverse: in the antipassive, inanimate/indefinite/non-specific/non-topical, etc. patients receive extra (oblique) marking, while in DOM patients lack overt marking. However, the relationship between DOM, antipassivization, and (pseudo-)noun incorporation are less obvious in Nez Perce, where examples like (1.10b) have been called antipassives.

(1.10a) Háama-**nm** pée-’wiye wewúkiye-**ne**
 man-ERG 3.ERG-shot elk-**OBJ**
 ‘The man shot an elk’

(1.10b) Háama **hi-**’wiye wewúkiye
 man 3.**NOM**-shot elk
 ‘The man shot an elk’ (Rude 1988:552)

Rude (1988:558) claims, based on textual analysis, that the ‘antipassive’ (as in (1.10b)) functions to mark patients low in topicality and/or animacy. There is no oblique marker, as one might expect in an antipassive construction, but rather only the absence of an object marker, as is characteristic of DOM. Additionally, the agent (and the verb) do not take ergative marking (as they do in (1.10a)), which in combination with a bare patient nominal resembles (pseudo-)noun incorporation. The relationship between antipassives and DOM is discussed further in section 5.3.3. Note that antipassive constructions may themselves exhibit DOM.

1.2.2 CONSTRUCTIONS HAVING TO DO WITH A DECREASE IN VALENCY

In addition to those transitivity-decreasing constructions discussed in the previous section, there are also a number of related constructions which also decrease the valency of the verb. One phenomenon which, like the antipassive, decreases valency, is patient omission. Patient omission is very common cross-linguistically, both in languages with lots of argument indexing morphology and languages with almost no morphological means of indexing arguments or transitivity. Patient omission simply refers to the ability to omit the object of a transitive predicate, either because it is understood from context or to remove any mention of it for particular discourse reasons. In English, many verbs are ambitransitive, meaning that these verbs

may be used transitively or intransitively, without reference to a patient. For example, take the sentence *I knitted a sweater*, which is transitive and has an overt patient (*sweater*). It is also possible simply to say *I knit*, meaning that knitting is something you do habitually or characteristically, without any specific reference to what is being knitted.

In other languages with more cross-referencing morphology, patient omission may involve not only the patient NP, but also any accompanying morphology. In Yawuru (Nyulnyulan),¹ both the patient NP and the object-marking enclitic may be omitted (see (1.11b) vs. (1.11a)). Notice that although both object marking and the patient are absent in (1.11b), the verb still bears transitive marking, and the agent is still ergative.

(1.11a) Nga-na-bura-nda=**ginyangka kamba wamba**
 1.NOM-TR-see-PFV=**3.ACC that man.ABS**
 ‘I saw that man’ (Hosokawa 2011:307)

(1.11b) Dyimbin i-**na**-ma-nda lindyu-**ni**
 inside 3SBJ-**TR**-put-PFV police-**ERG**
 ‘The police locked [him] up’ (Hosokawa 2011:421)

Also, with respect to object marking, there are a number of languages which have indefinite object markers. Indefinite object markers are affixes or clitics which appear in the typical pronominal object cross-reference position in the verb form and indicate that the patient is indefinite, unknown, or non-specific. Indefinite object markers are relatively common in the Americas (e.g., Uto-Aztecan, Athabaskan, Totonacan), in languages which in general have a lot of verbal morphology. The following examples are from Tanacross (Athabaskan), which contrasts a transitive construction (1.12a) with a transitive indefinite object construction (1.12b).

(1.12a) Š-n-in-h-ʔeh
 1SG-THM-2SG-H.CLF-see
 ‘You see me’ (Holton 2000:248)

¹ Yawuru has ergative-absolutive case marking for NPs, but nominative-accusative cross-reference, in that A and S are marked by prefixes and O is marked by a suffix (Hosokawa 2011:18). Third person non-humans are frequently not referenced by a verbal enclitic, although plural and collective non-humans may be referenced by the non-paucal plural object marker *-irr* (Hosokawa 2011:303-308). The use of the 3rd person object marker in (11a) is for emphasis.

- (1.12b) Č'ε-xε-ʔáʔ
INDEF.OBJ-HUM.PL-eat.IPFV
'They are eating [something]' (Holton 2000:252)

In most cases of indefinite object marking, a patient NP cannot be expressed overtly (which is also the case in Tanacross, cf. Holton (2000:251)). This makes the indefinite object construction very similar to patientless antipassives, structurally and functionally, where the primary difference is whether the marker is pronominal (inflection) or voice (derivation). Indeed, antipassive markers have evolved from indefinite object markers in several languages, as discussed in section 2.2.1.

Another valency-decreasing construction which shares characteristics with the antipassive is noun incorporation, discussed extensively in Mithun (1984). Prototypical noun incorporation involves grammatical fusing of the patient and the verb such that together they form an intransitive predicate which denotes a unitary concept. Because the patient loses its syntactic status as an individual object argument, it generally cannot take determiners, classifiers, demonstratives, or other modifiers. Also, the resulting predicate typically has a somewhat different meaning than the original verb + object construction which corresponds to it, and it often indicates habitual or incompletive aspect. Although the status of noun incorporation-type constructions has been debated in English,² examples of noun incorporation which have been cited for English include *bird-watching*, *berry-picking*, and *baby-sitting*, where **one bird-watching*, **berries-picking*, and **this baby-sitting* demonstrate that incorporated patients cannot be modified (cf. Mithun 1984:849).

Although the specifics of noun incorporation vary rather significantly between languages, there are two common forms which noun incorporation takes. The first is where the patient NP physically appears within the verb complex, usually in the object position. This type of incorporation is exemplified below by the following Nahuatl example, where *pah-* 'medicine, pills' appears in the object pronominal prefix position in (1.13b).

² There are some cases where these noun/adjective-plus-verb complexes are nominal, rather than verbal predicates (e.g., *I like bird-watching*). Also some (particularly *babysit*) are argued to be back-formations from nouns (*babysitter*). Finally, the line between compounding and noun incorporation is unclear. For a discussion of noun incorporation in English see Feist (2013).

(1.13a) Ni-**k**-toloa pah-tli
 1SG.SBJ-**3SG.OBJ**-take medicine-NPOSS
 ‘I take pills’

(1.13b) Ni-**pah**-toloa
 1SG.SBJ-**medicine**-take
 ‘I take medicine/pills’ (Sabina Cruz de la Cruz, p.c. 2017)

The second common pattern discussed as noun incorporation does not involve the patient appearing internally within the verb complex, but rather adjacent to it, where the verb is intransitive and the patient likewise cannot be modified. This type of noun incorporation is relatively common in Oceanic languages, exemplified here by Samoan. In this type of incorporation, the agent does not receive ergative marking and the patient appears adjacent to the verb root.

(1.14a) E tausi **e** ia pepe
 TNS care **ERG** 3SG baby
 ‘He takes care of babies’

(1.14b) E tausi **pepe** ‘oia
 TNS care **baby** 3SG.ABS
 ‘He takes care of babies’ (Chung 1978:183)

As mentioned above, there is some overlap between what have been termed semitransitive constructions and noun incorporation. For example, Makassarese has what is described as a semitransitive construction in Jukes (2013) where the patient of a dyadic predicate follows a verb which only bears absolutive marking. The patient is bare, may not be modified (e.g., by a definite article as in (1.15a)), appears immediately adjacent to the verb, and cannot be omitted.

(1.15a) **Ku**=kanre=i unti-a
1.ERG=eat=3.ABS banana-DEF
 ‘I eat the bananas’

(1.15b) Ang-nganre=a’ **unti**
 STR³-eat=1SG.ABS **banana**
 ‘I eat bananas’ (Jukes 2013:70)

³ See Jukes (2013:73) for a discussion of why the marker termed here STR ‘semitransitive’ (‘transitive’ in Jukes) is not best analyzed as an antipassive marker.

antipassives. In fact, a number of languages cover the entire range of valency-decreasing voices with one morphological form. This is the case, for example, in Russian (*-sja*) and in Cariban languages generally. The examples from Kari’ña (Cariban) below demonstrate the use of a single morpheme (with many allomorphs) in passive (1.17a), anticausative (1.17b), antipassive (1.17c), middle (1.17d), and reflexive/reciprocal (1.17e) functions.

(1.17) a. Enapy ‘eat P’	→	O -onapy ‘be eaten’	Passive
b. Empataka ‘flatten P’	→	O -ompataka ‘spread out’	Anticausative
c. Pomy ‘plant P’	→	Ot -pomy ‘plant’	Antipassive
d. Anti’mo ‘seat P’	→	Ot -anti’mo ‘sit’	Middle
e. Enguuna ‘comb P’	→	Os -enguuna ‘comb each other’	Reciprocal

(Gildea et al. 2016)

However, in other cases, it is more feasible to delineate the functions of the prototypes of these various voice operations in ways which contrast with the antipassive. Reflexives and reciprocals are perhaps the easiest to differentiate from the antipassive, since in both cases the agent(s) are coreferential with the patient(s), which is generally not the case in the antipassive (although, as shown above, the same marker may be used for the antipassive and the reflexive and/or the reciprocal. This is the case, for example, in a number of Bantu languages (see Bostoen et al. 2015)). While in many languages reflexives and reciprocals are intransitive constructions (reflecting the fact that they have decreased transitivity since the agent(s) are simultaneously the patient(s)), in other languages they are coded as transitives. A relatively typical example of an intransitive reflexive/reciprocal construction comes from Pilagá (Guaicuruan), which cross-references features of both subjects and objects on the verb in typical transitive sentences, as in (1.18a). In the reciprocal, however, only the subject is indexed on the verb (1.18b).

(1.18a) An-ñi-qotoŋon
 2OBJ-1SBJ-wake.up
 ‘I wake you up’ (Vidal 2001:145)

(1.18b) Ñi-lo-qo-t-’at
 1SBJ-look-PL-ASP-RECP
 ‘We are looking at each other’ (Vidal 2001:171)

In contrast, some reflexive/reciprocal constructions are clearly transitive. Sabanê (Nambikwaran) expresses the reflexive by literally making the patient the same as the agent, such that subject and object marking are both present but refer to the same person.

- (1.19) **Uli ma-kal-i-ntal-i**
2SBJ 2OBJ-cut-SUF-NPRET-ASSR
 ‘You cut yourself’ (Antunes de Araujo 2004:157)

Most Mayan languages also typically use a transitive construction to express basic reflexive/reciprocal propositions, where the verb is always marked for a third person singular object and the reflexive/reciprocal meaning is conveyed by the noun phrase-like morpheme *-ib* ‘-self’, inflected for person.⁴ The following example is from Q’eqchi’:

- (1.20) **Ma x-Ø-r-il r-ib laj Lu’ sa’ lem**
 INTERROG ASP-3SG.ABS-3SG.ERG-see 3SG-REFL CLF Pedro in mirror
 ‘Did Pedro see himself in the mirror?’ (Berinstein 1985:97)

For a more complete discussion of reflexives cross-linguistically see Geniušiene (1987).

Reflexive and reciprocal functions are sometimes also considered treated in individual languages as part of the spectrum of middle (see again the Kari’ña examples above, also the schematic in Kemmer (1993:202)). However, ‘middle voice’ can be roughly delimited as its own separate category. Middles typically have patientive subjects, are valency-decreasing, and, as argued by Kemmer (1993:3, 207-211), involve a “low degree of elaboration of events.” At least on the first two accounts, the middle appears more similar to the passive (as they both have patientive subjects) than the antipassive (which has an agentive subject). However, there are gradients as to how agentive or non-agentive a subject might be. For example, in Spanish the reflexive/middle creates not only more patientive subjects like in (1.21a), but also anticausative/undergoer subjects (1.21b), and auto-benefactive/experiencer subjects (1.21c).

- (1.21a) **Se necessita-n maestr-os**
MID need-3PL.PRS teacher-PL
 ‘Teachers are wanted’

- (1.21b) **El vaso se rompi-ó**
 DET.MASC glass **MID break-3SG.PST**
 ‘The glass broke’

- (1.21c) **Juan se compadec-e de su-s amigo-s**
 Juan **MID sympathize-3SG.PRS with 3.POSS-PL friend-PL**
 ‘John sympathizes with his friends’ (Masullo 1992:179, glossing is mine)

⁴ In some Mayan languages, there is also an intransitive reflexive/reciprocal construction. See Chapters 11 and 13 for details.

Se may also function with intransitive predicates like ‘die’ in (1.22a-b) to indicate a more or less actively involved subject. In (1.22a), the subject died presumably for external reasons, not due to anything he is responsible for taking place, whereas in (1.22b) with *se*, one infers that the subject had some responsibility for what caused his own death.

(1.22a) Juan muri-ó
 Juan die-3SG.PST
 ‘John died’ (and he had nothing to do with it)

(1.22b) Juan *se* muri-ó
 Juan MID die-3SG.PST
 ‘John died’ (and he was in some way involved/responsible)⁵

All of the constructions discussed in this section have some formal and/or functional similarity to the antipassive. However, they also have notable differences which allow them to be distinguished in many cases. While some constructions may expand or be co-opted into antipassive uses (or vice versa), the core features of each of these types of constructions, though related, are distinct.

1.3 SUMMARY

This chapter briefly described a wide variety of ideas central to typological linguistics. It began with an overview of the dissertation, and followed with an introduction to the important concepts of voice, valency, and transitivity. I attempted to clarify the differences between these concepts, at least within the confines of the present work. For purposes here, voices are the various marked valency patterns a verb and its arguments may appear in, while valency describes the number of core arguments in the clause. Transitivity is both a scalar property which can be increased and decreased without necessarily modifying valency, and also a relevant grammatical property of verbs in many languages.

The second half of the chapter looked at a variety of detransitivizing and valency-decreasing constructions which share features with the antipassive, and are sometimes considered antipassives, in a variety of languages. This included conatives, differential object marking, patient omission, indefinite object constructions, noun incorporation, semitransitives,

⁵ Thank you to Lyle Campbell for bringing these examples to my attention. *Se* may also indicate a stative/eventive-type contrast (cf. Hopper and Thompson 1980:266).

middles, and reflexives/reciprocals. In each case I mentioned ways in which these constructions differ from the core meaning of antipassive (which is further elaborated in Chapter 3), as well as illustrating the ways in which their functions and structures often overlap.

CHAPTER 2. ANTIPASSIVES, SYNCHRONICALLY AND DIACHRONICALLY

This chapter provides a basic overview of the antipassive, both what they are and how they function. The history of antipassives in the linguistic literature is presented in section 2.1, before progressing on to discuss how the antipassive has been discussed previously with respect to other structures and typological features, namely ergativity and passivization. I also discuss major syntactic division which has been proposed between pragmatic and syntactic antipassives, and how that division will be treated in this dissertation. Section 2.2 deals with diachronic aspects of antipassives, both how they develop and how they transition into other structures. Case studies from all around the world are given as examples of these changes.

2.1 BACKGROUND

Although antipassive constructions have been described in languages under other names by linguists for many years, the term ‘antipassive’ was coined by Michael Silverstein, first appearing in print in 1972 in a discussion of Chinook Jargon. The naming and formal identification of this structure led a series of articles in the 1970s (e.g., Heath 1976, Postal 1977, and also Silverstein 1976) which attempted to delineate the concept of the antipassive, to relate it to other structures in better-known languages, and to account for it in larger linguistic frameworks. In short order, the term was adopted to describe constructions in other languages. Dixon used the term in his 1977 description of Yidj (Pama-Nyungan), and antipassives also played a prominent role in his 1979 article on ergativity in *Language*. In fact, Thomas Smith-Stark considered the antipassive to have a “well-established meaning” in Mayan linguistics by 1978 (1978:169).

Although there has been and continues to be much debate about what constitutes an antipassive cross-linguistically (see Chapter 3 for a discussion of the range of definitions), antipassives are widely discussed both as valency-reducing and detransitivizing (e.g., Polinsky in press(b)). They function to decrease the transitivity of the predicate, which in many cases involves a less affected, indefinite, non-specific, or absent patient (see Cooreman 1994). Operationally, antipassivization often results in the agent of a dyadic verb being marked and/or treated in the same way as the subject of an intransitive verb, while simultaneously relegating the patient to an oblique phrase, or causing it to be omitted entirely (Silverstein 1976, Dixon 1979,

1994, Givón 1984). This has the effect of making patients peripheral (non-core) arguments of the verb, both structurally and semantically. The most often cited example of a language with antipassives is Dyirbal (Pama-Nyungan), an example of which is shown in (2.1a) (transitive) vs. (2.1b) (antipassive). The antipassive construction is signaled by both a verbal marker and a dative case marker on the patient, indicating that it is no longer a core argument of the verb in this clause. The agent also loses its ergative case marker.

(2.1a) Yabu ηuma-ηgu bura-n
 mother.ABS father-ERG see-NFUT
 ‘Father saw mother’ (Dixon 1994:10)

(2.1b) Duma bural-ηa-n^yu yabu-gu
 father.ABS see-AP-NFUT mother-DAT
 ‘Father saw mother’ (Dixon 1994:13)

Commonly cited examples of antipassives come from a wide variety of languages and language families, some of the most prominent of those not yet mentioned here include West Greenlandic (Eskimo-Aleut; Bittner 1987), Mam (Mayan; England 1983), Halkomelem (Salishan; Gerds 1982), Chamorro (Austronesian; Cooreman 1988b), and Chukchi (Chukotko-Kamchatkan; Kozinsky et al. 1988).

There are few works which are at all comprehensive in their discussions of antipassives. The most notable contributions to the study of antipassivization specifically (other than those already mentioned above) include, first, Ann Cooreman’s (1994) chapter which discusses the functions of various antipassive-type detransitivized structures in a sample of 19 ergative languages. Outside of the present study, the most wide-reaching attempt to collect data on antipassive constructions in a variety of ergative and non-ergative languages was conducted by Maria Polinsky (2005, 2013) as part of the *World Atlas of Language Structures* (WALS) project (Dryer and Haspelmath 2013). WALS contains information on antipassives (or the lack thereof) in 194 languages, of which 48 are listed as having antipassive constructions. See Chapter 4 for a comparison of the WALS sample with the dataset from this dissertation.

Most recently, Katarzyna Janic’s doctoral thesis and subsequent book (2013, 2016) became the first book-length treatment of antipassives. Janic examined antipassive-type structures primarily in the Pacific, Africa, and Eurasia (namely Turkic, Slavic, and Romance families/subgroups). Janic and Alena Witzlack also organized a workshop at the 2016 meeting of

the *Societas Linguistica Europaea* (SLE) on “the crosslinguistic diversity of antipassives: function, meaning, and structure” which included papers on antipassives in a wide variety of languages, and from both diachronic and synchronic perspectives. Publication of a volume from the workshop is currently in preparation.

2.1.1 ASSOCIATED ISSUES

While the most basic view of antipassives was presented in the previous section (2.1), there are a number of issues which arise when attempting to talk about antipassives in even the broadest sense. These issues come out of the origins of the term “antipassive” and the developments which followed, and as such merit attention here. This includes a discussion of the relationship between the antipassive and the passive (section 2.1.1.1), the relationship between antipassives and alignment (section 2.1.1.2), and the primacy of either pragmatic or syntactic functions of the antipassive (section 2.1.2). Although each of these topics is covered in relation to the data collected for this dissertation in later chapters, why these are important questions to investigate is addressed here.

2.1.1.1 ANTIPASSIVE AND PASSIVE

Silverstein’s (1972, 1976, 1986) discussion of the antipassive was, as the term implies, based on the idea that this construction is the opposite of the passive with respect to both functional and structural features. He wrote:

I have termed this *-ki-* form the ANTIPASSIVE construction, playing upon its inverse equivalence to a passive of accusative languages, because the sense is clearly equivalent to a transitive, though the form is intransitive, with the grammatical function of the remaining NP reversed (ergator becomes non-ergator). (Silverstein 1972:395)

Semantically, passives serve to remove, background, or peripheralize agents of transitive verbs, often signaling that they are less important, less identifiable, or unknown. Antipassives are used to achieve the same backgrounding effects, but applied to the patient as opposed to the agent. This correspondence is demonstrated in (2.2a-c) from Kaqchikel (Mayan):

Transitive:
(2.2a) X-Ø-u-tz’ib’-aj ri wuj ri tijonel
COMPL-3SG.ABS-3SG.ERG-write-TR DET book DET teacher
‘The teacher wrote the book’

Passive:

- (2.2b) X-Ø-tz'ib'-äx ri wuj (r-oma ri tijonel)
COMPL-3SG.ABS-write-PASS DET book 3SG-OBL DET teacher
'The book was written (by the teacher)'

Antipassive:

- (2.2c) Ri tijonel x-Ø-tz'ib'-an (r-ichin ri wuj)
DET teacher COMPL-3SG.ABS-write-AP 3SG-OBL DET book
'The teacher was writing (the book)' (author's notes)

In general, passives simultaneously promote the patient of a transitive clause and demote the agent, while antipassives simultaneously promote the agent and demote the patient. Both constructions result in a decrease in valency, as the verb has fewer core arguments than the corresponding transitive construction. But not only are antipassives and passives involved in parallel yet opposite demotions, they achieve this effect with similar structures. As demonstrated by Dixon's (1994:146) prototypical definitions of passives and antipassives, these two structures can bear the same types of markings, and there can even be morpheme-for-morpheme parallelism as shown in the Kaqchikel examples (2.2b-c) above.

Passive

- (a) applies to an underlyingly transitive clause and forms a derived intransitive;
- (b) the underlying O NP becomes S of the passive;
- (c) the underlying A NP goes into a peripheral function, being marked by a non-core case, preposition, etc.; this NP can be omitted, although there is always the option of including it;
- (d) there is some explicit formal marking of a passive construction (generally, by a verbal affix or else by a periphrastic element in the verb phrase—such as English *be...-en*—although it could be marked elsewhere in the clause).

Antipassive

- (a) applies to an underlyingly transitive clause and forms a derived intransitive;
- (b) the underlying A NP becomes S of the antipassive;
- (c) the underlying O NP goes into a peripheral function, being marked by a non-core case, preposition, etc.; this NP can be omitted, although there is always the option of including it;
- (d) there is some explicit formal marking of an antipassive construction (same preference and possibilities as for passive). (Dixon 1994:146)

If a given language has both head and dependent marking (cf. Nichols 1986), both antipassive and passive derivations (as described by Dixon) would have the following structural characteristics: a shift in pronominal agreement such that there is only one agreement marker which cross-references the intransitive subject, case marking on the remaining core argument

indicating that it is an intransitive subject (nominative or absolute), a voice morpheme which indicates that the verb is now intransitive, and an oblique marker for the oblique argument, when expressed. The Kaqchikel examples above have all of these features save nominal case markers, as it is a head-marking and not a dependent-marking language.

Other comments have been made with specific reference to the interaction of passives and antipassives with certain typological systems. An early idea was that passives are an operation associated with nominative-accusative systems, and antipassives are therefore their mirror image, structurally and functionally, in ergative-absolute systems (see below for a discussion of the relation of antipassive to ergativity). Silverstein (1976:115) cites a similar view to counter the claim that all ergative structures are derived from passives, which would imply an underlying nominative-accusative grammar for all languages. Silverstein points out that given antipassive derivations, it is equally plausible that all languages are underlyingly ergative-absolute, and nominative-accusative structures are derivations based on the antipassive.

This analogy between antipassive:ergative and passive:accusative, however, requires (a) that passives and antipassives are actually equal and opposite in structure and in function, and (b) that passives and antipassives are mutually exclusive within a particular language, i.e., it requires that there are no antipassives in nominative-accusative languages, and likewise no passives in ergative languages. This second requirement is unquestionably false, as there are many ergative languages which have both passives and antipassives (refer again to the Kaqchikel examples in (2.2a-c)). There are also a sizable number of non-ergative languages with antipassives (see sections 5.4-5.6).

This view of antipassive as equal and opposite to the passive in structure and in function, although now less pervasive, has continued to be a common thread in the discourse on antipassives, as evidenced in the various definitions of the antipassive presented in Chapter 3, despite some refutations of this idea (e.g., Comrie (1978:361), Heath (1976:211), Van Valin (1980:321)). The general critique was perhaps summarized best in Darnell (1997:41), who describes the passive as a ‘role-remapping’ voice where the semantic roles of agent and patient in a dyadic predicate are remapped in the passive. However, the antipassive is somewhat different in that it is partially role-remapping and partially role-modifying, since there is not always a difference in the status of the transitive vs. the intransitive agent, and there are also

associated semantic effects of antipassivization, such as habitual, durative, or incomplete aspect, a decrease in affectedness, definiteness, etc.

2.1.1.2 ANTIPASSIVE AND ALIGNMENT

The second general assumption has been that antipassives are in some way tied to ergativity, whether or not one adopts the ‘antipassive is to ergative alignment as passive is to accusative alignment’ analogy. If one does not accept that analogy, it becomes more difficult to explain why there appears to be a tendency for antipassives to be found more frequently in ergative languages (see also Chapter 6 on antipassives and ergativity). Some scholars have gone so far as to say that it is unlikely that there could exist an overtly marked antipassive construction in a nominative-accusative language:

If a device in an ergative system language for demoting or deleting A is regarded as a passive...it should follow that a device in an accusative system for demoting or deleting P is an antipassive. However, if a basic requirement is that such a device is explicitly marked (usually in the verb), it seems unlikely that there are, in fact, any languages with accusative systems (in their morphology of the noun and/or verbal agreement) that also have antipassives. (Palmer 1994:197)

Other scholars, however, have discussed the fact that there is no implicational relationship between ergativity and antipassives, and that there is no reason to assume that antipassives could not exist in nominative-accusative languages (e.g., Heath 1976, Givón 1984, Foley and Van Valin 1985:340, Cooreman 1994, Polinsky 2005, Schröder 2006). However, this observation has sometimes been based on definitions of the antipassive which are more inclusive than others’ definitions, and also than the one adopted here. For example, Palmer (1994:197) goes on to say that if there is no requirement that the construction has a morphological marker, then indeed it can be argued that there antipassives in accusative languages. Additionally, Polinsky (2013) reports that Choctaw, Māori, German, Romance languages, and about ten others are good examples of nominative-accusative languages with antipassives, most of which are not considered to have antipassive constructions by the criteria used for this study (see Chapter 7 for a discussion of non-ergative languages which were considered here to have antipassives).

However, if antipassives do not correlate with ergativity, is there any other typological characteristic that correlates better? This question is the focus of Chapter 5, and as such only some of the preliminary ideas about possible correlates are given here. First, since many linguists

require the antipassive to be a construction with some sort of morphological marking that indicates detransitivization and/or demotion of the patient, there would necessarily be a threshold which needs to be met in terms of the amount of valency, transitivity, voice marking, and/or argument role-indexing morphology a given language has. If there is no or little overt marking, then it is presumably more difficult to unequivocally demonstrate the existence of an antipassive, and the difference between antipassive, patient omission, or patients in other types of constructions involving lowered transitivity (Hopper and Thompson 1980). Likewise, languages which mark valency and/or derivation overtly, regardless of their verb alignment system, would be more likely to have identifiable antipassives. While in a global sense more voice/valency marking might indeed correlate with antipassives (see Chapter 5), there are certainly counterexamples. Quechuan languages, for instance, have an unusually rich system of derivational morphology, and yet they lack antipassives.

Another option is that the presence or absence of antipassives might correlate with how strictly verbs are classed for transitivity in a given language. For example, it is generally acknowledged that some languages distinguish verbal categories based on transitivity (which mostly exhibit ergative alignment), while languages such as English (which is nominative-accusative) do not. In fact, Givón (1984:151-164) claims that ergative languages are inherently more sensitive to transitivity. In contrast, with respect to non-ergative systems, Dixon (1994:31) claims that languages with semantically-based alignment systems (active-inactive) are less likely to have an antipassive construction since S, A, and O play less of a central role in their grammars. Jensen (1990) makes an argument along these same lines for Guaraní, that its sensitivity to agentive/non-agentiveness and to person hierarchies does not provide conditions amenable to antipassivization. All of these possibilities are investigated in Chapters 5 and 7 using the dataset collected for this dissertation.

2.1.2 PRAGMATIC VS. SYNTACTIC FUNCTIONS

Since the antipassive became a subject of study, different authors have proposed subdivisions in the category of antipassives based either on structure or on function (e.g., Heath's (1976) indefinite, promotional, coreferential, compounding, category-linked, hierarchy-linked, and non-syntactic types, or Polinsky's (2013) implicit patient vs. oblique patient). However, the most prevalent distinction which has been propagated in the literature is a distinction between

antipassives which serve pragmatic functions and antipassives which primarily serve syntactic functions (cf. Comrie 1978, 1989a, Dixon 1994, Foley and Van Valin 1984, 1985). This section discusses this functional divide and evaluates its merit. The related issue of the role of antipassives in syntactic ergativity is addressed in section 6.4.

Antipassive functions which I have termed here ‘pragmatic’, but which have also been termed ‘backgrounding’ (e.g., Foley and Van Valin 1985), refer to the role of antipassives which may be used outside of a handful of syntactic contexts that either may use or require an antipassive. Pragmatic antipassives are usually employed in managing information flow, which is why they have been described as ‘backgrounding,’ since they involve making transitive patients less prominent, definite, important, noteworthy, individuated, etc. Generally speaking, patients which are less individuated or represent ‘old information’ are more backgrounded, and may be formally encoded as such via the antipassive (Bittner 1987, Polinsky and Nedjalkov 1987). They are also frequently used when the patient is unknown or obvious. This type of antipassive can also signal that the patient was not entirely affected or the action was not complete (e.g., in Chamorro (Cooreman 1988b)), and may also be associated with particular tenses and aspects, typically the imperfective or habitual/iterative.

While some languages can antipassivize any type of verb with any class of patient and in any aspect, others have formalized to varying degrees the tendency for backgrounded patients to be less animate, definite, specific, or otherwise identifiable (Cooreman 1994:56), and do not have fully productive antipassivization. To formalize all of these tendencies, Givón (1984:162) presents two hierarchies, one for referentiality and one for topicality, which visually demonstrate that antipassives are more likely to appear as the patient becomes less referential/topical.

Referentiality: DEF-NP > INDEF-NP > NON-REF-NP

Topicality: more important/continuous topic > less important/continuous topic

If a language only has one type of antipassive, or if a language is not syntactically ergative, then we would expect it to have antipassives of the pragmatic type.

The second type of antipassive commonly discussed in the literature is one which serves primarily syntactic functions. These syntactic functions are what have been termed ‘pivot’ functions in syntactically ergative languages (e.g., Dixon 1979, 1994, Comrie 1989a). The idea of a ‘pivot’ comes from Dixon who uses it to describe the organization of syntactic elements,

either oriented to privilege or maintain the identity of S with A as opposed to O (a nominative-accusative system) or of S with O as opposed to A (an ergative-absolutive system). These are also the ‘foregrounding’ antipassives of Foley and Van Valin (1984, 1985), since they are primarily concerned with the grammatical status of the agent argument in the antipassive construction.

In languages exhibiting syntactic ergativity, there are syntactic rules and processes in which transitive objects and intransitive subjects (absolutive arguments) pattern together to the exclusion of transitive subjects (ergative arguments) (Polinsky in press(a)). Cross-linguistically, absolutive arguments are less marked than ergative arguments, both in terms of morphology and in terms of their ability to participate in various processes. Languages which are syntactically ergative often have restrictions on ergative arguments such that they cannot participate in processes such as relativization, questioning, clefting, coordination, subordination, focusing, topicalization, or co-referential NP deletion. One way of circumventing this restriction is by changing the relationship of the arguments to the verb in a way that allows the target (absolutive) argument to be clefted/relativized/coordinated/etc. Antipassives are often discussed as constructions employed for this exact purpose, since they have the effect of exchanging ergative agents for absolutive agents. Once an argument is in the absolutive, it is free to participate in structures which were previously inaccessible to it in the ergative. An example of this function of the antipassive is given in (2.3a-d) from Chukchi, where ergative agents (2.3c) must be realized as absolutive agents (2.3d) in order to be relativized.

Transitive:
 (2.3a) Ənpənačg-e milger kun-nin
 old.man-ERG gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ
 ‘The old man bought a gun’

Relativization of absolutive ‘gun’:
 (2.3b) [_____i ənpənačg-e kənnə-lʔ-ən] milger_i
 old.man-ERG buy-PTCP-ABS gun.ABS
 ‘The gun that a/the old man bought’

Impossible relativization of ergative ‘old man’:
 (2.3c) *[_____i milger kənnə-lʔ-ən] ənpənačg-ən_i
 gun.ABS buy-PTCP-ABS old.man-ABS
 Target: ‘The old man who bought the gun’

- Relativization of absolutive (antipassive) ‘old man’:
 (2.3d) [Məlgr-**epə** **ine**-kune-lʔ-ən] ənpənačg-**ən**
 gun-**ABL** **AP**-buy-PTCP-ABS old.man-**ABS**
 ‘The old man that bought a gun’ (Polinsky in press(a))

This use of the antipassive parallels aspects of the passive in some nominative-accusative languages (such as Javanese, cf. Keenan and Comrie 1977:70) which do not permit objects of transitive verbs to be relativized. Through passivization, the former transitive object is realized as the subject of an intransitive verb, which can then participate in a wider range of syntactic processes. However, Tsunoda (1988a:34) argues that despite the widespread attention to this syntactic function of the passive in the literature, this function has been overemphasized. He cites Heath (1976:211) in noticing that *bona fide* examples of the object-promoting function of the passive are hard to come by (mainly English, German, and some Malayo-Polynesian languages), and also that in these languages the passive is rarely used systematically in that function.

I make a case similar to Tsunoda’s here and in section 6.4.1 with respect to syntactic ergativity and the antipassive, that the syntactic function is generally overstated. First, most ergative languages are not syntactically ergative.⁶ Second, just as no language is ergative in every aspect of its morphology, syntactically ergative languages only exhibit syntactic ergativity in a handful of constructions. For example, Shipibo-Konibo (Panoan) exhibits syntactic ergativity in only one construction, internally-headed relative clauses (Valenzuela 2003). Third, in those few ergative syntactic environments in syntactically ergative languages, in about half the cases (see section 6.4.1), other, non-antipassive constructions are used to circumvent restrictions on ergative arguments. Finally, even in cases where an antipassive is used to circumvent syntactic restrictions on ergative arguments, often this process is not mandatory (or ‘systematic’, in the terminology used for the passive above). For example, English may use a passive or a gap when relativizing patient arguments:

⁶ While the impression has generally been that morphologically ergative languages well outnumber those which are both morphologically and syntactically ergative, Polinsky (in press(a)) has suggested that syntactic ergativity may be more widespread than previously thought. However, this was based on relativization in the 32 languages in the WALS sample for ergative-aligned case marking on full NPs (Comrie 2013a). My statement above is based on my sample, which contains 160 morphologically ergative languages, only 37 of which were also described as being syntactically ergative (see section 8.2.10).

Passive:

(2.4a) I saw the mailman [who was chased by the dog]

Object relative:

(2.4b) I saw the mailman_i [whom the dog chased ___i]

Relatedly, Cooreman (1988a) found that 48% of co-referential relationships in chained clauses in Dyirbal follow a nominative-accusative, not an ergative-absolutive pattern, which, contrary to Dixon's (1972) discussion, suggests that the use of antipassives for syntactic purposes is not mandatory/systematic throughout Dyirbal. See also the discussion of syntactic ergativity in Kaqchikel in Chapter 13.

Since the role antipassives play in syntactic ergativity is less frequent than one might expect from the literature, one might question the validity of the distinction between syntactic and pragmatic antipassives, and instead consider one type to be an extension of the other. This is initially supported by the observation that syntactic and pragmatic antipassives are morphologically identical cross-linguistically, with few exceptions.⁷ There are also some observed differences between pragmatic and syntactic uses of antipassives which shed light on this matter. The first difference harks back to the separation in function noted by Foley and Van Valin (1985), where general antipassives are concerned with the status of the patient, as opposed to syntactic antipassives which are more concerned with the grammatical role of the agent. This most likely causes the second difference, which is the fact that an oblique patient is very frequently present in syntactic antipassive constructions (since syntactic antipassives are substitutes for dyadic predicates), whereas the patient is free to be deleted with general antipassives (if it is licensed at all).

Cooreman (1994:75) also notes that for some languages (e.g., Dyirbal) which have multiple possible oblique markers for patients in antipassive constructions, it is often the case that fewer markers will be sanctioned with the syntactic antipassive than with the general antipassive. Additionally, it is often not the case that the syntactic antipassives carry the same aspectual associations as general antipassives, presumably because encoding that type of information is not their primary purpose. Lastly, as mentioned above, it is very common for

⁷ See the discussion of the oblique antipassive in Kaqchikel and related languages in Chapter 12, where I argue that an apparently recent innovation has taken place where the oblique-patient antipassive no longer appears outside of focus contexts.

languages to have an antipassive which performs pragmatic functions, but does not participate in syntactic ergativity. There are very few (possibly only one) language(s) where the reverse is true, that antipassives serve a syntactic function, but cannot also serve pragmatic functions outside of ergative syntactic contexts.⁸

Given these differences, Cooreman (1994:75) concludes that syntactic antipassives are most likely secondary developments and therefore do not contribute directly to understanding of the nature of basic antipassives. In this view, languages with syntactic ergativity have co-opted existing antipassive constructions to fill structural gaps caused by argument restrictions. This would explain most of the differences noted above, such as why aspectual associations pertaining to patient expression are generally not present, and why the oblique patient would be maintained. It would also explain the restricted distribution of syntactic antipassives with respect to pragmatic antipassives, and the morphological identity between the two types. Based on this evidence, the view that syntactic functions of antipassives are generally secondary developments and therefore do not constitute a second basic type of antipassive has been adopted here. As such, general discussions primarily involve pragmatic antipassives, and syntactic functions are discussed separately in sections 6.4 and 8.2.10.

2.2 DIACHRONIC PATHWAYS

Just as with other linguistic structures, antipassives can be created and lost as languages evolve over time. This section briefly looks at some known cases of diachronic pathways involving the development or loss of antipassives. Section 2.2.1 deals with the origins of antipassive markers and constructions, a topic which has recently received some attention (e.g., Dixon and Aikhenvald 2000:25, Sansò 2015, Auderset 2016). Section 2.2.2 then deals with the loss/reanalysis of antipassives, particularly those instances where reanalysis of an antipassive or an antipassive-type structure led a shift in alignment from ergative-absolutive to nominative-accusative.

⁸ The only example I am aware of a syntactic antipassive which cannot appear outside of certain syntactic contexts is Movima (p.c. Katharina Haude 2016). The truth of this statement also depends on one's view of the Philippine-type voice systems, which have sometimes been described as examples of syntactic ergativity, but which have no general unmarked transitive constructions (cf. Aldridge 2004).

2.2.1 DEVELOPMENT OF ANTIPASSIVES

Although many antipassive markers do not have transparent origins, Sansò (2015) identifies four different recurring sources of antipassive markers: agent nominalizations, action nominalizations, indefinite object markers, and reflexive/reciprocal markers. In many cases the antipassive continues to also perform these functions, and as such are discussed with respect to dedicated vs. plurifunctional antipassives elsewhere in this dissertation (namely sections 8.2.4 and 8.2.5). However, relevant examples are also discussed here to illustrate the various origins of antipassives. See also Sansò (2015) for more examples.

One particularly common origin of antipassives is middle/reflexive/reciprocal valency decreasing markers which get extended to also produce predicates with agentive and non-coreferential subjects. In such cases, the antipassive interpretation is often only accessible with a lexical subset of verbs, and sometimes only in cases where a middle/anticausative/reflexive/reciprocal reading is not possible. The use of a middle/reflexive morpheme in antipassive functions is well-documented in several genetically distinct language families and subgroups, including Slavic (Janic 2013) and Pama-Nyungan (e.g., Dixon (1972:90) on Dyirbal). Another example of a middle-type marker expanding into antipassive functions comes from the Bantu reciprocal morpheme *-an-*, which has an antipassive use in some languages but not in others (see Bostoen et al. 2015 for more details). The following example is from Kirundi, where the sentence can be read either as a reciprocal or as an antipassive when the subject is plural:

- (2.5) A-ba-nyéeshuúle ba-a-tuk-**an**-ye
AUGII-NPII-student SBJII-PST-insult-**RECP/AP**-PRF
'Students insulted each other'
'Students insulted (people)' (Ndayiragije 2003:186, glossing from Bostoen et al. 2015:735)

Another relatively common pathway for the development of antipassive markers is the transition of an indefinite, non-specific, or generic object marker into an antipassive marker, which themselves often evolved from independent lexical material like '(some)one'/'person' or '(some)thing'. In many languages the indefinite object marker/clitic is mutually exclusive with the overt expression of the patient (as in Athabaskan or Uto-Aztecan). This provides the opportunity for the predicate to be reanalyzed as intransitive with a voice marker instead of an

object marker. One clear case of an indefinite object marker becoming antipassive is Ainu, where the pronominal patient prefix *i-* is clearly intransitivizing, as shown by a change from A in (2.6a) (marked by *a-* in the first person singular) to S in (2.6b) (marked by *-an* in the first person singular).

(2.6a) Nea kamuy **a-ri** kor
 what bear LOG.A-skin when
 ‘When I skinned that bear...’

(2.6b) Cise or ta oka yan. **i-ri-an** wa or-o wa
 house place LOC exist.PL IMP.POL AP-skin-LOG.S and place-POSS and
 sini-an na
 rest-LOG.S FV
 ‘Please stay! I will skin (the catch) and enter (the house)’ (Bugueva 2016)

The difference between the indefinite object and the antipassive is sometimes hard to identify, particularly in languages which do not show the change from A to S overtly, and cases where the marker IS the object and therefore an overt patient NP cannot be expressed.

However, some of the more interesting pathways for the development of antipassive markers are those where antipassives appear to be related to verbalizing or valency-increasing morphology. The general pathway involves a causative marker or word (typically ‘do/make’) which turns nouns into intransitive verbs with agentive subjects. Causative elements may also be added to nominalized dyadic predicates to yield an antipassive-type meaning (e.g., ‘do shopping’, as proposed in Creissels 2012). There are an increasing number of languages which have been identified as having homophonous causative/verbalizer and antipassive morphemes, including Mocoví (Juárez and Álvarez 2016), Nivacle⁹ (Vidal and Payne 2016), Japhug (Jacques 2014), and Soninke (Creissels 2012). In Japhug, both antipassive morphemes (*sɣ-* and *rɣ-*) are homophonous with denominal prefixes which form either transitive or intransitive verbs from nouns.

⁹ Although see Campbell et al. (in preparation) for a different account of voice morphology in Nivacle.

Denominal forms:

- (2.7a) R γ -lo β ‘to build a nest’ (INTR) < lo β ‘nest’
R γ -t γ a ‘to measure by span’ (TR) < t γ a ‘handspan’
S γ -nd γ γ ‘to be poisonous’ (INTR) < (t γ)-nd γ γ ‘poison’
S γ -k^hu ‘to smoke’ (TR) < (t γ)-k^hu ‘smoke’ (Jacques 2014:15-16)

Antipassives:

- (2.7b) T γ -rza β nuu p γ γ -r γ - ϵ ph γ t
INDEF.POSS-wife DET IPFV.EVID-AP.NHUM-mend
‘The wife was mending (clothes)’
- (2.7c) T ϵ hi tu-tu-ste η u k γ -s γ -fstun
what IPFV-2-do.this.way NPST.be INF-AP.HUM-serve
‘How do you serve (your husband and the people from his family)?’ (Jacques 2012:215)

Jacques (2014:18-19) proposes that the antipassive developed from the denominal, beginning with the observation that some forms such as r γ - ϵ p^h γ t ‘to patch clothes’ could either be analyzed as the antipassive of the transitive ‘to patch’, or the denominal form of the bare action nominal ‘patch’. At some point there would have been a critical mass of these intransitive denominal forms such that the marker got reinterpreted as antipassive.

There are a few other examples of valency-increase being associated with antipassives. For example, in Mithun (2000:97-98) proposes that the antipassive markers *-(u)te-* and *-(g)i-* in Central Alaskan Yup’ik developed from the identical benefactive and malefactive applicatives, respectively. Although it is somewhat surprising that valency-increasing morphemes developed such that they held the opposite function as detransitivizers, because Yup’ik has categorical restrictions on certain types of verbs, it is possible to construct a pathway to derive an antipassive interpretation from benefactive and malefactive constructions.

Yup’ik has three transitivity classes for verbs: intransitive, transitive, and ambitransitive, which can take the inflection of either of the other two categories without any additional derivation. Unlike ambitransitives, root transitives cannot simply become intransitive by assuming intransitive inflection. Therefore, if a speaker wants to use an intransitive form for a transitive-only verb, one way to arrive at an intransitive given a transitive-only root is to use a benefactive or malefactive construction to derive an agentive ambitransitive. Once the stem is ambitransitive, an agentive intransitive verb can be derived simply by inflecting it intransitively. This is illustrated by the progression below:

<i>Transitive-only</i>	<i>Benefactive</i>	<i>Patientless intransitive</i>
ikayur- ‘to help’ →	ikayur-(u)te- ‘to help to the benefit of’ →	ikayur-(u)te-tu- ‘to help out’
		(based on Mithun 2000:96)

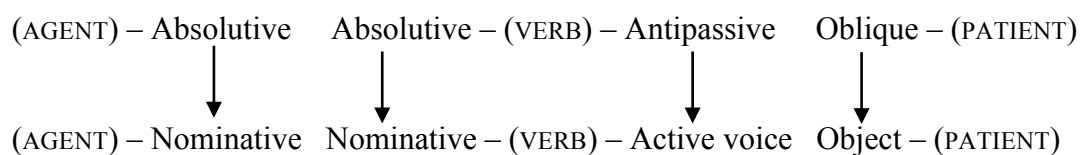
We then would have to assume that *-(u)te-* and *-(g)i-* got extended from their original benefactive/malefactive contexts to primarily mark the detransitivization which they were already being used for. Mithun (2000:96) notes that although there is possibly some evidence for the semantic associations of benefactive and malefactive for *-(u)te-* and *-(g)i-* respectively, the difference in modern usage has been lexicalized.¹⁰

2.2.2 ANTIPASSIVE REANALYSIS AND ALIGNMENT

There are a few cases where the reanalysis of the antipassive has been argued to have lead the shift from an ergative alignment system to a nominative-accusative one. This is the supposed opposite of the better-attested pathway for the development of ergativity via a reanalysis of the passive, which harkens back to the idea that antipassives are the ergative equivalent of passives (see section 2.1.1.1). Coghill (2016:25-28) describes three possible pathways for the shift from ergative-absolutive alignment to nominative-accusative alignment: 1. via the antipassive (she gives the example of Georgian, discussed further below); 2. via an analytical verb form involving an intransitive auxiliary (as in Lezgian, cf. Creissels 2008:25-28); and 3. via the reanalysis of topic copy pronouns as person indexing on the verb (as in the northern dialect of Tabassaran; see Harris and Campbell 1995:249-50). There are also cases where (at least the appearance of) split ergativity arises from complementation, where a matrix aspectual verb is accompanied by a possessed nominalized verb form (as argued in Coon 2010 for Ch’ol and Bricker 1981 for Yucatec). There are only a handful of known cases where the shift from ergative to accusative alignment is associated with the reanalysis and loss of an antipassive construction. The data on this topic come primarily from studies of ergative languages which have related languages or dialects which lost ergativity (e.g., Pama-Nyungan). This section outlines the proposed pathways of development in several languages, most of which are found in Australia.

¹⁰ Sansó (2015) notes that since *-(u)te* also has reciprocal uses, it is possible that the antipassive use developed from the better-attested reflexive/middle/reciprocal pathway than from the benefactive.

Although there are many individual differences in how changes progress through a given language, the proposed pathway by which antipassives lead the reanalysis of an ergative alignment system as nominative-accusative has several overarching characteristics. Generally speaking, the shift happens when antipassive constructions are exceedingly frequent, so much so that they compete with and eventually replace original transitive structures as the basic expression of a dyadic predicate. There are many different ways in which the antipassive can become frequent, including the extension of antipassive morphology to new domains for stylistic reasons (which can also happen during the shift), other reanalyses of antipassive or intransitive markers, or the use of syntactic structures which require an antipassive. The result is that the antipassive structure is reanalyzed as a basic transitive. Any oblique marking is then reanalyzed to mark accusative case and any verbal marking ceases to be detransitivizing or valency-decreasing. Verb agreement which was formerly considered absolutive is reinterpreted as a nominative. This transition is schematized below (although the elements could appear in any linear order).



Because the antipassive is often associated with incompletive aspect, the development of the antipassive into a transitive often applies first to the incompletive. This creates a tense/aspect-based split in alignment, where the imperfective exhibits nominative-accusative alignment while the perfective remains ergative.

However, although the diachronic pathway outlined above is attested, there are reasons to doubt that it is frequent, at least as far as it relates to the antipassive. As mentioned above, this pathway was conceived of as the opposite as the passive-to-ergative pathway for nominative-accusative languages. However, Givón (1994:32-37, 2001:167 (vol. 2)) states that the passive-to-ergative correspondence is “in urgent need of rethinking” since there is an incongruence between ergative arguments, which are highly topical, and the oblique agents of passive clauses, which are extremely non-topical. He proposes instead that pragmatically inverse clauses are the precursors to ergativity, where obviative (less topical) arguments become ergative. If this is indeed the case, there is not necessarily any reason to assume that antipassives would be

involved in the opposite (antipassive-to-accusative) pathway. While some antipassive-like structures do serve inverse functions (e.g., agent focus in Tsotsil, Aissen 1999), antipassives in general amplify the respective discourse prominences of the agent and the patient, as opposed to reversing them, as schematized by Dixon and Aikhenvald (2000:84) below.

Voice	Relative Topicality		
Active/direct	AGT	>	PAT
Inverse	AGT	<	PAT
Passive	AGT	<<	PAT
Antipassive	AGT	>>	PAT

Also, as Givón (2001:167) pointed out for passives, most antipassives lack overt patients. Patientless antipassives do not express the same proposition as a transitive predicate, and therefore cannot take over as the primary means for expressing a dyadic event. Secondly, as discussed in section 8.2.10, many of the antipassive constructions in the dataset which allow the patient to be expressed in an oblique phrase also have syntactic uses. These syntactic uses are defined by an opposition between the antipassive form for the questioning, clefting, relativizing, etc. of ergative arguments and a transitive form for the questioning, clefting, relativizing, etc. of absolutive arguments. It would seem that such a system would reinforce the functional division between transitive and antipassive constructions. Relatedly, if it were to be the case that an antipassive became the generalized transitive construction in a language where it actively participated in syntactic ergativity, we might predict that the language would also cease to be syntactically ergative.

Finally, there is no immediately apparent reason why the antipassive-to-accusative pathway would be particular to antipassives, structurally or semantically. As discussed in section 1.2, the antipassive is just one of a set of different structures languages use to express dyadic propositions, equivalent to transitive sentences. It is fairly easy to imagine how any dyadic pattern could be exchanged diachronically for any other dyadic pattern with the same thematic roles. Indeed, this appears to be the case given the known cases which have been claimed to exemplify this pathway. Most of the cases involve changes in case patterns, and only two (Inuktitut and Georgian) involve any type of verbal voice marking. An overview of several languages which are undergoing or which have undergone the types of changes described above are discussed in the following section.

2.2.2.1 CASE STUDIES

Perhaps the most illustrative case demonstrating the antipassive-to-accusative pathway comes from Georgian (Kartvelian). Georgian is different from the other cases discussed here in that it has historical documentation which provides evidence of the change over time. The argument-indexing system in modern Georgian is roughly active-inactive and involves three series based on tense/aspect/mood, outlined in the table below, adapted from Harris (2008:58). The narrative case also appears in some descriptions as the ‘ergative’ case.

TABLE 2.1. Case patterns in modern Georgian

	O	Inactive S	Active S	A
Series I	Dative	Nominative	Nominative	Nominative
Series II	Nominative	Nominative	Narrative	Narrative
Series III	Nominative	Nominative	Dative	Dative

Historically, Pre-Common Kartvelian was morphologically ergative, such that all intransitives took what are termed ‘nominative’ (historically absolutive) forms in Table 2.1, as did transitive objects, and only transitive subjects took ‘narrative’ (historically ergative) case (Harris 2008:59-60). At some subsequent point the language developed a productive antipassive construction which was an object demotion strategy associated with imperfective aspect (Campbell and Harris 1995:245). The two patterns, formerly ergative transitive and antipassive, are illustrated by the examples in (2.8a-b) below, with glossing which reflects that point in time.

(2.8a) Deda-**m** p'erang-i garecxa
 mother-**ERG** shirt-**ABS** washed
 ‘Mother washed the shirt’

(2.8b) Deda p'erang-**s** **recxavs**
 mother.**ABS** shirt-**DAT** washes.**AP**
 ‘Mother is washing the shirt’ (Campbell and Harris 1995:245)

However, when the ergative transitive pattern transitioned into an active pattern, it prompted the antipassive construction to be reanalyzed as a non-voice-related imperfective transitive (Harris 2008:61). The imperfective preserves the case marking of the antipassive as well as the verbal morphology, although it is no longer indicating voice. This reflects the modern state of affairs, where the former antipassive is now Series I in Table 2.1, and the active-inactive

system is Series II. The development of a distinction between these two series and Series III (the evidential) was a later development (Harris 2008:63).

While the reanalysis of an antipassive construction as transitive has already happened in Georgian, a similar change is currently underway in Inuktitut, which is visible in the differences between eastern vs. western dialects. While this is a synchronic as opposed to a diachronic look at antipassivization, and the complete range of structures is not exemplified (i.e., there is no dialect of Inuktitut which completely lacks the ergative transitive pattern), it nicely demonstrates some of the mechanics of the progression of the pathway. According to Johns (2006), in western dialects of Inuktitut, the ergative pattern is the unmarked choice for expressing a dyadic proposition and the antipassive is somewhat marked. However, in eastern dialects, the antipassive is much less marked. The overt consequences for the proliferation of the antipassive in eastern dialects are namely that names can be patients of antipassives in eastern dialects, while they are prohibited as antipassive patients in western dialects.

Western dialects (Iñupiaq):

(2.9a) *John tautuk-tuq Mary-mik
John.ABS see-3.S Mary-INST
'John sees Mary'

Eastern dialects:

(2.9b) Margarita Kuinatsa-i-juk Ritsati-mik
Margarita.ABS tickle-AP-3.S Richard-INST
'Margarita is tickling Richard' (Johns 2006:295)

Additionally, Johns argues that the case marker for the patient in the antipassive construction indicates a more accusative-like agreement relationship in eastern varieties, since the patient does not necessarily receive a partitive interpretation, and the case marker for the patient cannot be used to mark the instrumental. As such, the continuum of Inuktitut varieties from West to East represent in current time different points on the antipassive-to-accusative pathway, where western dialects have an opposition between ergative and antipassive, while eastern dialects have less-marked antipassive constructions which have more features of transitive clauses.¹¹

¹¹ Although the antipassive construction in these languages has been treated as an antipassive throughout this dissertation, Johns (2006:295) states that a number of linguists have concluded that the theme argument of the antipassive is in fact an object argument and not an oblique

There are a number of languages in Australia which have also been discussed as cases illustrating the antipassive-to-accusative pathway. Although some of these structures would not qualify as antipassives by some stricter, but oft-cited definitions (primarily Dixon 1994), they do demonstrate a change in case marking patterns from absolutive/dative to nominative/accusative with a concomitant loss of ergativity. One of the better-known cases of this type of diachronic change comes from Lardil, a Tangkic language of Australia. The facts given here for Lardil come from Klokeid (1978), in which he discusses the loss of ergativity in a few of the Pama-Nyungan languages (which he considers to include Tangkic). His discussion is a response to Hale's (1970) observation that most of the Pama-Nyungan languages are predominantly ergative and lack passives, while only a few are primarily nominative-accusative and have passives. Hale argued that the ancestor of these languages was originally nominative-accusative, which is preserved in a few languages such as those of Wellesley Island (of which Lardil is one). Other languages reanalyzed their passive constructions as transitives, which explains the lack of passive constructions in the modern ergative Pama-Nyungan languages. However, Klokeid takes the opposite approach and argues for an ergative proto-language where a re-evaluation involving an absolutive-dative pattern (the 'antipassive') led to nominative-accusative alignment in a few languages (termed the "Ancestral Ergative Hypothesis" (1978:599)). He bases this on data primarily from Lardil involving fossilized patterns and passive constructions, as well as some data from Yukulta.

The following example (2.10) demonstrates modern Lardil active verb structure. The glossing is meant to implicate both analyses. The *-ntha* morpheme (with allomorphs *-n* and *-in*), which now marks accusative case in Lardil, is cognate with the Yukulta *-intha* dative case morpheme.

(2.10) Bidngen kurri marun-in
 woman.ABS/NOM see boy-ACC/DAT
 'The woman sees the boy' (Richards 2013:44)

This structure can be compared with absolutive-oblique (antipassive) structures in some other ergative Pama-Nyungan languages, which have contrasting transitive structures. For example,

argument. In that case, the shift from 'antipassive' to accusative in Inuktitut looks more like the other cases discussed here where the transitive is replaced by another, not necessarily antipassive, dyadic structure.

Yukulta has a detransitivized absolutive-oblique construction which alternates with the transitive, which appears primarily when the clause is negative, irrealis, or when the underlying O outranks the underlying A on a hierarchy of person and number.

- Yukulta transitive:
- (2.11a) Kuṅul-i-Ø-kanta pa:t^ya
 mosquito-ERG-3SG.ACC-TR.PST bite.IND
 ‘A mosquito bit him’
- Yukulta ‘antipassives’:
- (2.11b) Kuṅul-ta-**tu**-yiṅka pa:t^ya
 mosquito-ABS-1SG.OBL-PST bite.IND
 ‘A mosquito bit me’ (Keen 1983:234)
- (2.11c) Kawata-kati makurara-**ṅta**
 cook.DES-1SG.PRS wallaby-DAT
 ‘I’d like to cook a wallaby’ (in a ground oven, said wistfully by an old lady) (Keen 1983:239)

The following stages are proposed in the diachronic trajectory of Lardil alignment: first, assume that there was an ancestral language for Pama-Nyungan which had ergative verb alignment, where transitive subjects were marked differently from intransitive subjects and transitive objects. In the next stage, many languages develop a process of detransitivization (‘antipassivization’ in Keen, also termed “3-2 revaluation” in Klokeid) which generates intransitive predicates with absolutive-marked agents and dative/oblique-marked patients. The examples from Yukulta above represent this stage. The final stage involved the extension of the absolutive-dative pattern to affect all patients. This led to the disappearance of the original ergative transitive structure, and coincided with the absolutive-dative pattern being reanalyzed as a transitive, nominative-accusative construction. This final stage therefore created the difference in alignment between the other modern Pama-Nyungan languages and Lardil (Klokeid 1978:600).

These stages of evolution of an ergative system in Pama-Nyungan to a nominative-accusative system in Lardil (in contrast to the opposite proposal by Hale) are supported by evidence of relics of more ergative-like structures in the language. For example, cases where the patient does not bear the *-ntha* dative marking can be found in Lardil in imperatives with 3rd person singular objects. Klokeid (1978:606) takes this to be evidence that these forms are a

remnant of a time before the absolutive-dative pattern was completely generalized and eclipsed all former ergative transitive structures.

- (2.12) (Nyingki) ratha **karnjin!**
 2SG.ABS spear wallaby.ABS
 ‘Spear the wallaby!’ (Klokeid 1978:606)

There is also evidence which suggests that the passive was not original in Lardil, and therefore would not have existed early enough to have led to the evolution of ergativity in the other languages. Klokeid claims that Lardil extended an older reflexive to create the passive, which indicates that it is a relatively recent innovation (1978:604-605).

Klokeid (1978) (taken up also by Dixon (1980:475)) proposes that this chain of events in Lardil was motivated by a phonological change which eroded the ergative marker, reducing the distinction between the ergative transitive and the absolutive-dative structures. However, Evans (1995:447-448) argues against a phonological motivation (and also McConvell’s (1981) proposed auxiliary motivation), and suggests that the fact that pronominal subjects and objects appear not to have been distinguished in Proto-Tangkic would have supported the expansion of any construction in which subjects and objects were distinct.

A very similar set of changes appears to have taken place in the Ngayarda languages (subgroup within Pama-Nyungan). Dench (1982) argues that Proto-Ngayarda was ergative, and that in several languages an intransitive absolutive-dative pattern became generalized as the primary means of expressing two-argument actions, such that it eclipsed the ergative transitive pattern. The absolutive-dative pattern was subsequently reanalyzed as a transitive construction with nominative-accusative marking. The original ergative pattern is exemplified by Nyamal in (2.13a-2.13b) below, while the innovative nominative-accusative pattern is shown in (2.14a-2.14b) in Ngarluma.

- Nyamal (ergative-absolutive):
- (2.13a) Ngajuku yukurru yurla-ngka nyini-yampa
 1.GEN.ABS dog.ABS camp-LOC sit-PRS
 ‘My dog is sitting in camp’
- (2.13b) Ngajuku-**lu** yukurru-**lu** jurru nyanyja-rna
 1.GEN-ERG dog-ERG snake.ABS bite-PST
 ‘My dog bit the snake’

- Ngarluma (nominative-accusative):
- (2.14a) Maru parni-ku mayaka
 many.NOM sit-PRS man.NOM
 ‘Many men are sitting’
- (2.14b) Yukurru thartaji-rna kuju-yi
 dog.NOM bury-PST bone-ACC
 ‘The dog buried the bone’ (Dench 1982:45-46)

However, unlike the explanation Klokeid gave for the change in Lardil, Dench (1982:53-54) suggests that this shift was facilitated by nominative as opposed to ergative syntax in Proto-Ngayarda, such that a switch to nominative-accusative morphology matches the alignment in the syntax. This cannot be a universal motivation, since there are a number of morphologically but not syntactically ergative languages in the dataset which have productive antipassives that allow the patient to be expressed in an oblique phrase, but do not show signs of shifting their verb alignment.¹² One might speculate that the semantic motivations which govern the frequency of the antipassive with respect to the ergative transitive construction are different, such that in some languages the antipassive is frequent enough to compete while in others it is not.

As a final case study, a similar type of absolutive-dative to nominative-accusative pathway also appears in at least one language in the Americas. Trumai is a linguistic isolate spoken in Brazil which has been described primarily in Guirardello (1999). The language is both morphologically and syntactically ergative, although Guirardello-Damian (2010:231-2) argues that this is a relatively recent innovation, given the uniformity of the ergative system. This is especially interesting considering that the language is also showing signs of moving toward nominative-accusative structures.

Although Trumai does not have an antipassive by the criteria used in this dissertation, it does exhibit what appears to be an incipient change where an absolutive-dative case pattern is gaining some ground over the ergative transitive pattern. The absolutive-dative case is described as an “intransitive with two positions” (Guirardello-Damian 2010:210). It involves one unmarked argument (or marked by null absolutive case) and another which takes the dative. However, these constructions are syntactically transitive and cannot occur without their dative-marked patients. They also lack a corresponding transitive structure with a non-dative patient.

¹² Examples include Chuj, Chamorro, Guatuso, and Kuku Yalanji. See sections 6.4 and 8.2.10 for a discussion of antipassive-type structures and syntactic ergativity.

Additionally, this case marking pattern is lexically determined, and is associated with one class of verbs which have the following semantic characteristics: verbs of perception (e.g., see, listen), mental activity (e.g., think, believe, like), contact (e.g., grab, step on), or habitual events with semi-predictable patients (e.g., cook, drink, hunt, fish) (Guirardello-Damian 2010:211). These verbs can only take an absolutive-dative case marking pattern, which has resulted in some interesting pairs of verbs and structures like those in (2.15a) and (2.15b), where different verb roots appear in transitive vs. absolutive-dative patterns.

(2.15a) Kasoro-**k** ha tako
 dog-**ERG** 1.**ABS** bite
 ‘The dog bit me’

(2.15b) Kasoro make hai-**tl**
 dog.**ABS** bite 1-**DAT**
 ‘The dog bit me’ (Guirardello-Damian 2010:215)

There are a number of events such as ‘bite’ above which can be expressed by two different verbs—one which takes the ergative-absolutive case marking pattern, and one unrelated verb with identical or nearly identical meaning but which belongs to the class which requires absolutive-dative case marking. The semantic overlap between the two verbs with their associated case patterns allows for one of the two forms to fall out of use in favor of the other. It is apparently the case that the verbs and structures like that in (2.15a) are being gradually lost in favor of the absolutive/dative verbs and structures like that in (2.15b) (Guirardello-Damian 2010:230). If this pattern were to dominate to the point that it entirely eclipses the transitive ergative pattern, then it seems likely that the absolutive marker would inevitably be reanalyzed as nominative and the dative would be interpreted as also marking the accusative case. So although Trumai may not have a classic antipassive, here we see that similar structures have the potential to undergo the same reinterpretation which likewise leads to nominative-accusativity.

2.3 SUMMARY

Section 2.1 provided a basic overview of antipassivization, and outlined some claims from the literature with regard to passivization, verb alignment, and types of antipassives. I took the position that antipassives are not the mirror-image of passives, and also that syntactic

antipassives are almost always functional extensions of existing antipassive constructions with pragmatic uses, which have been grammaticalized in agent-foregrounding functions.

Additionally, although not much is currently known about the evolution of antipassive markers, section 2.2 discussed attested diachronic pathways involving the origins of antipassive markers, as well as the means by which antipassive constructions get reanalyzed in the grammars of various languages. Since there are few examples of the loss of prototypical antipassives (e.g., Georgian), this section also looked at the evolution of antipassive(-type) structures which lack verbal marking in languages such as Trumai (Brazil), Lardil (Australia), and several Ngayarda languages (Australia).

CHAPTER 3. EXAMINING ANTIPASSIVE DEFINITIONS

Many scholars share a concern in restricting the domain of voice in a such a way as to only include structures which can be meaningfully compared (Shibatani 1988:3, Cooreman 1994, Dixon 1994, Fleck 2006). Concern here is with the term ‘antipassive’, which has been used variously to describe any dyadic verbal construction with a peripheral, non-core, non-individuated, or absent patient. For example, Foley and Van Valin (1984, 1985) include in their discussions of antipassives a wide array of structures in a variety of languages, including English conatives (e.g., he hit *at* the ball vs. he hit the ball), English so-called noun incorporation (e.g., he bird-watches), Philippine-type agent voice constructions, and Mayan agent focus, all of which are not widely regarded as being instances of antipassivization. The antipassive at its core is a voice operation which causes a decrease in valency by putting A¹³ arguments in S forms and functions, and peripheralizing (marking as oblique) or eliminating patients. Since all the structures mentioned above (the conative, noun incorporation, agent focus, and Philippine-type voice) share what could be considered an oblique (or incorporated) patient, one series of questions is, how important is it that antipassive is a ‘voice’, that it is formally intransitive, and that it is mutually exclusive with other named structures?

These kinds of questions arise when one compares the different definitions of antipassive which have been proposed, both in terms of structural requirements and also in terms of function, as both affect which languages have constructions which fit into the antipassive category. Also, if it is accepted that syntactic and pragmatic antipassives are different from one another in significant ways (which is not a view I adopt here), then the core definition of ‘antipassive’ might lean more towards either the general type of antipassives which serve discourse/pragmatic functions, or to those with primarily syntactic functions. In this chapter I look at existing definitions of ‘antipassive’ which have been given in the literature, and at how they differ in terms of which structures they encompass. I then discuss in section 3.2 why it is difficult to rigidly adopt any of the proposed diagnostic structural criteria for antipassives. Finally, given these considerations, I explain in section 3.3 the criteria for the identification of antipassives which I have adopted for use in this dissertation.

¹³ A refers the agentive argument of a transitive verb, S to the only argument of an intransitive verb, and O to the patientive/theme argument of a transitive verb, per Dixon (1979).

3.1 DEFINITIONS

Before it is possible to discuss a working definition for ‘antipassive’, it is important to review of some of the proposals which have already been put forth, and to examine how they differ from each other. Some of the major definitions from the literature are listed below in alphabetical order.

Baker (1988:174): “Descriptively, this construction [‘antipassive’] has been characterized as one in which a morpheme is added to a transitive verb, such that the verb is made intransitive, with its thematic direct object appearing as an oblique phrase instead of as a surface direct object.”

Comrie (1989b:42): “In the antipassive voice, a lexically transitive predicate shows up as intransitive, with the agent as the only argument required by the valency of the verb (although the patient may also appear, in an oblique case).”

Cooreman (1994:50): “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 the O in an ergative clause are marked as ergative and absolutive respectively, the A in an antipassive is typically coded as an absolutive NP, and the O (if present) appears in a case other than the absolutive. The verb phrase may or may not be explicitly marked as intransitive.”

Dixon (1994:146): “*Antipassive*

- (a) applies to an underlyingly transitive clause and forms a derived intransitive;
- (b) the underlying A NP becomes S of the antipassive;
- (c) the underlying O NP goes into a peripheral function, being marked by a non-core case, preposition, etc.; this NP can be omitted, although there is always the option of including it;
- (d) there is some explicit formal marking of an antipassive construction (same preference and possibilities as for passive) [generally, by a verbal affix or else by a periphrastic element in the verb phrase].”

Foley and Van Valin (1984:172): “The verb in an antipassive construction is intransitive so the A is case marked as an S, in the absolutive case. As with backgrounding passives, languages have a range of backgrounding antipassive constructions. The most typical construction is that in which the undergoer is suppressed entirely and removed from the clause. This again parallels the widespread actorless backgrounding passive construction.”

Givón (1984:161): “First, the object in the NP construction is not coded by the normal (unmarked) *absolutive* case-marker characteristic of the ergative construction, but rather by an *oblique/indirect object* marker, most commonly a marked pre- or post-position. In that sense, to begin with, the AP-clause [antipassive-clause] ‘does not have a direct object’, and thus displays one major characteristic of an intransitive clause. Second, most commonly as a result, the agent/subject loses its ergative case-marking, and reverts to the *absolutive* (unmarked) case.”

Palmer (1994:178) “The antipassive is formed, then, by (i) marking on the verb, (ii) promotion of the Agent-Ergative to Absolutive and (iii) demotion of the Patient-Absolutive to an oblique relation, especially Dative, Locative, and Instrumental.”

Polinsky (in press(b):1): “‘Antipassives’ are constructions in which the logical object of a transitive (two-place) predicate is not realized as a direct object, but instead appears as a non-core argument or [is] left unexpressed (but presupposed). The morphological realization of the antipassive is more varied than is usually assumed; in particular, pseudo noun incorporation, true noun incorporation, and bi-absolutive constructions can instantiate the antipassive.”

Shibatani (1988:5): “the antipassive voice denies grammatical prominence to the patient nominal by either encoding it as an oblique constituent or not syntactically encoding it at all. (Recall the treatment of the agent nominal in the passive construction.) A typical consequence of the antipassive construction is the promotion of the agent to the most grammatically prominent constituent.”

Song (2001:184): “In the antipassive the A of the active clause appears as S, marked by the absolutive case, with the P[atient] of the basic transitive clause demoted to peripheral status. Moreover, just as the adjunct (agent) phrase is optionally or obligatorily eliminated from the passive clause, the demoted P of the basic transitive clause in the antipassive can be optionally omitted or must be suppressed completely from the clause. When present in the antipassive, however, the demoted P of the active clause is accordingly marked by a non-core or oblique case. This suggests that the antipassive is as much intransitive or detransitivized as is the passive.”

Tsunoda (1988b:629): “Antipassive prototype:

- a. the A is realized as the d-S [derived S];
- b. the O is realized as the OBL, or is not realized at all;
- c. the patient is backgrounded, and;
- d. the clause shows a lower degree of transitivity than the corresponding Vtr [transitive verb] in terms of affectedness.”

First, notice that the definitions themselves are quite varied, despite all of them being based primarily on structural characteristics. Given the range of definitions, it is immediately clear why there is such a range of structures which have been labeled ‘antipassive’ by different scholars. Several of these definitions describe an antipassive as any detransitivized structure which demotes or deletes the patient (e.g., Polinsky, Cooreman, Givón, Foley and Van Valin, Song, Comrie), which, as Polinsky points out, would result in the inclusion also of a host of other structures such as object omission, etc. subsumed under that definition. In contrast, Dixon, Baker, and Palmer provide narrower definitions, requiring not only an overt antipassive marker but also requiring that the patient have the ability to appear in an oblique phrase. These definitions exclude many constructions allowed by the other definitions, most notably those

where there is obvious detransitivization and an antipassive marker, but the patient cannot be expressed as an oblique. Some authors also include ergativity or ergative/absolute case marking as part of the definition (Cooreman, Givón, Palmer, Song), which is problematic if one does not want to a priori limit the discussion of antipassives to ergative languages. In fact, if the unified definition of ‘antipassive’ were to be only those elements which are shared across all of the above definitions, there would be very little to compare: all assume a relationship with a dyadic or two-place predicate, and that the construction differs in some systematic way from that two-place predicate. I think most would consider such a definition too broad to be useful. However, as discussed in section 3.2 below, the inclusion of various other structural criteria can cause issues in terms of the marking and what that marking indicates.

3.2 PROBLEMS: CAN THERE BE A UNIFIED DEFINITION OF ‘ANTIPASSIVE’?

Even if noun incorporation, object omission, and other constructions mentioned in Polinsky (in press(b)) are excluded, there is still an astonishing amount of structural variation observable within the realm of antipassive and antipassive-like constructions which challenges the basic tenants of many of the above definitions. The basic structural elements mentioned across the definitions above as central to the concept of ‘antipassive’ include:

- 1) That there exists a corresponding (generally more basic) transitive structure which alternates with the antipassive;
- 2) A (visible) change from A to S;
- 3) There is some sort of overt marker, typically verbal, which marks the construction;
- 4) The semantic patient may (or must be able to) appear in an oblique phrase, when it is expressed.

The first problem arises with (2), change from A to S. If it is a requirement that the change from A to S be visible morphologically in terms of case marking or agreement (cf. Song, Palmer, Givón), this requirement can only be a diagnostic for antipassives in a language that has ergative case marking or agreement, since A and S are marked identically in nominative-accusative languages. While it is perhaps more difficult to demonstrate a change from A to S in a nominative-accusative language, and this has certainly hindered the identification of antipassives in nominative-accusative languages in the past, there is no independent motivation for proposing criteria which de facto eliminate non-ergative languages from consideration.

In fact, requiring a change from A to S is also potentially contentious even in ergative languages. Since transitivity is not an all-or-nothing proposition, it is possible for languages to have a structure indicating reduced transitivity that does not necessarily result in an intransitive construction. Although some would not consider such constructions to be antipassives, they have been treated as such in others' accounts. A well-known example of such a structure comes from Warlpiri:¹⁴

(3.1a) Ngarrka-**ngku** ka marlu luwa-rni
 man-ERG PRS.IPFV kangaroo shoot-NPST
 'The man is shooting the kangaroo'

(3.1b) Ngarrka-**ngku** ka-rla-jinta marlu-**ku** luwa-rni
 man-ERG PRS.IMPF-3.DAT-3.DAT kangaroo-DAT shoot-NPST
 'The man is shooting at the kangaroo' (Hale et al. 1995:143, cited in Legate 2006:170)

These Warlpiri constructions bear other hallmarks of the antipassive, such as the oblique-marked patient and an incomplete, unachieved, or partially achieved action. So while the sentence is not necessarily transitive, since the object bears dative marking, it is also not intransitive, since the agent is still marked with the ergative case.

The third criterion for antipassive from above was that there be some sort of mark which can be called an 'antipassive marker' which is separate from case marking, agreement or other strategies for argument-indexing. Of the definitions found in the existing literature, only those of Dixon and Palmer require some sort of overt antipassive marker. It is possible to consider constructions which lack a voice marker to be antipassives, but in that case it becomes harder to call the antipassive a single, unified phenomenon. If one does not require antipassives to have

¹⁴ Legate refers to this as the 'conative' construction in Warlpiri. Similar examples can be found in Hale (1973:336), cited in Palmer (1994:190):

(3.1a) Njuntulu-**!u** npa-tju pantu-**nu** **natju**
 you-ERG 2-1 spear-PST me
 'You speared me'

(3.1b) Njuntulu-**!u** npa-tju-**!a** pantu-**nu** **natju-ku**
 you-ERG 2-1-CLT spear-PST me-DAT
 'You speared at me/tried to spear me'

overt verbal marking, then any detransitivized structure could be considered an antipassive, including the following English sequence:

(3.2) *Transitive* *Conative/Antipassive* *Intransitive/Antipassive*
 James shoots the quail → James shoots at the quail → James shoots (habitually)

Just in terms of the semantics, the English conative and intransitive would be difficult to distinguish from an antipassive. In fact, some have argued that the English conative IS an antipassive (e.g., Foley and Van Valin 1985). However, I take the position that such a definition is too broad to be useful, in that it includes structures too disparate to be meaningfully compared.

Also included under a definition which does not require voice morphology are verbs which may appear unmodified in either a transitive or an intransitive frame (typically indicated by case/agreement patterns), also known as A=S ambitransitivity, which is very common cross-linguistically. Although ambitransitives have occasionally been considered instances of ‘antipassive’ in languages with more morphology (e.g., Dixon 1981 on Warrgamay), this is generally not the case for languages with less morphology (e.g., English *I ate* (generally, no specified object) vs. *I ate pudding*). However, the existence of both antipassives and ambitransitive patterns in the same language suggest they are different phenomena. For example, Central Alaskan Yup’ik has separate processes of intransitivization and antipassivization (sometimes also analyzed in Eskimo-Aleut as an ‘optional’ antipassive marker, see section 8.2.1), which indicates that they are not necessarily equivalent. Central Alaskan Yup’ik has two antipassive morphemes, *-(u)te* and *-(g)i*, one example of which is given in (3.3a). However, it is also possible simply to make ambitransitive verbs intransitive by using the root in an intransitive frame, as demonstrated by *kiturlria* ‘passed by’ in (3.3c) below.

Antipassive:
 (3.3a) Camiliini tuai maurluq-ka ulligte-**i**-naur-tu-q
 sometimes and grandmother-1SG>3SG cut.fish-AP-HABIT-INDIC.INTR-3SG

 luqruuyag-nek
 pike-PL.ABL
 ‘And sometimes my grandmother would cut up pike...’ (Mithun 2000:97)

Transitive (ambitransitive root):

- (3.3b) Ayag-inaner-ani=am una nasaur-lur-yagar kitur-**ke-ii**
leave-PST.CONTEMP-3SG=EMPH this girl-little pass-PTCP.TR-3SG/3SG
'As he was going, he passed a little girl'

Intransitive (ambitransitive root):

- (3.3c) Una mikelnguq kitur-**lria**
this child pass-PTCP.INTR.3SG
'A child passed by' (Mithun 2000:94)

The opposite of A=S ambitransitivity, where a verb may appear as either transitive or intransitive without additional marking, is equipollence, where both the transitive construction and the intransitive construction have either voice or transitivity marking, such that there is no clear way in which the two patterns are directly related to each other (which is a requirement of Baker's and Dixon's definitions, and possibly Song's and Palmer's as well, where underlying transitives are made intransitive, i.e., a voice relationship). As with ambitransitives, the existence of both antipassives and these equipollent patterns in the same language suggests they are different phenomena. In addition to the antipassive exemplified in (3.4a), Matses (Panoan) also has two other constructions which remove the patient. The first is an example of patient omission, where the valency of the verb does not change, but the object is unrepresented, equivalent to the 3rd person anaphoric pronoun, which is zero. This construction can produce the same effect as the indefinite/unspecified object interpretation of the antipassive, although the patient to which the null pronoun refers is recoverable, as shown in (3.4d). The second avenue for intransitivization is lexical, as Matses has sets of transitive/intransitive pairs of verb forms, where some of the intransitives have agentive subjects. The transitive forms end in *ka* and alternate with intransitive forms which end in *ke* (3.4b-c), which constitute equipollent transitive/intransitive pairs.

Antipassive:

- (3.4a) Aid opa-Ø pe-**an-e-k**
that.one dog-ABS bite-AP-NPST-INDIC
'That dog bites' (Fleck 2006:559)

Transitive (equipollent):

- (3.4b) Debi-n chuşh**ka**-o-şh
Davy-ERG reprimand.TR-PST-3
'Davy reprimanded/was reprimanding him'

- Intransitive (equipollent):
 (3.4c) Debi-Ø çuʃhke-o-ʃh
 Davy-ABS reprimand/complain.INTR-PST-3
 ‘Davy was reprimanding’
 ‘Davy complained/was complaining’ (Fleck 2006:561-562)

- Patient omission:
 (3.4d) Adekbidi poshti-bi-mbo-en-bi-di
 likewise.INTR woolly.monkey-like-AUG-MANNER.TR-EMPH-same

çhëʃhëid-n inkuente-n¹⁵ (Ø) bed-e-k
 spider.monkey-ERG tail-INST 3.ABS grab-NPST-INDIC
 ‘In the same manner as woolly monkeys, spider monkeys also grab [things] with their tails’

In addition, examples of languages have occasionally been cited where it is not clear that the structure termed ‘antipassive’ actually has a corresponding transitive construction. For example, some Austronesian languages have two opposing structures, ‘agent voice’ and ‘patient voice’. While there are differences in what is discussed as the ‘Philippine-type’ voice system across languages, a hallmark of the system is that there is no consistently unmarked transitive structure; agent voice and patient voice are patterns which exist in opposition to each other, and the transitivity status of both is unclear. So although some have claimed that agent voice in these languages is an antipassive and patient voice is transitive (e.g., Aldridge 2004), agent voice is not more ‘basic’ than patient voice, nor is there a corresponding transitive structure which does not highlight an argument. This lack of a pragmatically neutral transitive structure constitutes a fundamental difference from languages with more prototypical antipassive-type structures.

A similar argument has also been made by Otsuka (2011) with regard to ergativity and antipassive in eastern Polynesian languages. She demonstrates that the so-called ‘antipassive’ pattern is relegated to a subset of verbs which take only that marking pattern, and therefore are not necessarily derivations from underlying transitive structures. These verbs include verbs of emotion and perception, as well as ‘wait’, ‘follow’, ‘visit’, ‘speak’, ‘arrive’, and ‘call’. Examples of the transitive and so-called ‘antipassive’ in Tongan are given in (3.5a) and (3.5b).

¹⁵ In Matses, the ergative is homophonous with both the instrumental and the genitive for full noun phrases (Fleck 2006:543). This is not problematic or unexpected given that this type of homophony is common cross-linguistically.

(3.5a) Na'e sio 'a e tamasi'i ki he 'akau
 PST see ABS REF boy.DEF to REF tree
 'The boy saw a tree'

(3.5b) 'oku sai'ia 'a e tamasi'i 'i he mango
 PST like ABS REF boy.DEF in REF mango
 'The boy likes mangoes' (Otsuka 2011:269)

As a final point with respect to marking, it is very common across languages for antipassive markers to have other functions in addition to the antipassive. As discussed further in sections 8.2.4 and 8.2.5, most antipassive markers are not dedicated only to the antipassive construction. They might also mark other valency-decreasing processes such as reflexives (as in some Pama-Nyungan languages such as Dyirbal) middles (as in Cariban languages), and even anticausative (as in K'ichee') or passive functions (as in Humburi Senni (Heath 2014:281)). The antipassive might also be used to indicate aspect, without a decrease in valency (as in Bezhta (Comrie et al. 2015:552)). Given these disparate additional uses for antipassive morphemes, positively identifying a morpheme as 'antipassive' depends on whether the definition allows the antipassive to have other uses as well (note that none of the definitions discussed here mention the possibility of multiple functions for a single construction).

The final structural parameter shared by the various definitions for antipassive involves marking the patient as an oblique argument (number four above). Of the eleven definitions cited above, four (Baker, Dixon, Givón, and Palmer) require that the patient be able to be expressed in an oblique phrase. Although these definitions do not all imply that the oblique argument has to have a case marker (the oblique could be a different type of functional element, e.g., relational nouns of Mayan languages), this criterion does tend to favor case-marking languages where role marking on dependents is mandatory. This leads to an interesting phenomenon in some languages which are not generally dependent-marking and which have relatively prototypical antipassive structures, but the oblique marking appears to be entirely optional, or its presence is conditioned by various factors. One such construction is found in Katukina (Harákmbut-Katukinan; South America).

Transitive:
 (3.6a) Anyan hinuk na=toman wiri
 3SG group MKCASE=shoot peccary
 'They shot a peccary' (Queixalós 2010:243)

Antipassive with an oblique patient:

- (3.6b) **Wa**-toman adu wiri **katu** wa
AP-shoot 1SG peccary **SOC.INST** PROSP
'I am going to shoot peccaries'

Antipassive with a juxtaposed patient:

- (3.6c) Nodia Hanani **wa**-hoho-nin Owi
Nodia Hanani **AP-call-DUR** Owi
'Nodia and Hanani are calling Owi' (Queixalós 2010:257-258)

Given examples like the antipassive in Katukina where the oblique marker is not always present (in fact it frequently is not), it is difficult to require an oblique-marked patient in any absolute way in a definition of 'antipassive'. See section 8.2.6 for a discussion of antipassive-type constructions in other languages which do not always have an oblique-marked patient.

I have now outlined some specific shortcomings of structural definitions of antipassive. However, unfortunately, functionally-based definitions in general face their own difficulties. Definitions which center around the semantics of antipassives and their uses generally fail to specify 'antipassive' as any particular construction distinct from other constructions within the realm of intransitivization and reductions in transitivity. If one adopts a Hopper and Thompson-esque view of transitivity (cf. Hopper and Thompson 1980), object demotion, object incorporation, antipassivization, and object omission are all different points on the same continuum which manipulates prominence/specificity of the agent in relation to the prominence/specificity of the patient. In fact, Cooreman (1994:64) found that in terms of function, "of the ten parameters listed in Hopper and Thompson, nine are reflected in the functions described for the antipassive so far. In each case the functions identified in this paper correspond with that end of the parameter indicating a lower degree of transitivity." Definitions of antipassives based on functional criteria, then, describe antipassives as transitivity-lowering operations and might offer insight into what persons/aspects/moods/numbers are more likely to undergo antipassivization, but they do not produce anything more specific in terms of what forms they could take. This is also complicated by examples in some languages where antipassivization does not (at least initially) appear to express functional correlates of detransitivization, such as increased volitionality or desire on the part of the agent (see Mathie 2016).

3.3 TOWARDS A WORKING DEFINITION OF ‘ANTIPASSIVE’

After reviewing different proposals for definitions of ‘antipassive’ and how they interact with structures in various languages, I tend to agree with others who have suggested that creating a definitive definition for antipassive (or any other voice construction) is largely a futile endeavor (e.g., Tsunoda 1988b; Gildea et al. 2016). However, in order to map the variation which exists between antipassive constructions and how they correlate with other typological features, it is necessary to establish a baseline of comparison for different structures. One solution is to delineate a prototypical version of that construction, and then discuss deviations from that (e.g., Tsunoda 1988b on antipassives and Shibatani 1985 on passives). However, identifying what that prototype should be is not an uncontroversial endeavor (see Chapter 9 for a discussion of several different possible prototypes for antipassives). Instead, I have developed a broader working definition for antipassive (see below), which is based less on theory and more on practicality, i.e., key elements which are identifiable in a wide variety of languages. Then, to deal with the variety of structures which fall roughly under the ‘antipassive’ heading, I created a feature system (see Chapters 4, 8, and 9) which is used in the discussion to expand or narrow the definition of what characterizes antipassive constructions. This section develops the criteria for that working definition which serves as the foundation for the generalizations made in Chapters 5-10.

First, although functional criteria were tracked in this study (the feature [Semantics], discussed primarily in section 8.2.9), they were not included as a crucial component of the basic definition. In addition to the issues with purely semantic/functional accounts mentioned in section 3.2 above, invoking function would not solve the problems with the structural criteria also discussed in section 3.2, since many of those less antipassive-like constructions likewise result in decreased transitivity. As such, it is necessary to depend primarily on structural criteria in order to develop a cross-linguistically valid definition of ‘antipassive’ as a distinct phenomenon. However, this is not to say that function and use are not critically important, which is apparent in section 8.2.9 and in the discussion of Mayan structures in Chapters 11 and 13.

To summarize the discussion of structural criteria from the previous section, in defining antipassive (a) we cannot require overt A to S marking since that would automatically exclude all nominative-accusative languages; (b) verbal markers in and of themselves are not sufficient to identify an antipassive and distinguish it from other constructions because these markers are

often not dedicated to the antipassive construction; and (c) the expression of the patient in an oblique phrase cannot be required in an absolute way since there are examples where the oblique marker for the patient is not mandatory. To address these limitations, I have required as few criteria as possible in the definition, and formulate those criteria in ways which do not discriminate against alignment type or locus of grammatical marking. This working definition of antipassive seeks to include constructions in languages which exhibit many of these prototypical antipassive attributes, but perhaps not all of them. Those features which are not required as part of the definition are still encoded as features and are discussed in detail in Chapter 8.

First, ‘antipassive’ here is considered to be a voice. What precisely constitutes voice is an ongoing discussion (Shibatani 1988, 2006, Klaiman 1991, Kemmer 1993, Dixon and Aikhenvald 2000, Kulikov 2010, Authier and Haude 2012, Malchukov and Comrie 2015, *inter alia*), and definitions of voice alternations vary in their strictness. However, many definitions require that voice involve a verbal marker (e.g., Klaiman 1991, Kulikov 2010), and that a given voice corresponds to a particular distribution of event participants. For the antipassive voice specifically, antipassive corresponds to a transitive event type (Baker, Comrie, Cooreman, Dixon, Polinsky, Song, Tsunoda). A number of these definitions specify that the transitive event-type be more ‘basic’ (Song), ‘underlying’ (Dixon), or ‘lexical’ (Comrie), which indicates directionality, i.e., that the antipassive is a marked variant of an inherently transitive structure. Although this view is a more restrictive view of voice than some would advocate (e.g., Shibatani 2006), I have adopted it here as a way to deal definitively with some of the issues surrounding equipollence/ambitransitivity, symmetry, and intransitivization.

In addition to the examples already discussed above, some languages can create unergative intransitive predicates from stative bases (e.g., Movima) or unaccusative roots (e.g., Salishan languages). I would consider these cases to be the result of processes of (agentive) intransitivization as opposed to antipassivization, even when the resulting predicate can be either monadic or dyadic. Defining voice in such a way as to require that the antipassive bears more morphosyntactic marking than the corresponding transitive ensures a greater degree of comparability between antipassive constructions from typologically disparate languages.

Not all definitions of the antipassive require an overt voice marker as one of their features, and such a requirement is arguably too strict for a basic definition of ‘antipassive.’ However, there are, I believe, several compelling reasons for requiring a voice marker as a

feature in this particular case. First, it is the clearest and most visible way to have the antipassive bear morphosyntactic marking that the transitive does not, which has already been discussed as a desirable attribute. Second, it eliminates the problem discussed above, where non-voice-like constructions such as differential object marking, object omission, non-canonical case marking, etc. are much harder to separate from what is primarily ‘antipassive’ without the additional information an overt marker brings. Third, verbal markers are highly identifiable, which is a desirable attribute when trying to find relatively safe criteria by which to identify constructions in a wide variety of languages that one is not familiar with.

In addition, there are a sizable number of languages for which case and/or agreement are not necessarily reliable indicators of grammatical relations and transitivity. As such, verbal marking is a more reliable and consistent means for identifying a voice alternation. Relatedly, verbal marking has an added advantage over case/agreement in that it is equally likely to be present in languages which are dependent-marking, head-marking, and neither head- nor dependent-marking. Although case is generally discussed as a primary indicator of the status of NPs and their relationship to the verb, it obviously cannot be used as a diagnostic in exclusively head-marking languages, or languages which lack both case and agreement and instead mark grammatical relations through word order.

Next, in order to distinguish the antipassive from other voices with similar structural characteristics, it is necessary to specify that the subject of an antipassive construction be an agent semantically. Like the antipassive, passives and middles are voices which have a verbal voice marker, are formally intransitive, and may have oblique arguments. However, middle and passive subjects are not agentive, but rather are patientive, reflexive/reciprocal, anticausative, or auto-benefactive. Specifying that antipassives must have agentive subjects differentiates them from other voices. However, I included as ‘antipassive’ those instances where a voice marker may have a core middle (or other) function, but also has antipassive uses (i.e., agentive subjects) with some verbs. For a discussion of dedicated antipassive markers and the various functions of non-dedicated markers, and what the distribution of antipassives would look like without them see sections 8.2.4 and 8.2.5.

Another characteristic adopted here which is present in many of the definitions in section 3.1 is that the antipassive should be formally (grammatically) intransitive. However, this can be established using any relevant, language-specific diagnostic for transitivity, and need not show

up as a visible change from A to S. While case and agreement patterns are one way to establish the intransitive status of the predicate, other diagnostics I accepted included but were not limited to omissibility of the patient (if patients are not usually omissible), and word order (e.g., AVO vs. VS).

So, to summarize, the following four criteria constitute the working definition of ‘antipassive’ used throughout this dissertation:

1. There is an overt marker for the antipassive construction;
2. The antipassive clearly corresponds to an unmarked or less marked bivalent transitive construction;
3. The agent of the transitive construction is preserved, while the patient is either inexpressible or optionally expressed in an oblique phrase;
4. The antipassive construction is intransitive.

This definition contains the same basic elements as other definitions which have been proposed previously, and as such includes most constructions which have generally been considered antipassives. It also handles definitively the questions discussed in section 3.2, and does not require de facto that a language have certain alignment or locus of grammatical marking.

However, one conspicuous way in which this definition differs from several of the definitions in section 3.1 is that it does not require that the patient be expressible via an oblique phrase (which is a requirement in the definitions of Baker, Palmer, and Dixon). While I agree that a more prototypical antipassive would have this option, there are a few good reasons for not requiring it. First, as mentioned earlier in this section, case marking is not always a reliable diagnostic for grammatical relations, and dative-marked patients (for example) are not always obliques. There therefore must be language-specific criteria for what can be considered an oblique argument, besides non-canonical case marking. Second, radically head-marking languages are not necessarily going to have an oblique-marking strategy which looks anything like an oblique case marker (see the discussion of Algonquian in section 7.4). Third, many definitions allow the antipassive to lack any overt expression of the patient (e.g., Comrie, Foley and Van Valin, Shibatani, Song, Tsunoda). Importantly, as noted by Foley and Van Valin (see section 2.1), patientless antipassives are the most common type cross-linguistically. This was confirmed by this study, and as such excluding patientless antipassives on definitional grounds significantly restricts the dataset in ways which are not conducive to discussion.

My inclusion of patientless antipassives is further justified on the grounds that (a) this is an aspect of many definitions, not just the one proposed here, and (b) patientless antipassives have all the other structural properties of antipassives, and since those which allow the patient to be expressed in an oblique phrase generally appear most frequently without the patient, often patientless and patient-allowing antipassives are identical. If the patient argument was present, however, I did require that it have some sort of indication that it is an oblique argument, although the presence of that marker in all possible environments was not mandatory. This caveat was necessary to deal with examples of occasionally absent oblique marking as in Katukina in (3.6) above. For a discussion of what the distribution of antipassives would look like when only considering those constructions which allow the patient to be expressed obliquely, see section 8.2.6. Finally, the oblique patient argument must be omissible, and if this was not possible it was taken as a sign that the predicate is not formally intransitive.

3.4 SUMMARY

This chapter looked at many of the major definitions of ‘antipassive’ put forth to date in the literature, and then discussed the points on which they differ and how this leads to a wide variety of structures being labeled as ‘antipassive.’ Also discussed were some potential issues which arise with both structural and functional criteria for defining antipassive. Finally, in section 2.3 I developed a working definition for antipassive which is used throughout this dissertation. This working definition aimed to provide consistent, cross-linguistically applicable criteria for the identification of basic (as well as prototypical) antipassive constructions in typologically disparate languages. It also deals with the structural issues raised in section 3.2, and provides a base which can be modified by the addition or subtraction of other common antipassive features, as discussed in Chapter 8. The four criteria used here as a working definition of antipassive are reiterated below for ease of reference:

1. There is an overt marker for the antipassive construction;
2. The antipassive clearly corresponds to an unmarked or less marked bivalent transitive construction;
3. The agent of the transitive construction is preserved, while the patient is either inexpressible or optionally expressed in an oblique phrase;
4. The antipassive construction is intransitive.

CHAPTER 4. INTRODUCTION TO THE TYPOLOGICAL STUDY

There are a myriad of reasons to conduct a large, cross-linguistic typological study. First, antipassives as a unified phenomenon are still understudied, particularly in comparison to the passive. Given that information on antipassives and other valency-changing structures in more ‘exotic’ languages has become more available in recent years, the time has come to re-examine such cross-linguistic facts. As discussed in Chapter 3, although scholars have put forth guidelines as to the identifying characteristics of antipassives, these definitions do not always map neatly onto each other or the actual data. In fact, as this study shows, what is generally considered ‘prototypical’ for antipassive structures is actually extremely narrow, and there are many dimensions along which structures may be functionally or structurally similar.

The compilation of a large amount of information on antipassives and the languages which have them over the same set of criteria allows us to apply the term ‘antipassive’ in a more meaningful and informed way. Also, even without artificially declaring that ‘yes, this language has antipassives’ or ‘this language does not have antipassives’, we are able to use these same criteria to talk in a more detailed and precise way about exactly what types of detransitivizing structures are seen across unrelated languages. We can also look at correlations not only among valency features but also characteristics such as marking type, word order, and verb alignment. Finally, the benefit of these types of broad-reaching typological investigations is that they collect a great deal of information in the same place. Even if the reader does not agree with the somewhat artificial binary categorization I have adopted to determine if a language has or lacks antipassives (see Chapter 3), the data which have been provided are hopefully clear enough that others can make that judgment for themselves. Also, since information was collected which does not pertain directly to antipassivization, this study can also be seen as a repository for information on valency in a sizable sample of languages.

4.1 CAVEATS

While there is clearly value in this type of typological comparison, there are limitations which should be acknowledged. The primary concern about this type of study is that it is highly unlikely that the researcher has or can acquire intimate knowledge of all of the languages in the sample, and therefore it is prone to misinterpretations. This is an undeniable fact, and other

recent approaches to typology have attempted to address this. A timely example is Malchukov and Comrie's 2015 series *Valency Classes in the World's Languages*, which looks at all of the valency phenomena in thirty languages from around the world, with each chapter written by specialist(s) on that language. While this type of study certainly has its benefits and provides for greater accuracy (and much of the information contained in Malchukov and Comrie (2015) is reflected in my study here), it does not provide the breadth of coverage or the focus of the more traditional type of study. This dissertation attempts to represent the best of both worlds: it includes a detailed sketch of valency decreasing phenomena in Kaqchikel (Mayan) based on my own original research, and compares these structures with other, similar constructions found in languages throughout the world.

The second limitation is in the availability of resources. Those languages which were ultimately included in the sample are a reflection of the documentation which has been done. Languages which do not have grammars, or languages where no information is provided on valency alternations were not included in the sample. A similar issue has to do with the nature of description: as linguistics has evolved, ways of portraying languages in linguistic descriptions have evolved as well. Sometimes the argumentation is quite clear, and sometimes it is more opaque to the modern researcher. A related limitation is that of the quality and accessibility of the descriptive material. The issue of accuracy in the interpretation of the data in particular languages can only be mitigated by the amount of effort the researcher puts into finding and interpreting (analyzing) the available information on each language. All that can be said is that I have done my best to portray accurately the phenomena in each language based on the information available. In some cases, this has meant indicating uncertainty about some of the facts. Information that was questionable or unknown is accompanied in the dataset by question marks, 'unknown', or additional commentary to that effect. This is especially true with respect to the feature values. It was surprisingly common that a source would not discuss some of the features being sought for the survey, particularly how productive a given construction was, leaving me to attempt an interpretation based on the examples provided. Where it was impossible to tell what the feature value should be, that feature value is accompanied by a question mark. Any feature which was not mentioned in the sources is considered not to exist for the purposes of the statistical correlations given in the following sections.

The final perennial problem for studies which require data on languages on which the researcher is not an expert is the issue of negative evidence. While grammars usually make an effort to be comprehensive, it is impossible to anticipate and describe everything about every aspect of a language that someone else might be interested in. That means that as a reader looking for something specific in a descriptive text, not finding mention of it does not necessarily mean that it does not exist in that language. While some grammarians (for example, grammarians who follow a set grammar template such as that of the LINCOP *Languages of the World/Materials* series) do sometimes mention when a particular structure does not exist in the language described, this is seldom accompanied by the evidence that supports that conclusion. The inclusion of this specific type of negative evidence is not yet common practice in the discipline, and, admittedly, it is difficult to think of the possible things a language lacks that someone might be interested in. However, including this type of information is quite useful to the linguist who is not necessarily familiar with the typological characteristics of the language in question. For this reason, languages which have been portrayed here as lacking antipassive-type structures may indeed have them, but they were not discussed in the works cited in the final column of the dataset.

It is also important to note that the judgment of whether a language was recorded here as having antipassives or not was made independently of the terminology used by the authors of the various source materials. In the vast majority of cases the value recorded in the dataset reflects the opinion of the scholars of the language, and their reasoning for using a particular term was always taken into account. However, it was not always the case that the criteria for using the term ‘antipassive’ in the descriptions aligned with the criteria used for this study. It was more common that a source did not label a structure ‘antipassive’ which was considered antipassive in this study than the reverse, where a source used ‘antipassive’ as a label which I decided did not meet the necessary criteria. In a number of cases this approach was helpful when different scholars had used different terminology to talk about cognate structures in related languages (e.g., Abkhaz-Adyghean, Kiranti, Slavic, Algonquian, among others).

While as much information as possible was taken into account when evaluating whether a language had an antipassive construction, most of that information is not reflected in the ‘comments’ column of the dataset for space reasons. Most languages contain brief notes which are designed to complement the content of the other columns (see section 4.2.3 for a discussion

of the information included in each column), and, where necessary, outline my reasoning in assigning a particular value to that language. If the comments are not sufficiently clear, the reader is referred to the primary works cited for that language.

4.2 DATA STRUCTURE

4.2.1 SAMPLING AND CATEGORIZATION

Cross-linguistic typological studies depend on the quality of their samples. While ideally the sample would include all known languages, this is of course infeasible. As mentioned above, one of the factors that dictated aspects of that sample used here was the availability of descriptive materials that contained information about voice and valency. However, the sample was also constrained along several other lines. Perhaps the primary sampling goal was to gather data from as many genetically diverse languages as possible. For that reason, this sample contains members from all major language families, as well as members from more language isolates than the samples behind most other studies. Then, within genetic groups, an effort was made to represent the typological diversity of the family, which often meant choosing languages which belonged to different major branches of the family. This method also yielded good geographical coverage, including languages in all parts of the globe inhabited by humans.

This genetically and geographically diverse set of languages constituted the core of the sample. The languages in each area surveyed was then expanded to include languages and language groups which were known or suspected to contain antipassives. This also included greater representation of languages in the sample where ergativity is known to exist, given the oft-cited assumed correlation between antipassives and ergativity. Since there is more representation of those language groups which contain the target feature, there is some bias which skews the overall sample in favor of languages with antipassives.

While there are many more languages I would have liked to include and which would have merited inclusion, time constraints and lack of availability of descriptive materials prevented further expansion of the study. It is my hope that this sample gets expanded upon over time, both from my input and the input of other scholars.

The regions assigned to languages were designed to be approximate labels to aid in categorization. They are not particularly precise, and the boundaries are largely arbitrary, as they are meant to delineate roughly the regions where various languages and language families exist,

and therefore often overlap geographically. For example, all of Indo-European is placed in a region labeled ‘Europe’, even though many Indo-European languages are spoken outside of Europe per se. The regions used here are: Americas, Europe, Asia, Pacific, Africa, and Australia. A true geographically-based representation of the global distribution of antipassives is provided by the map in section 4.3.2.

Since the sample was based in a large part on genetic relationship (or more accurately non-relationship), something must be said about the genetic classification used here. I have used the nebulous term ‘genetic group’ to describe the classification in order to be as agnostic as possible about the exact levels at which the languages are related. In general, the top-most widely accepted genetic group has been used, which almost always correlates with ‘language family’. In cases where the family was very large (e.g., Austronesian), the major sub-branch to which the language belongs has also been included. The goal was to display the current state of our understanding of linguistic relationships without engaging in debates involving disputed hypothesis (e.g., Trans-New Guinea, Nilo-Saharan). The classification used here for the languages of Europe and the Americas has been reviewed by Lyle Campbell, those for Austronesian by Robert Blust, and those for New Guinea by Gary Holton.

A minor point should also be made about language names. There is often a lot of politicized debate about the name that a language bears in the literature, since some exonyms are common but offensive, or there are simply a multitude of different orthographic representations of the name that have been used over the years (see Campbell and Chen (forthcoming)). Again, the goal for this study was to represent languages in an uncontroversial way, but such that the language was still linkable to its record in the existing literature. As such, language names appear largely as they appear in the most recent descriptive material, and if this was at odds with what exists in the *Catalogue of Endangered Languages* (ELCat), *Ethnologue*, *Glottolog*, the *World Atlas of Language Structures* (WALS), or Wikipedia, an alternate name was also provided. If the entry in the study refers to a particular variety of a language, this was in parentheses following the name (e.g., Cherokee (Oklahoma)).

4.2.2 FEATURES

The critical discussion in Chapter 3 of the various definitions of what constitutes an antipassive has shown that there is no single defining feature we can call upon in order to

unequivocally call something an antipassive. The reality is that all languages have some way of conveying antipassive-like notions, deleting and demoting patients, creating non-volitional, generic, or indefinite participants, or, in terms of syntax, resolving a ban on extracting ergative arguments. However, not all languages use the same mechanisms to perform these types of functions. From a functionalist perspective, how languages code or signal these things depends on what the language ‘cares’ about, be that for instance transitivity or semantic roles or lexical class membership, and on what is already available in its machinery which can be extended to cover various needs. However, there is an interesting convergence of forms and functions where very different languages achieve similar information-structure goals in similar ways. It is interesting to look at these structural convergences, even if not all of them fit a prototypical view of a particular kind of valency alternation, in this case antipassive. In order best to take into account the various options which languages have to create antipassive-like structures, a feature-based system of description has been adopted here (see Shibatani 1985 for a similar-minded approach to the passive). This approach allows us to track various antipassive-like features individually, and then see which features cluster together. These clusters of features which recur in languages of the world can then be compared to more prototypical antipassives (see Chapter 9), as well as what has been considered to be ‘antipassive’ in the literature for various language subgroups.

The features which were tracked in this study come primarily from the literature on antipassives, as recurrent features constructions called ‘antipassives’ have. It was also necessary to add one or two other features after it was discovered that certain other aspects of some constructions in some of the languages needed to be encoded as well. In total, this study tracked eleven features related to antipassivization. For ease of discussion, each feature has been assigned an abbreviation, given in brackets and small caps (e.g., [OBLIQUE]). Features in the dataset in Appendix A are additionally designated by letters A-K for the sake of readability and space within the spreadsheet. Which feature received which letter was completely arbitrary; the order does not imply a hierarchy or the primacy of some features over others. Since many of these features could apply to any valency-decreasing construction (e.g., passives and middles), only agent-preserving detransitivizing constructions were assigned features.

Importantly, languages did not have to have an antipassive construction by the criteria used here to have a construction which could be described by features. For example, the English

conative (‘kick’ vs. ‘kick at’) is not considered to be an antipassive, but it has several antipassive-like characteristics which are recorded by feature values [OBLIQUE, SEMANTICS]/[BF]—obliquely marked patient, and antipassive semantics. A key for what each letter/feature value represents is provided below, and again in Chapters 8 and 9. Features can be separated into four categories: those related to antipassive marking, those related to transitivity and valency, those related to productivity, and those related to function/effect. These features are also not necessarily independent of each other, and some are subtypes of others (e.g., [DEDICATED] is a subtype of [VALDEC]). For a discussion of the relationships between these features, see section 9.1.

Features related to marking:

1. [OBLIQUE] ~ [B]: The patient appears in an oblique phrase. If the oblique marker is optional or does not always appear, this feature is represented in parenthesis.
2. [MARK] ~ [C]: Presence of an antipassive marker. Typically, this marker is verbal, although that is not a strict requirement. It does, however, have to be a morpheme which detransitivizes the predicate and preserves the agent, and demonstrably indicates voice (i.e., not an object marker; see [ASYMM] ~ [A]).
3. [DEDICATED] ~ [G]: The antipassive marker is dedicated to the antipassive construction. In other words, does the morpheme in question does not have other uses beyond signaling the antipassive. For example, in many languages the antipassive marker has evolved from a middle marker or reflexive/reciprocal marker and still have that function as well, in which case the marker is not dedicated to the antipassive.

Features related to transitivity:

4. [ASYMM] ~ [A]: The antipassive construction clearly corresponds to an unmarked or less marked bivalent transitive construction. This defines the antipassive as a voice operation which applies minimally to transitive predicates (although it may also apply to ditransitives, intransitives, etc., as long as it primarily acts on bivalent structures). The alternation must also involve the same verbal root (i.e., is not suppletive), and have an effect on argument structure.
5. [INTRANS] ~ [D]: The resulting predicate is intransitive. Antipassive constructions are not simply detransitivizing, but intransitivizing. This is an important counterpart to

[OBLIQUE], since some languages have detransitivizing operations which demote the patient, but the operation does not result in intransitive predicates and the patient cannot be omitted.

6. **[VALDEC] ~ [J]**: The construction is always valency-decreasing. This is an important feature which is related to [DEDICATED] and ensures that the morpheme and the construction in general involves a change in voice. This feature applies to languages with dedicated antipassive markers as well as languages which have antipassive markers which have other valency-decreasing uses outside the domain of antipassive. To have this feature, the patient argument must always be omissible, and the verbal marker may only apply to transitive (or ditransitive) bases.

Features related to productivity:

7. **[-LEXICAL] ~ [E]**: The antipassive is non-lexical. Generally speaking, valency alternations are processes, and if the alternation is not productive, existing only in a few verbs, then the derivation is considered to be lexical.
8. **[PRODUCTIVE] ~ [I]**: The operation applies to (almost) all transitive verbs. While derivational processes in general rarely apply to absolutely all verbs in a language, it is not uncommon for an antipassive construction to be quite productive and apply to most transitive verbs in a language. This feature, coupled with [-LEXICAL], encodes essentially the same productivity dimensions as WALS feature 108b: ‘productivity of the antipassive construction’ (Polinsky 2013). A lack of [-LEXICAL] and [PRODUCTIVE] indicates that the construction is lexical; the presence of [-LEXICAL] but not [PRODUCTIVE] indicates that the construction is non-lexical, but not entirely productive; the presence of both [-LEXICAL] and [PRODUCTIVE] indicates that the construction is quite productive.

Features related to effect:

9. **[SEMANTICS] ~ [F]**: The construction is accompanied by antipassive-like semantics/functions. Semantic correlates of antipassivization are discussed in Cooreman (1994) and include, for example, non-individuation/genericness/non-specificity/indefiniteness of the patient, the expression of partitive relationships, habitual or canonical action, incomplete aspect, promotion of the agent, and/or demotion or deletion of the patient from the discourse. This feature is therefore very broad, and could

even be said to apply to any language, as all languages have some way of achieving all of these effects. However, while this feature is indeed quite common, it was mainly applied in this study only to constructions which had other antipassive-like features.

10. [-PATIENT] ~ [K]: The operation creates a predicate where there is no implication of any specific patient. This feature is unlike the others in that it contributes primarily to information structure and not to a prototypical structural and functional definition of antipassivization. In some languages, antipassive constructions remove any implication of a specific patient from the semantic structure of the verb. However, in other languages the patient is in some way present, either as an oblique, or may be implied or understood even if the patient NP is inexpressible.

11. [SYNTAX] ~ [H]: The construction is used to circumvent various types of restrictions on non-absolute arguments, i.e., participates in syntactic ergativity.

4.2.3 PRESENTATION OF THE DATA

Although various aspects of the dataset are discussed in this chapter, the full dataset is given in Appendix A, Appendix B, and Appendix C. The dataset had to be split into multiple appendices to accommodate print formatting, but a single-table version of the dataset for web viewing can be found on my website. There are 17 different fields included in the dataset, given below in the order of the full dataset (online). The data in Appendix A include columns 1, 2, and 4-8, and 14, which provide the information in the dataset which pertain specifically to antipassives. Appendix B repeats columns 1, 2, and 4, and then includes columns 9-15, which includes information about the typological features of the languages in the dataset which were tracked here as possible correlates to antipassivization (word order, alignment, locus of grammatical marking, etc.). It also provides for comparison a summary of the features with respect to antipassives which were given for each language in WALS (Polinsky 2013). Appendix C contains the geographic information necessary to create the maps in this dissertation, and includes columns 3, 4, 16 and 17. A description of what each column includes is provided here.

Column 1: Region. See the discussion of region assignment in section 4.2.1.

Column 2: Genetic affiliation. See the discussion of genetic classification in section 4.2.1.

Column 3: ISO 639-3. Note that in the print copy this column only appears in Appendix C for space reasons.

Column 4: Language. See the comments on language naming in section 4.2.1.

Column 5: Does the language have antipassive(s)? This column typically only contains a ‘yes’ or a ‘no’, which is occasionally accompanied by a question mark if the facts are not clear. Some languages have more information in this box because they either have multiple (non-allomorphic) antipassive markers, or multiple antipassive constructions. Multiple antipassives are indicated by a number following ‘Yes’. There is a related coding strategy which is used for Mayan languages, since they have a number of constructions which have at various points been called ‘antipassive’, but only some of them are considered true antipassives in this study. This is complicated by the fact that the verbal antipassive markers are not typically in a one-to-one correlation with structure type. For these languages, the information in this box lists the number of structures considered antipassives out of the number of possible antipassive-type structures, as well as the number of markers for those constructions.

Column 6: Comments. As mentioned in section 4.1, the comments box is meant to include information which is not reflected elsewhere in the row for each language. What appears there varies based on the facts for each particular language. If a language has an antipassive, it may contain additional information about that construction. It also often contains some information on constructions or case frames which may resemble an antipassive, in which case this is the structure which the values in the feature column pertain to. When applicable, this box also contains information on differential object marking, if present, switch-reference, if there are any ambitransitive/labile verbs, how grammaticalized transitivity is within the system, and what sort of strategies the language uses when it comes to patients, e.g., for omitting them or making them generic/non-specific/partitive/not completely affected, as an antipassive might.

Column 7: Patient type. This column only contains information if the language has an antipassive construction that confirms to the criteria in this study. Patient type refers to the way the patient appears in the antipassive construction. Traditionally an antipassive has an oblique-marked patient, which may be omitted. The label ‘oblique’ refers to those antipassives which allow an oblique-marked patient, while ‘patientless’ describes the construction where the patient is omitted, which is mandatory in many of the languages in the sample. The data also

necessitated a third option, ‘patient’, which describes instances where the patient lacks an oblique marker.

Column 8: Features. Features are represented in Appendix A as their letter values. For a discussion of the different feature values see section 4.2.2, and for a discussion of the distribution of features across antipassive-type constructions see Chapters 8 and 9.

Column 9: Ergativity. This column describes the type of verb alignment of the language in a pseudo-binary manner. It is coded in terms of whether the language is ergative or not (‘Yes’ or ‘No’), where ‘No’ with no further information indicates that the language is nominative-accusative. Additional notes are given in brackets describing if the language is split-ergative, or if it is active-inactive/split S (notice active systems are not considered here to be a type of ergativity), direct/inverse, or exhibits a mix of alignment patterns. Notes may also describe the particular type of alignment split, or if the language is only ergative with respect to one or two features (coded as ‘minimal’).

Column 10: Type of ergativity. This describes the type of ergativity which the language has, i.e., if it is only manifested in the morphology, or if the language is syntactically ergative (for non-ergative languages this value is ‘NA’). This information is sometimes accompanied by additional notes about what structures exhibit syntactic ergativity, and whether antipassives are required.

Column 11: Basic word order. This column was added to the dataset for the purpose of looking at correlations, as word order has been so influential in the typological literature. Where information on dominant word order had not already been gathered, this value comes from WALS.

Column 12: Locus of grammatical marking. This category refers to whether a language is more head-marking, dependent-marking, neither, or both, in the sense of Nichols (1986) with respect to clause-level typology. There are of course different degrees of head and dependent marking (e.g., Mohawk is radically head-marking), and some languages are both head-marking and dependent-marking (e.g., Greenlandic) or neither head-marking nor dependent-marking (e.g., Mandarin). While sometimes this value was explicitly stated in the literature, it often had to be inferred from example sentences and the description.

Column 13: Other marked valency alternations. This column is meant to reflect the amount of morphology dedicated to valency alternations, and how much valency-marking is

grammaticalized in the system. This column does not include what Malchukov and Comrie (2015) call ‘uncoded valency alternations’, i.e., those which do not include a verbal valency morpheme. It is also often made explicit in this column whether the language has a marked passive construction.

Column 14: Sources. The primary sources from which the information in the dataset was obtained are given in this column. In some cases this is not an exhaustive list of works which were consulted, but rather those which contributed specific information to the table.

Column 15: WALS (*World Atlas of Language Structures*). The languages in the sample here which were also part of the WALS sample with respect to antipassives are noted in this column. A discussion of how the information in the present sample compares with the WALS data is given in section 4.4 below. WALS has two features which provide information on antipassives: (1) ‘antipassive’, which has the values ‘oblique patient’, ‘implicit patient’, and ‘no antipassive’, and (2) ‘productivity of the antipassive construction’, which has the values ‘productive’, ‘partially productive’, ‘not productive’, and ‘no antipassive’ (Polinsky 2013). Those values which WALS assigned to a given language are provided in this column, where applicable. ‘No’ indicates that language is said in WALS to lack an antipassive, while ‘NA’ indicates that the WALS sample for antipassive features does not include that language.

Column 16: Latitude. This column contains the latitude values for the sampled languages for creating the maps which appear throughout this dissertation.

Column 17: Longitude. This column contains the longitude values for the sampled languages for creating the maps which appear throughout this dissertation.

The information mentioned above constitutes the core information which was collected for each language to create the dataset which is the subject of the following chapters. The full dataset for the typological study which is here spread across three Appendices for print purposes can be found in full liner format on my website: www.rainaheaton.com/. A simplified version of this information is also available in the form of an interactive map on that website.

As I am not a specialist in most of the languages in this sample, it is my hope that the information presented here can be corrected, expanded and improved over time through input from other scholars. If readers have additional information they would like to share, or would

like to see the language they work on added to the dataset, please contact me at heatonr@hawaii.edu, or whatever address is currently on my CV.

4.3 OVERVIEW OF THE SAMPLE

This section provides a basic information of the composition of the sample for the typological study. For the purpose of discussing various typological correlations, a binary + antipassive/-antipassive value has been adopted using the definition developed in Chapter 3, which is then amended with respect to different clusters of antipassive-type features in Chapter 8. See Chapter 5 for correlations which have been investigated involving various typological features, Chapters 6 and 7 for a thorough discussion of antipassives and alignment, Chapters 8 and 9 for a discussion of the feature analysis of antipassives, and Chapter 10 for an examination of languages which have multiple antipassive markers/constructions.

4.3.1 LANGUAGES BY REGION AND GENETIC AFFILIATION

The sample for this study includes 445 languages, which, assuming a total of 7,097 languages spoken on the planet (according to the current edition of Ethnologue (Lewis et al. 2016)), is 6.27% of all languages. While this may not seem large, it is a carefully selected sample of the world's languages, meant to represent much of the linguistic and typological variation which exists on the planet. It is also significantly larger than the samples utilized in many cross-linguistic studies, and is, for example, larger than the sample for many features in WALS. The sampling method and criteria are discussed above in section 4.2.1. Table 4.1 provides an idea of the geographic distribution of languages in the sample by listing the number of languages by region.

TABLE 4.1. Languages sampled by region

Region	Number of languages
Africa	86
Americas	151
Asia	64
Australia	32
Europe	45
Pacific	67
Total:	445

The regions are each well-represented in this sample in terms of genetic and typological diversity. Regions were not delineated based on the number of languages in each (e.g., Africa contains just over 2,000 languages while Australia only has a couple hundred, far fewer that have anything like adequate documentation), which accounts for the differences in representation from each region. The Americas are slightly better represented in terms of number of languages sampled vs. total number of languages in the region, which is reflective of the number of small language families in the region (see below), as well as the somewhat greater number of languages with antipassive constructions (see Chapter 5).

The sample includes representatives from 144 higher-level genetic groups: 15 groups in Africa, 66 groups in the Americas, 18 in Asia, 16 in Australia, 7 in Europe, and 22 in the Pacific. These 144 genetic groups can be separated into 112 language families and 32 language isolates (families of only a single member). Because many language families are quite small, or the members are quite closely related, this sample often only includes one member of each of these smaller families. There are 61 non-isolated genetic groups which have only one member in this sample.

If we calculate that there are 420 language families in the world (Campbell 2013:159), then this sample contains languages which represent 34.3% of the world's linguistic diversity. Since this study focused primarily on living languages (and some reasonably well-documented awakening languages such as Tunica and Chitimacha), and 100 of the 420 language families have no more speakers, this sample actually accounts for more like 45% of the world's current linguistic diversity. Genetic groups are listed alphabetically by region, with the number of isolates at the bottom.

TABLE 4.2. Languages sampled by genetic group

Region	Genetic group	Number of languages
Africa	Afro-Asiatic ^a	14
Africa	Central Sudanic	5
Africa	Eastern Jebel	1
Africa	Khoisan ^b	4
Africa	Kuliak	1
Africa	Niger-Congo ^c	34
Africa	Nilotic	8
Africa	Nubian	2
Africa	Saharan	2
Africa	Songhay	4
Africa	Surmic	7
Africa	Isolates ^d	4
Americas	Algonquian	4
Americas	Arawakan	4
Americas	Arawan	1
Americas	Athabaskan-Eyak-Tlingit	6
Americas	Aymaran	1
Americas	Barbacoan	1
Americas	Boran	1
Americas	Cariban	9
Americas	Chibchan	4
Americas	Chinookan	1
Americas	Chumashan	1
Americas	Eskimo-Aleut	3
Americas	Guaicuruan	2
Americas	Iroquoian	2
Americas	Harákmbut–Katukinan	1
Americas	Jê	4
Americas	Kariri	1
Americas	Mascoyan	1
Americas	Matacoan	1
Americas	Mayan	23
Americas	Misumalpan	1
Americas	Miwok-Costanoan	1
Americas	Mixe-Zoquean	2
Americas	Muran	1
Americas	Muskogean	1
Americas	Nadahup	1
Americas	Nambikwaran	1
Americas	Otomanguean	5
Americas	Palaihnihan	1
Americas	Pano-Tacanan	7
Americas	Peba-Yaguan	1

TABLE 4.2. (Continued) Languages sampled by genetic group

Americas	Pomoan	1
Americas	Quechuan	2
Americas	Sahaptian	1
Americas	Saliban	1
Americas	Salishan	9
Americas	Siouan	3
Americas	Tequistlatecan	1
Americas	Totonacan	2
Americas	Tsimshianic	1
Americas	Tucanoan	3
Americas	Tupian	4
Americas	Uto-Aztecan	7
Americas	Wintuan	1
Americas	Yanomaman	1
Americas	Yokutsan	1
Americas	Zaparoan	1
Americas	Isolates ^e	19
Asia	Andamanese	1
Asia	Austroasiatic ^f	6
Asia	Chukotko-Kamchatkan	2
Asia	Dravidian	7
Asia	Hmong-Mien	1
Asia	Japonic	3
Asia	Koreanic	1
Asia	Mongolic	1
Asia	Sinitic	2
Asia	Tai-Kaddai	3
Asia	Tibeto-Burman ^g	27
Asia	Tungusic	3
Asia	Yenisian	1
Asia	Yukaghir	2
Asia	Isolates ^h	4
Australia	Arnhem	1
Australia	Bunuban	1
Australia	Daly	1
Australia	Garrwan	1
Australia	Gunwingguan	1
Australia	Iwaidjan	1
Australia	Limilngan	1
Australia	Maningrida	1
Australia	Mirndi	2
Australia	Nyulnyulan	1
Australia	Pama-Nyungan	14
Australia	Tangkic	3

TABLE 4.2. (Continued) Languages sampled by genetic group

Australia	Worrorran	1
Australia	Yangmanic	1
Australia	Isolates (Tiwi, Gaagudju)	2
Europe	Abkhaz-Adyghean	3
Europe	Indo-European ⁱ	22
Europe	Kartvelian	2
Europe	Nakh-Daghestanian	9
Europe	Turkic	2
Europe	Uralic	6
Europe	Isolates (Basque)	1
Pacific	Angan	1
Pacific	Asmat-Kamoro	1
Pacific	Austronesian ^j	41
Pacific	Awyu-Ok	3
Pacific	Border	1
Pacific	Dani	1
Pacific	Engan	1
Pacific	Inanwatan	1
Pacific	Koiarian	1
Pacific	Lower Sepik-Ramu	1
Pacific	Morehead-Wasur	1
Pacific	Ndu	1
Pacific	North Halmahera	1
Pacific	Nuclear Goroka	1
Pacific	Rai Coast	1
Pacific	Sentani	1
Pacific	Simbu	1
Pacific	Sko	1
Pacific	Timbe-Selepet-Komba	1
Pacific	Timor-Alor-Pantar	4
Pacific	Isolates (Kuot, Yélî Dnye)	2

^aSubgroups represented include Berber, Chadic, Cushitic, Omotic, and Semitic.

^bThis group is defined per the classification in Brenzinger 2012; it is not Greenberg's (1966) grouping of the same name that is now abandoned.

^cSubgroups represented include Adamawa, Bantu, Dogon, Edoid, Gur, Heiban, Kwa, Mande, Senufo, Ubangi, and Yoruboid.

^dIsolates sampled in Africa include Hadza, Bangime, Sandawa, and Kunama.

^eIsolates sampled in the Americas include Tunica, Chitimacha, Haida, Yuchi, Takelma, Tonkawa, Zuni, Washo, Wappo (possibly Yukian), Purepecha, Huave, Seri, Mapudungun (possibly Araucanian), Trumai, Movima, Warao, Kanoê, Puinave, and Kwaza.

^fSubgroups represented include Aslian, Bahnaric, Khasian, Munda, Nicobaric, and Vietic.

^gSubgroups represented include Bodic, Brahmaputran, Burmish, Dhimal, Karenic, Kiranti, Kuki-Chin, Nungish, Rgyalrongic, and Tani.

^hIsolates sampled in Asia include Ainu, Burushaski, Nivkh, and Nihali.

ⁱSubgroups represented include Baltic, Celtic, Germanic, Hellenic, Indic, Iranian, Romance, and Slavic.

^jSubgroups represented include Atayalic, Bali-Sasak-Sumbawa, Barito, Celebic, Central Luzon, Central Malayo-Polynesian, Central Pacific, Central Philippine, Central Vanuatu, Chamic, East Formosan, Eastern Admiralty, Malayic, Minahasan, New Caledonian, North Sarawak, Northern Vanuatu, Nuclear Micronesian, Paiwan, Polynesian, Puyuma, South Halmahera-West New Guinea, South Sulawesi, Temotu, Tsouic, and Western Oceanic Linkage.

4.3.2 GLOBAL DISTRIBUTION OF ANTIPASSIVES

To supplement the rough division of languages in the sample into regions, the data are represented in map format as well. This provides a more precise idea of the location and distribution on a global scale of languages sampled, since genetic affiliation (and likewise the genetically-based region assignments discussed above) is not a one-to-one proxy for geographic region.



FIGURE 4.1. Geographic distribution of the 145 languages in the dataset

This map and other maps of this type throughout this dissertation were constructed in the statistical program R using the package Leaflet (Graul 2016), using a basic topographic map as the base. The location data came from multiple sources: about half of the geographical coordinates are those in *The Catalogue of Endangered Languages (ELCat)* (*Catalogue of Endangered Languages* 2016), and about half came from *Glottolog* (Hammarström et al. 2016).

There were eight remaining languages not covered by either database for which the author generated coordinates. In regard to the ELCat data, many languages have multiple geographical coordinates listed. In those cases, only one set of coordinates from the preferred source was used. Although Leaflet allows for the creation of polygons to represent more accurately the area(s) in which languages are spoken, there was not sufficient data to achieve this. In this way, these maps suffer the same inadequacies of all other similar maps which use single points to represent areas roughly where languages are spoken. The table containing the geographic data which was used to generate this map and the other maps throughout this dissertation is provided in Appendix C.

4.4 COMPARISON WITH WALS

The *World Atlas of Language Structures* (WALS) has a section on antipassive constructions (108a) and the productivity of antipassive constructions (108b) (Polinsky 2013). The WALS survey is in many ways the starting point of the project undertaken here. It outlines many of the basic features of antipassives, and provides an initial sample of languages which contain antipassives. Since the WALS sample obviously pre-dates the current sample, some care was taken to select languages for this sample that were complementary to the WALS sample, and to expand upon it rather than to duplicate it. The basic numbers from the WALS data for feature 108a listed in Table 4.3. Antipassive constructions are provided below, along with the corresponding values for the current sample.

TABLE 4.3. Comparison of antipassive data from this study and WALS

	This study	WALS
# of languages with antipassives	126	48
# of languages lacking antipassives	319	146
Total # of languages surveyed:	445	194

The current sample is more than twice the size of the WALS sample, and includes about 70 more languages which have antipassive structures than shown in WALS. However, the proportion of languages with antipassive structures to the whole sample is similar, with about 28% for this study and 25% for the WALS sample.

Of course, there was still some significant overlap in the two samples, as both sought to include most known instances of antipassives, particularly the ones considered to be prototypical, like Dyirbal and Greenlandic. In total, there are 106 languages that are shared across both

samples. This leaves 339 languages which are included in the current sample but are not in the WALS antipassive sample (76.2% of the sample here), and 88 languages which are in the WALS antipassive sample but not the current sample. This means that in total, now there is access to consolidated information on antipassives in 533 languages, or 7.5% of all languages, which is quite good for any single feature.

However, it is important to reiterate that the criteria for including a given construction as an instance of ‘antipassive’ in WALS are not the same as those employed in this dissertation. Of those 106 languages which appear in both the WALS antipassive sample and the current sample, WALS gives 30 as having antipassives, and 76 as lacking antipassives. Of those same languages, the current study has 24 languages listed as having antipassives, and 82 lacking antipassives. Not surprisingly, values coincided for most of these languages. However, there were 22 languages for which the assessment differed; 14 of these involved WALS including the language as having antipassives, but the structures not meeting the criteria for ‘antipassive’ that are used in this study (see Chapter 3), and 8 where either WALS did not consider the same structure considered here, or WALS took the same structure into account but did not consider it antipassive (it is not clear from the documentation). Those languages are listed below, with the full amount of information available from WALS, contrasted with a comparable collection of facts from this study. Almost all of the structures in these languages will be discussed in the following sections.

In addition to those languages in Table 4.4 below, there are other cases where both datasets agree that the language has antipassives, but disagree about the features that it has. That type of difference is not catalogued here, but can be extrapolated from the dataset in Appendix A and Appendix B.

TABLE 4.4. Differences in categorization between WALS and this dissertation

Language	WALS characterization	Current characterization
Russian	No antipassive	Patientless; partially productive
Latvian	No antipassive	Patientless (implied human patient); not productive
Ainu	No antipassive	Patientless; productive
Georgian	No antipassive	Patientless; partially productive
Otomí	No antipassive	Patientless; not productive
Murle	No antipassive	Patientless; partially productive
Macushi	No antipassive	Patientless; productive (?)
Hixkaryana	No antipassive	Patientless; productive
Kabardian	Oblique patient; productive	No antipassive
Kapampangan	Implicit patient, productive	No antipassive
Paiwan	Oblique patient, productive	No antipassive
Gooniyandi	Oblique patient; partially productive	No antipassive
Basque	Oblique patient; partially productive	No antipassive
Jakalteko/Popti'	Implicit patient; productive	No antipassive
Choctaw	Oblique patient	No antipassive
Halkomelem	Oblique patient; productive	No antipassive
Thompson	Implicit patient; partially productive	No antipassive
Chechen	Oblique patient; productive	No antipassive
Päri	Oblique patient	No antipassive
Nez Perce	Oblique patient	No antipassive
Yukulta	Oblique patient	No antipassive
Sanumá	Oblique patient	No antipassive

Most of the differences here are attributable to two factors: the use of a middle voice maker as an antipassive (see Chapter 8) and symmetrical, ambitransitive, or equipollent sets of patterns. Both of these will be dealt with in more detail later, but a short explanation is merited here. First, all of the structures WALS calls antipassive have oblique patients (including Kapampangan, Jakalteko, and Thompson, even though they are not characterized that way). In many of these cases, the oblique marker on the patient is the only antipassive marker; in some of these languages there is also a change in the verb stem to indicate it also is intransitive. Indeed, many may call these antipassives. However, it should be recalled from the discussion in Chapter 3 that if there is nothing that can be called an antipassive marker, all patterns are equally marked (or that the primary correspondence is not with a transitive pattern), then it is difficult to claim that there is directionality, i.e., that one structure is more basic than the other. For this reason, this study has excluded equipollent and symmetrical pairs of structures.

In contrast, notice that all of the structures included as antipassive in the present study that are absent from WALS are patientless. All of these structures involve voice morphemes, mainly middle voice morphemes, which have gained antipassive meaning (agent-preserving, patient-deleting). This is why it has been termed ‘middle expansion’ here, where an antipassive develops out of an existing voice construction that was patient-preserving rather than agent-preserving. While the core meaning in many cases is likely more middle than antipassive, and these are therefore not prototypical examples of antipassive constructions, they nevertheless fulfill the semantic and structural criteria used that allow them to be considered a type of antipassive.

CHAPTER 5. ANTIPASSIVE CORRELATIONS

Now that the foundations have been laid in terms of understanding the dataset and the sample (Chapter 4), it is possible to discuss findings about the distribution of antipassives. Of the 445 languages in this sample, 126 have antipassives based on basic, cross-linguistically comparable structural features of antipassives outlined in Chapter 3. Those criteria are repeated below for ease of reference.

1. There is an overt marker for the antipassive construction;
2. The antipassive clearly corresponds to an unmarked or less marked bivalent transitive construction;
3. The agent of the transitive construction is preserved, while the patient is either inexpressible or optionally expressed in an oblique phrase;
4. The antipassive construction is intransitive.

See Chapter 3 for a discussion of why these features were chosen as basic cross-linguistic diagnostics for antipassives. However, keep in mind that this delineation of languages which have and lack antipassives is a suggestion, based on characteristics here considered either central to the definition or necessary for performing comparable cross-linguistic comparison. A discussion of the distribution of different constructions with more or fewer antipassive-like features are discussed in Chapter 8.

Those 126 languages with antipassives represent 28.3% of the current sample. As discussed in section 4.1, this sample specifically targeted languages suspected of having antipassive constructions, so the percent of languages globally with antipassive constructions is likely lower. For comparison, 25% of the 194 languages in the WALS sample for antipassives (Polinsky 2013) have antipassive constructions, which is slightly lower than the percentage from the sample here.

In section 5.1 I look at the distribution of antipassives in the sample by region and by genetic classification. Then in section 5.2 I investigate several possible correlations between the presence of antipassive constructions and various basic word order patterns, locus of grammatical marking, and valency marking in general. In section 5.3 I discuss possible correlations between antipassives and other features, including passive, switch-reference and differential object marking. Section 5.4 gives a summary of the findings for this chapter.

5.1 DISTRIBUTION OF ANTIPASSIVES

As discussed in section 4.1, the world was divided into six roughly geographic regions for the purpose of this study: Africa, Asia, the Americas, Australia, Europe, and the Pacific. Figure 5.1 below shows the number of languages with antipassives by region, along with the total number of languages sampled in that region.

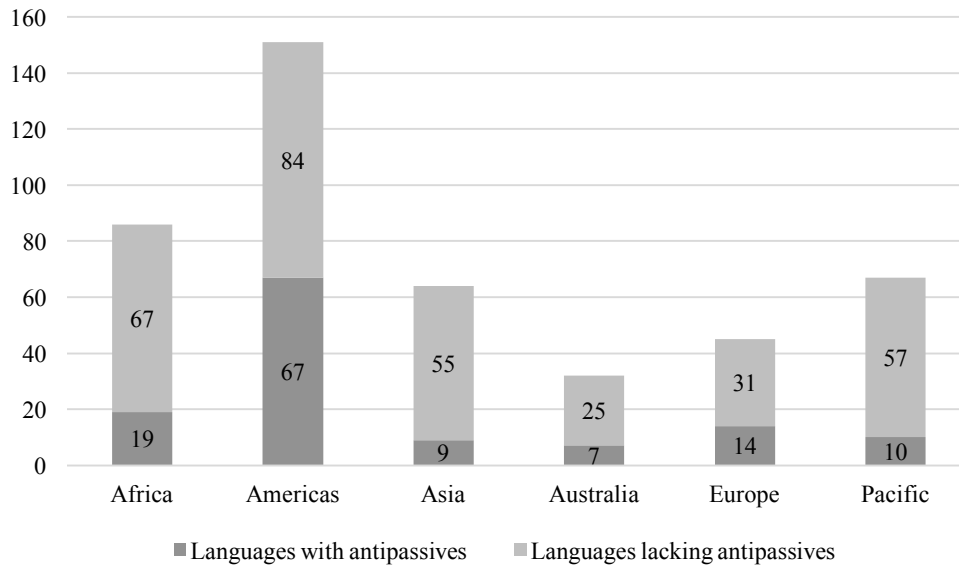


FIGURE 5.1. Languages with antipassives by region

First, all of the regions as defined in the sample include languages with antipassives; there is no large asymmetry in the distribution where antipassive structures are only found in some regions and not others. However, the distribution is not uniform either. There appears to be a concentration of languages which have antipassive structures in the Americas, where such languages make up 44% of the languages sampled for that region. At the other end of the spectrum, despite the large area and linguistic diversity it encompasses, antipassives are only present in 14% of the languages in Asia. While there are some significant differences between regions (e.g., Americas vs. Asia, $\beta: 1.25 \pm 0.45$, $p < 0.01$) when all other factors are taken into account,¹⁶ region is not a consistent or strong predictor of whether a language has antipassives.

¹⁶ All beta values, standard errors, and p-values reported in this chapter were calculated using a generalized linear regression model that was fit to the presence or absence of antipassives in a language, with region, word order, alignment and locus as predictors. Genetic affiliation is closely tied to region, and was not included in the model for convergence reasons. See the

The map in Figure 5.2 below provides a coordinate-based geographic representation of the distribution of languages with and without antipassives across the globe. A blue icon indicates that the language has an antipassive, while maroon icons indicate that the language lacks an antipassive. Although the version of the map in this dissertation is a simple jpg file, an interactive version of the map is available on my website: rainaheaton.com. The interactive version of the map allows users to zoom in and zoom out, and when a user hovers over different points, it displays the name of the language and whatever appears in the description column in the full dataset (see Appendix A).

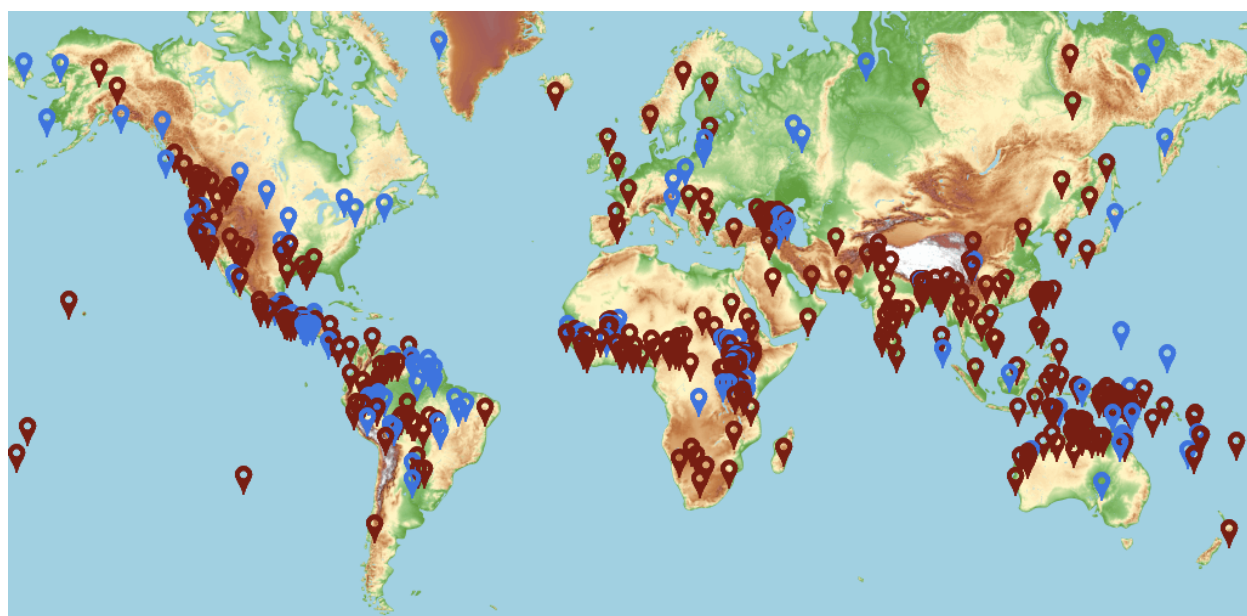


FIGURE 5.2. Map of languages in the dataset with and without antipassive constructions

The second way to look at the distribution of antipassives globally is by genetic affiliation. While typological features can cluster in geographical areas (linguistic areas, *Sprachbünde*), they can also be found in groups of languages, shared due to common inheritance. Of the 144 higher-level genetic groups included in the sample, 39 contain at least one member that has an antipassive construction (although this includes lexicalized antipassives, see Chapter 8), which is 27% of the genetic diversity in the sample. These groups are given in Table 5.1 below, along with how many languages in that group have antipassives, the total number of

discussion of genetic affiliation in this section. All statistical models are provided in Appendix D.

languages in that group, and the percentage in the final column. Genetic groups are listed in alphabetical order, with isolates at the bottom.

The above 40 genetic groups constitute all families found here to contain members with antipassives. However, some families have the antipassive as a feature shared among many members of the family, while in others the presence of an antipassive construction appears unusual. Of the above 40 groups, 6 are isolates (out of the 32 total isolates in the complete sample), and 4 other groups (Matacoan, Eastern Jebel, Chinookan, and Harákmbut-Katukinan) only had one member in the sample. If these groups are excluded (since nothing can be said about the prevalence of antipassives in those families), the average percent of languages per group with antipassives is 41.9%. This is still less than half, suggesting that while genetic relationship is a good predictor of antipassives in some specific families, in general the odds are less than 50/50 that a given language will have antipassives, even if other languages in the family do. This is reflected by the lack of a statistically significant correlation between genetic group and antipassivization.¹⁷

On the other hand, there are 7 groups with a sample greater than one for which *all* the sampled languages contained antipassives: Chukotko-Kamchatkan, Cariban, Eskimo-Aleut, Iroquoian, Jê, Siouan and Yukaghir. Although this may be an artifact of the sampling technique and there are members of these language groups which lack antipassive constructions, there is still a very strong correlation between genetic group membership and the presence of antipassives for languages in these families. In contrast, there are likewise 9 groups for which most of the languages in the group lack an antipassive construction: Arawakan, Austroasiatic, Chibchan, Nilotic, Otomanguean, Salishan, Tibeto-Burman, Timor-Alor-Pantar, and Uralic, which suggests that synchronically the antipassive is not a pervasive feature for these families.

¹⁷ Statistical significance was calculated using a generalized linear regression model, which did not show significance between genetic affiliation and antipassivization. Attempts to include other factors caused the model not to converge.

TABLE 5.1. Genetic groups with evidence of antipassives

Region	Genetic group	# languages with antipassives	# languages in the sample
Asia	Ainu (isolate)	1	1
Americas	Algonquian	3	4
Americas	Arawakan	1	4
Americas	Athabaskan-Eyak-Tlingit	3	6
Asia	Austroasiatic	1	6
Pacific	Austronesian	9	41
Americas	Cariban	9	9
Americas	Chibchan	1	4
Americas	Chinookan	1	1
Asia	Chukotko-Kamchatkan	2	2
Africa	Eastern Jebel	1	1
Americas	Eskimo-Aleut	3	3
Americas	Guaicuruan	1	2
Europe	Indo-European	6	22
Americas	Iroquoian	2	2
Americas	Haida (isolate)	1	1
Americas	Harákmbut–Katukinan	1	1
Americas	Jê	4	4
Europe	Kartvelian	1	2
Americas	Matacoan	1	1
Americas	Mayan	20	23
Americas	Mixe-Zoquean	1	2
Americas	Movima (isolate)	1	1
Europe	Nakh-Daghestanian	5	9
Africa	Niger-Congo	10	34
Africa	Nilotic	2	8
Americas	Otomanguean	2	5
Australia	Pama-Nyungan	7	14
Americas	Pano-Tacanan	6	7
Americas	Salishan	0	9
Americas	Seri (isolate)	1	1
Americas	Siouan	3	3
Africa	Songhay	2	4
Africa	Surmic	4	7
Americas	Takelma (isolate)	1	1
Asia	Tibeto-Burman	3	27
Pacific	Timor-Alor-Pantar	1	4
Europe	Uralic	2	6
Americas	Washo (isolate)	1	1
Asia	Yukaghir	2	2
	Total:	126	287

In the geographical distribution of antipassive constructions discussed above, we can see that the geographical clustering can be narrowed along genetic lines. If we look only at those groups which have a high incidence of antipassives within the group sampled (greater than 50%, excluding groups with only a single sampled member, but including isolates), the picture is a bit clearer:

TABLE 5.2. Genetic groups with greater than 50% presence of antipassives in the sample by region, excluding multi-member groups with only a single member sampled

Americas	Asia	Africa	Europe
Algonquian	Ainu	Surmic	Nakh-Daghestanian
Cariban	Chukotko-Kamchatkan		
Eskimo-Aleut	Yukaghir		
Iroquoian			
Haida			
Jê			
Mayan			
Movima			
Pano-Tacanan			
Siouan			
Seri			
Takelma			
Washo			

The Americas contain four times as many genetic groups where antipassives are quite prevalent (i.e., 50% more of the sample contains them) than any other region. Based on this information, it seems likely that the Americas contain a greater number of genetic groups with a high incidence of antipassives than other regions of the world. There are of course some caveats associated with this, primarily that when more languages are sampled, these groups may no longer have upwards of 50% of the languages in the group containing antipassives. For example, Siouan is a relatively large family, and it is possible that a smaller subset than that suggested by the sample here contain something that can be called an antipassive, while all other members lack antipassives. However, this serves at least a preliminary hypothesis about the genetic and geographical distribution of antipassives, to be confirmed or disproven by additional data points.

5.2 CORRELATIONS WITH TYPOLOGICAL FEATURES

The next two sections investigate potential correlations between the presence of antipassives in a language and various other typological factors. This section focuses on basic word order, locus of grammatical marking, and coding of valency, while the last section is dedicated to the correlation between antipassives and passives, switch-reference and differential object marking.

5.2.1 BASIC WORD ORDER

Since Greenberg's seminal work on word order correlations in the world's languages (Greenberg 1963), discussions of basic word order have been very important in the typological literature (see also Vennemann 1974; Lehmann 1978; Hawkins 1990; Dryer 1991, 1992). While there is not necessarily any reason to believe that antipassives are themselves correlated with any particular dominant word order, it has been claimed that there is a correlation between ergativity and non-verb-medial orders (e.g., Mahajan 1997:38, see section 6.2). In a view that connects antipassives with ergative languages, we might expect to see a pattern connecting word order and antipassives, via ergativity.

Figure 5.3 shows the languages in the sample categorized by dominant word order. If there is no order which can be called 'basic' or 'dominant', then the order was termed 'flexible' (termed as such not to indicate that word order is not flexible in languages that have a basic order, but to avoid the misleading term 'free', since the various orders in these languages still tend to have pragmatic effects, and as such they are not completely free). Additionally, there were 24 languages in the sample which were reported to have multiple dominant word orders, or there are different basic orders reported for different dialects (see section 4.2 on the gathering of word order data). However, for statistical purposes, these 24 languages were assigned to a single word-order category based on either frequency of occurrence or the word-order profile of related languages.

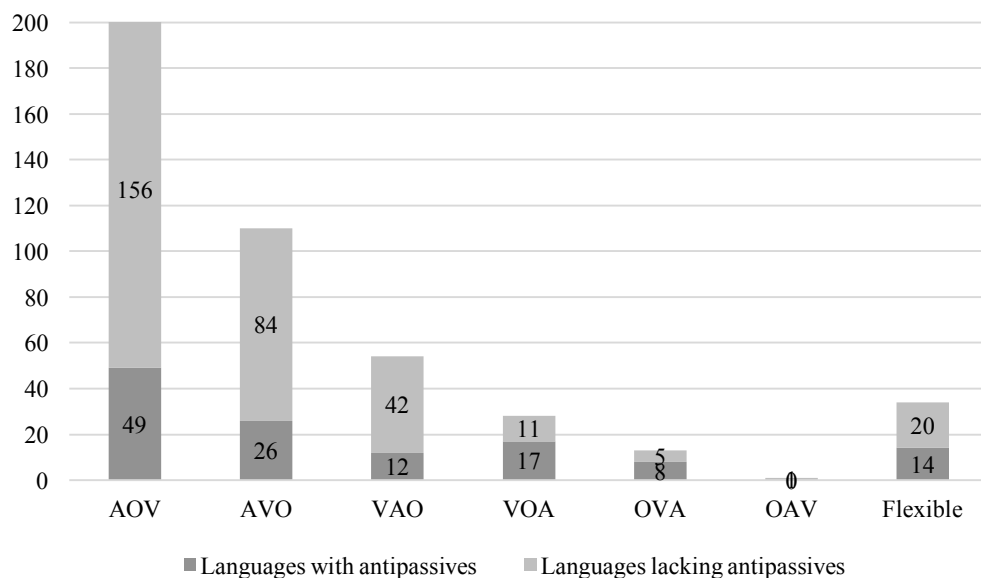


FIGURE 5.3. Languages in the sample by basic word order

Languages with antipassives in this sample have all possible orders except OAV, which is not surprising since there is only one OAV language in this sample, and there are only a few identified worldwide. The distribution of dominant word order in this sample is very much on par with the distribution of word order among languages in general (see WALS (Dryer 2013) for a comparison, available online at <http://wals.info/chapter/81>). There is a greater proportion of languages with antipassives and VOA, OVA, and highly flexible word orders (~40-60%) than with other orders (~22-24%). This difference is significant (e.g., AOV vs. VOA with respect to antipassives, $\beta: 1.45 \pm 0.54$, $p < 0.01$).

There are two related comparisons which also merit examination: the order of the verb and the object, and the issue mentioned above about verb-medial versus verb-peripheral correlations. First, if those languages with highly flexible word orders and which have both basic VO and OV patterns are omitted, then we can check to see if there is any correlation between antipassives and the order of the verb and the object. In the set of languages with antipassives, 55 (49.5%) are VO and 56 (50.4%) are OV. This contrasts with the set of languages which lack antipassives, 133 (45.9%) that are VO and 157 (54.1%) that are OV. This suggests that a somewhat greater proportion of languages with antipassives are VO than OV, although this difference is not statistically significant.

Likewise, if we once again exclude those languages with flexible word order and those which have both verb-medial and verb-peripheral dominant word orders, it does not appear that there is any significant correlation between antipassives and verb-peripheral basic word orders. Within the set of languages which have antipassives, there are 34 with verb-medial orders and 83 with verb-peripheral orders (70.9%). This is comparable to the proportion in the non-antipassive data, with 84 languages with verb-medial orders and 196 with verb-peripheral orders (70%). Also, as shown in Figure 5.3 above, there are 26 languages in the sample that contain antipassives and have basic AVO word order. Given the set of entailments mentioned above, that if ergative languages have verb-peripheral basic orders and if antipassives only appear in ergative languages, this would appear to be an anomaly. Therefore, either the first claim is false, and ergative languages may have basic verb-medial orders, or antipassive structures are not highly correlated with ergativity. This point is taken up again in Chapter 6.

5.2.2 LOCUS OF GRAMMATICAL MARKING

The second type of correlation between antipassives and other typological features under investigation here involves the locus of grammatical marking. Nichols (1986) outlines a categorization of languages based on where they morphologically mark grammatical constituency. This can be at the phrase level, the clause level, or the sentence level, but for our purposes the focus is only on clause-level relations. At the clause level, languages may mark grammatical relations on verbs via agreement (head-marking), on the nominal arguments via case (dependent-marking), on both nouns and verbs, or neither (in which case linear order is often important in disambiguating the roles of the arguments of verbs). Nichols points out that most linguistic work to date has focused on dependent-marking languages, largely due to the prominent position of Indo-European languages. In spite of this, she observes that more languages tend to be head-marking than dependent-marking (which is an observation corroborated here). While it has not necessarily been suggested that antipassives might correlate with the locus of grammatical marking, much of the discussion of antipassivization in the literature has centered on Dyirbal, which is dependent-marking, and some of the northern languages in the Americas, such as Western Greenlandic, which are both head- and dependent-marking. It is therefore prudent to look at how antipassive structures interact with different marking types in order to get a fuller picture of how the same type of construction is realized in

languages which code arguments in different ways.

Nichols used a scalar system that ranked languages as more or less head- or dependent-marking based on the proportion of head-marking vs. dependent-marking structures a language has. Her typology has been somewhat simplified here to provide more generalized categories. The following calculations only categorize languages based on clause-level marking of grammatical relations, the aspect most likely to correlate with antipassivization. The following figure graphically depicts the number of languages in the sample by locus of marking and whether they contain antipassive structures.

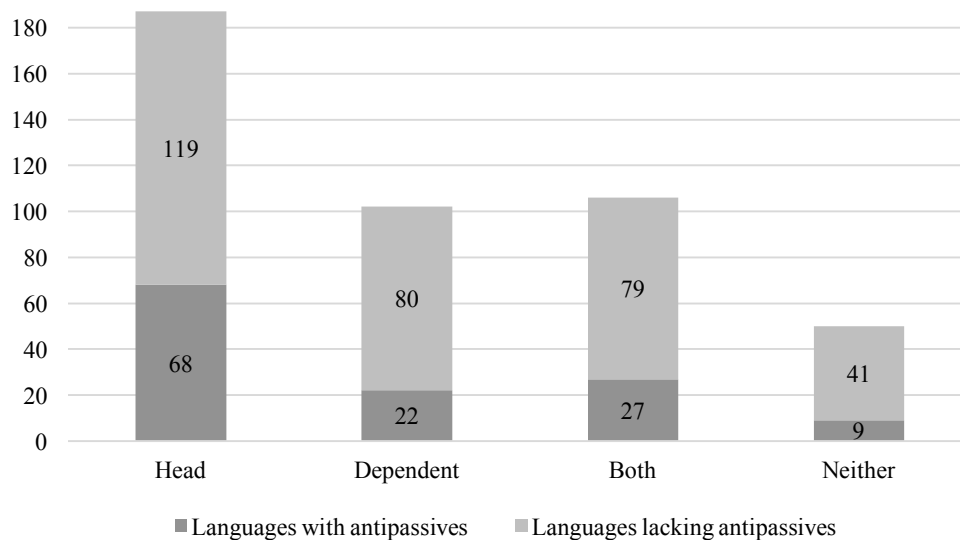


FIGURE 5.4. Languages in the sample by locus of grammatical marking

Notice that the head-marking strategy was the most common across the whole sample, with approximately equal numbers of languages that are dependent-marking and both head- and dependent-marking. Given the fact that for a language to qualify in this study as having an identifiable antipassive construction there had to be an antipassive marker (not just an obliquely marked patient, see Chapter 3), it was possible that languages which prefer verbal marking would be favored. However, this does not appear to be the case, as it was also common for primarily or exclusively dependent-marking languages to have overt antipassive voice morphology.

The other possibility was that by requiring antipassive derivation and detransitivization to be visible (morphologically encoded), this would de facto favor languages with more participant

marking in general. This also does not seem to be the case, or we might expect more languages in the ‘both’ category to have antipassives, since they make use of both available marking strategies. On the other hand, the proportion of languages which are neither head-marking nor dependent-marking that have antipassives is smaller than the proportion of languages without antipassives. While this could also be an artifact of the definition (or likely any structural definition of antipassive), it is clearly possible for a language to have little marking for the roles of arguments but still have antipassives, since there are 9 languages in the sample that represent this category. Indeed, antipassives can appear in languages of all marking types, and there is no significant correlation between any particular marking type and the presence of antipassives based on this sample. Examples of antipassives in languages with each marking orientation are given below.

In languages which are both head-marking and dependent-marking, the case marking shifts from either an ergative/absolutive or nominative/accusative case frame to an absolutive/oblique or nominative/oblique case frame, where the oblique argument is omissible. The verb receives an antipassive marker and verbal cross-reference markers, depending on how many arguments are normally indexed, either going from two agreement markers to one (ERG-ABS \rightarrow ABS, or NOM-ACC \rightarrow NOM), or, if the language is ergative and only indexes the subject, then ERG \rightarrow ABS. Western Greenlandic exemplifies an ergative both head- and dependent-marking language with an antipassive. In the Western Greenlandic example (5.1b), the agent ‘Jacob’ is absolutive (null-marked), while the patient ‘stone’ is marked with the instrumental. The verb not only has an antipassive marker, it also overtly signals its intransitive status with the intransitive indicative *-vu* and absolutive-only pronominal cross-reference.

Western Greenlandic:

(5.1a) Jaaku-p ujarak tigu-a-a
 Jacob-ERG stone.ABS take-INDIC.TR-3SG.ERG/3SG.ABS
 ‘Jacob took [a/the] stone’

(5.1b) Jaaku ujarak-**mik** tigu-**si-vu-q**
 Jacob.ABS stone-INST take-AP-INDIC.INTR-3SG.ABS
 ‘Jacob took [a/the] stone’ (Bittner 1987:194)

Tundra Nenets exemplifies a non-ergative language with both head- and dependent-marking which has an antipassive. Tundra Nenets has nominative/accusative case marking, as shown in

(5.2a). Eastern varieties have patientless antipassives, while western varieties allow a plural patient marked obliquely with the prolocative case, as in (5.2b) below.

Tundra Nenets:

(5.2a) Doka kniga-m tolaə-d°m
1SG book-ACC read-1SG
'I read many books' (Nikolaeva 2014:162)

(5.2b) Kniga-**qm°na** tola-**nc'o**-rka
book-**PL.PROL** read-**AP-COMP**
'He reads books [from time to time]' (Nikolaeva 2014:226)

Languages which are primarily or entirely dependent-marking exhibit the same changes in case marking discussed above, but only show detransitivization in the verb via the antipassive morpheme. The Yidj construction in (5.3b) below exemplifies the antipassive in a dependent-marking ergative language. The optional oblique patient is marked by the locative case.

Yidj:

(5.3a) Waguja-ŋgu jugi gunda-l
man-ERG tree.ABS cut-PRS
'The man is cutting a tree'

(5.3b) Wagu:ja gunda-:**ji-ŋ** jugi-:**l**
man.ABS cut-**AP-PRS** tree-**LOC**
'The man is cutting a tree' (Dixon 1994:59-60)

All but two of the languages in the sample (Russian and Tira) which are primarily dependent-marking and have antipassives are ergative, and both of those non-ergative languages have only patientless antipassive constructions (i.e., there is no possibility of including the patient in an oblique phrase).

Russian:

(5.4a) Sobaka kusa-jet pochtaljon-a
dog.NOM bite-3SG.PRS postman-ACC
'The dog bites the postman'

(5.4b) Sobaka kusa-jet-**sja**
dog.NOM bite-3SG.PRS-**DETR**
'The dog bites [people, habitually]' (modified from Comrie 1985:319)

Head-marking languages show antipassivization in a variety of ways, depending on how head-marking they are and whether they are ergative. A language with both subject and object cross-reference shows detransitivization via the loss of one of these markers. A language which only cross-references the subject would show a change from A to S only if it is ergative (or tripartite, or some combination of the two), leaving the antipassive marker as the only morphological evidence of the antipassive construction in non-ergative languages. For all head-marking languages, the patient (if present) may gain an oblique marker, as in K'ichee' in (5.5b).

- K'ichee':
- (5.5a) K-Ø-a-yoq' ri a-na:n
INCOMPL-3SG.ABS-2SG.ERG-mock DET 2SG.POSS-mother
'You mock your mother'
- (5.5b) K-**at**-yoq'-**on** č-e:h ri a-na:n
INCOMPL-**2SG.ABS**-mock-**AP** **OBL**-3SG DET 2SG.POSS-mother
'You mock your mother' (Campbell 2000:266-7)

There are 23 non-ergative head-marking languages with antipassives, but as with dependent-marking languages, the antipassives in these languages are all patientless. In Tamambo (5.6b), the antipassive prefix carries the additional meaning that the subject habitually performs the action, or is inclined to perform the action.

- Tamambo:
- (6.6a) Hambuhani mo kamwe na batuivanua
volcano 3SG destroy DET village
'The volcano destroyed the village' (Jauncey 2011:50)
- (6.6b) Tina-ra mo **vari**-tuwa asena
mother-3PL.POSS 3SG **AP**-smack INTEN
'Their mother is inclined to smack a lot' (Jauncey 2011:124)

Finally, while it is certainly less likely that detransitivization is identifiable in a language which does not morphologically mark grammatical relations, it is still possible for such a language to have antipassives. There were 9 such languages in the sample, of which 6 come from Africa, 2 from the Pacific, and 1 from Asia. None of them allows the overt expression of the patient argument in an oblique phrase, and none of them is ergative. In most of these languages the antipassive is not productive. Both of the examples below are from languages of Africa.

Soninke:

(5.7a) Sòró-n dà yillê-n pátá
people.PL-DEF TR millet-DEF cut
'The people harvested the millet'

(5.7b) Sórô-n pátá-ndì
people.PL-DEF cut-AP
'The people harvested (the crops) (Creissels 2012:7, 1991:10)

Kwegu:

(5.8a) A-koh-i-yaa dowada
1-fish-SG-PFV dowada
'I fish dowada (fish sp.)'

(5.8b) A-koh-(o)ne-yaa
1-fish-AP-PFV
'I fish (intransitive)' (Hieda 1998:365)

5.2.3 OTHER VALENCY MARKING

It is possible that not only marking type but also sheer amount of valency marking interacts with the presence or absence of antipassives in a given language. In general linguistic parlance, it is not uncommon to find mention in grammars of what a particular language 'pays attention to' or 'cares about', i.e., what morphosyntactic traits are salient in the language. For example, it is a fact that some languages have a large amount of machinery involving reference tracking and discourse topic/focus, while others almost entirely lack it. In that case the language 'pays attention to' topic/focus, while another may not have any special way of marking topics as opposed to focused constituents, etc. This is also true of transitivity. There are many languages in which most verbs are ambitransitive¹⁸ or 'labile', in that they have no inherent transitivity specification and can freely be used as either transitive or intransitive verbs (e.g., Kabba, Mian, and many more). However, there are others that 'care' a lot about transitivity, where most verbs have a set transitivity value (e.g., Mayan languages, Yidij). Languages of this type require

¹⁸ Ambitransitivity here refers to any root which can be used as a transitive or an intransitive verb without the addition of any transitive or intransitive voice marking. As such, ambitransitivity can exist in languages which lack inflectional elements which indicate the transitivity of the verb (e.g., English), and languages in which transitivity is signaled by other inflectional elements (e.g., Yup'ik (cf. Mithun 2000)). However, note that some use the term 'ambitransitive' to refer only to those cases where there is no inflectional or derivational change between the transitive and the intransitive forms, which is not the sense in which I use it here.

dedicated morphosyntactic marking to signal a change in the valency of a verb. It stands to reason that a language which has set transitivity values for verbs and requires valency-altering derivations would be more likely to have an antipassive valency-changing derivation than a language that has mainly ambitransitive verbs and therefore does not need to encode valency change.

However, it is not necessarily obvious how to measure quantitatively how much a language ‘cares’ about transitivity.¹⁹ As a rough approximation, those languages which were described as having primarily rigid transitivity classes for verbs and those which were reported to have verbs with more fluid transitivity values (many ambitransitive verbs) were totaled and correlated with the presence or absence of antipassives. The number of languages which can be included in this particular metric is quite a bit smaller than the total sample simply because it was not reported or was not integral to the grammar for the majority of sampled languages.

There were 87 languages in the sample which were reported to have rigid transitivity classes for verbs, with few to no labile/ambitransitive verbs, and an additional 57 languages which reported that many or most verbs were labile, for a total of 144 languages. Of the 87 languages with rigid transitivity, 53 (60.9%) have antipassives. This stands in stark contrast with the facts for languages with more ambitransitive verbs, where only 3 languages (5.3%) with fluid transitivity contain antipassives. This result establishes what logically makes sense, which is that antipassivization, like other valency-altering processes, are more prevalent in languages which have fixed transitivity values for verbs. See Chapters 6 and 7 for a discussion of fixed transitivity values with respect to alignment.

The other way to look at valency is with respect to directionality and inherent argument structure. Valence orientation, in the sense of Nichols et al. (2004), refers to which end of the transitivity spectrum languages tend to treat as basic or underived. Languages may be predominantly transitivizing, where intransitives are treated as basic and transitives are more

¹⁹ I initially attempted to measure this in a wider sample of languages by totaling morphologically coded valency alternations, on the assumption that languages with more coded alternations require them because they have more rigid transitivity values for verbs. However, there was no significant correlation between number of coded valency alternations and antipassives. Since it is possible that number of coded valency alternations is a poor metric for either rigidity of transitivity or valence orientation, I have instead reported here a more reliable metric, i.e., is the language described as having rigid transitivity classes.

complex and derived, or predominantly detransitivizing, where transitives are treated as basic and intransitives tend to be derived. There are also languages which treat both transitives and intransitives as derived (equipollent derivation, or ‘neutral’ in Nichols et al.), or both are basic (ambitransitive verbs, ‘indeterminate’ in Nichols et al.). The idea under investigation here is that languages which have a tendency to treat intransitive verbs as basic are more likely to have transitivizing operations, while languages which treat transitive verbs as basic are more likely to have detransitivizing operations such as antipassives.

To investigate this idea, I looked at what Nichols et al. (2004) refer to as ‘whole-language types’, whether a language can be considered to have an overall valency orientation. They determined a given language’s overall valence orientation by looking at 18 semantically related monovalent and bivalent lexical pairs across 80 languages, then determining which strategy (transitivization, detransitivization, neutrality/equipollence, or ambitransitivity/indeterminacy) is most prevalent. Since it was infeasible to collect the necessary lexical data for all 445 of the languages in the dataset, I look here only at the 39 languages which are in this dataset and also in Nichols et al. (2004)’s sample, and have therefore already been assigned a valence orientation. Of these 39 languages, 3 are detransitivizing, 4 are transitivizing, 5 are indeterminate, 11 are neutral, 4 are neutral in combination with another orientation,²⁰ and 12 are none, presumably lacking any dominant valence orientation (cf. Nichols et al. 2004, Appendix 3). Although they claim that 10 languages in their dataset have antipassives (Nichols et al. 2004:171), only 6 of the 39 languages in both samples have antipassives by the criteria used here. Three of these six languages are of the detransitivizing type (Huastec, Russian, Maa (Maasai)), while the other three (Chukchi, Nenets, Ojibwe) lack any dominant valence orientation (“none”). This sample is so small that it is difficult to confirm the hypothesis that detransitivizing languages are more likely to have antipassives, but given that half of those languages with antipassives are also detransitivizing suggests this may indeed be a tendency.

5.3 CORRELATIONS WITH OTHER FEATURES

While the previous sections have explored correlations involving geographical location, genetic relationship, and various whole-language typological features, this section addresses

²⁰ Arabic and Basque are neutral/transitivizing, Tiwi is neutral/indeterminate, and Greek is neutral/detransitivizing.

other single features which seem like they might in some way be related to or interact with antipassivization. These include the passive voice (5.3.1), switch-reference (5.3.2), and differential object marking (5.3.3).

5.3.1 PASSIVE

As the name ‘anti-passive’ suggests, much of the early literature about antipassives conceptualized them as a mirror image of passive structures in both form and function (e.g., Silverstein 1972, 1986), as discussed in section 2.1.1.1. This view was then extended to include alignment, with the observation that many nominative-accusative languages have passives, while ergative-absolutive languages tend to have antipassives. The goal of this section is not to discuss alignment (see Chapters 6 and 7), but rather to elucidate the distribution of passive structures with respect to antipassive structures, as well as how passives relate to ergativity.

Of the languages in this sample for which information on non-antipassive valency-changing constructions was available, 131 have morphologically marked passive constructions. Of those 131 languages, 43 (32.8%) have both passive and antipassive derivations. These languages are found in every region and represent 17 different genetic groups. This is a substantial percentage, particularly since it excludes various constructions described as ‘passive-like’ in the literature. This was a necessary precaution as passive constructions were not independently evaluated like antipassive constructions were.

Mayan languages make up a substantial portion of languages with both passives and antipassives (20), and are widely cited as examples of this co-occurrence. In fact, most Mayan languages have multiple passives, and they allow the agent to appear in an oblique phrase. The following example comes from Q’anjob’al.

Passive:
 (5.9a) Max-Ø k’och-**lay** ixim nal (y-uj cham winaq)
 COMPL-3SG.ABS shell-PASS CLF corn 3SG.POSS-by CLF man
 ‘The corn was shelled (by the old man)’ (Mateo-Toledo 2008:70)

Antipassive:
 (5.9b) Max-Ø tek’-**waj** no chej (y-in no tx’i’)
 COMPL-3SG.ABS kick-AP CLF horse 3SG-at CLF dog
 ‘The horse kicked (at the dog)’ (Mateo-Toledo 2008:74)

Passives are also found in other languages with antipassives, including a number of Western Nilotic languages. The example below is from Burun, where the passive voice is indicated by a suffix and a change from OVA to SVObl word order. The antipassive in Burun is likewise SV, but does not allow the patient to be expressed. Intransitivity is additionally indicated by a change in the verb root vowel from [o] to [u]. Diaeresis in (5.10) signals that the vowel is [+ATR].

Passive:
 (5.10a) Lälbäär yööl-**tī** geel
 giraffe 3SG.chase-**PROG.PASS** lion
 ‘The giraffe is being chased by the lion’ (Schröder 2006:102)

Antipassive:
 (5.10b) Geel yүүл-**ir**
 lion 3SG.chase.**PROG-AP**
 ‘The lion is chasing’ (Schröder 2006:96)

In addition, there are also a number of languages which have middle voice morphemes that cover both passive and antipassive functions. This is true of some well-known languages such as Russian, where the middle morpheme *-sja* can signal antipassive as well passive, where in passive use it allows the agent to appear in an oblique phrase.

Passive use:
 (5.11a) Dver’ otkryva-jet-**sja** shveitsar-om
 door.NOM open-PRS.3SG-**DETR** doorman-INST
 ‘The door was opened by the doorman’ (modified from Comrie 1985:328)

Antipassive use:
 (5.11b) Sobaka kusa-jet-**sja**
 dog.NOM bite-PRS.3SG-**DETR**
 ‘The dog bites [habitually]’ (modified from Comrie 1985:316)

With respect to alignment, of those 43 languages identified here as having separate passive and antipassive constructions, 30 have some degree of ergativity. This includes all of the languages above, with Mayan exemplifying languages which exhibit ergativity with respect to most structures. If we continue to exclude languages where the same morpheme has both passive and antipassive functions (e.g., as in Slavonic (nominative-accusative) and Cariban (ergative features)), then this leaves 13 languages in the sample which have both passive and antipassive

derivations and lack ergativity. These languages belong to 9 different genetic groups, and are found in all regions except Australia and the Pacific, although primarily in Africa and the Americas. All but one of these languages have only patientless antipassive constructions. The African nominative-accusative language Maa (Eastern Nilotic) has a relatively prototypical patientless antipassive construction as shown in (5.12b), as well as an impersonal passive-type construction, where the single argument receives accusative case, as shown in (5.12a).

- Passive:
- (5.12a) ε -gírá-[↓]í áa-tur ε n=kóp peê e-un-í
 3-PROG-IMP.PASS INF.PL-dig SG.FEM=ground.ACC so 3-plant-IMP.PASS
- im=poošhéc
 PL.FEM=beans.ACC
 ‘The ground is being dug so that the beans can be planted’

- Antipassive:
- (5.12b) Óre siî apá ɪl-Máásâi n-é-m-é-púrr-**isho**
 DISCONT just before PL.MASC-Maasai CONN1-EP-NEG-3-rob-AP
 ‘A long time ago Maasais did not steal’ (Payne 2016)

Passive constructions have also been reported in Surmic languages, although they are less prototypical passives in that they are still morphologically transitive. The verb has a passive marker, but also shows agreement for both subject and object. However, both subject and object agreement markers refer to the single argument in the clause, and the agent cannot be expressed. This is illustrated in the example below from Tirmaga (Surmic). If these constructions are excluded from the above count, then there are 40 languages with separate passive and antipassive constructions, 10 of which are non-ergative and represent 8 separate genetic groups.

- Passive-like construction:
- (5.13a) **Ka**-dák-t-ey-o
 PASS-hit.PFV-PL.SBJ-1PL.OBJ-PF.PFV
 ‘We were hit’
- Antipassive:
- (5.13b) Kó-kóh-**inén**-Ø-tɔ
 1.SBJ-weed.IPFV-AP.1/2-SG.SBJ-PF.IPFV
 ‘I am weeding’ (Bryant 1999:93-94)

These findings suggest that it is not only possible but in fact relatively common for languages to have both passive and antipassive derivations, with about a third of the languages with antipassives in this sample also having a passive derivation. Although these languages are mostly found in Africa and the Americas, they are not limited by genetic group or by alignment type.

5.3.2 SWITCH-REFERENCE

Switch-reference is a discourse-tracking device which marks morphology when the subject of two adjacent clauses are coreferential (and/or when they are not). Dixon (1994:154) has proposed that languages with switch-reference and languages with ‘pivot-feeding’ antipassives (aka syntactic antipassives) should belong to mutually exclusive sets. The reasoning for this is that there would be no need to derive nominative or absolutive arguments for the purpose of co-reference in coordination, subordination, etc. because there is no potential for ambiguity: switch-reference essentially signals what an antipassive would signal in these cases; it identifies which referent is the same (or different) between two successive clauses. This reasoning would of course not apply to languages which have extraction-based syntactic ergativity, as opposed to coordination-based syntactic ergativity. Dixon cites Diyari as an example of a language which has both antipassives and switch-reference, but crucially lacks syntactic restrictions of the type found in other Pama-Nyungan languages. Diyari examples showing same-subject and different-subject constructions are given in (5.14a) and (5.14b):

(5.14a) Nhulu puka thayi-**rna**, nhawu pali-rna warrayi
 he.ERG food.ABS eat-REL(SS) he.NOM die-PTCP AUX
 ‘While eating some food, he died’

(5.14b) Wilha wapa-rna kuda-**rnanhi**, kupa yinda-yi
 woman.ABS go-PTCP go.away-REL(DS) child.ABS cry-PRS
 ‘When the woman goes away, the child cries’ (Austin 1981b:318)

It should be noted that the antipassive in Diyari is not particularly prototypical; its use is limited, occurring with only eight verbs. It also has other uses, including passive, which vary based on the root class to which the morpheme *-tharri-* is attached.

(5.15) Nganhi karlka-**tharri**-yi nhangkangu wilha-nhi
1SG.NOM wait.for-AP-PRS 3SG.FEM.LOC woman-LOC
'I wait for the woman' (Austin 1981a:159)

But regardless, based on the Diyari facts, one might expect that languages with switch-reference do not have antipassives which serve a pivot function, and are possibly less prototypical in some other way as well.

Of the languages in the sample, 44 are recorded as having switch-reference morphology. Switch-reference systems are found in all regions, and for more information on the characteristics of switch-reference systems in specific areas see McKenzie (2015) and Jacobsen (1983) on North America, van Gijn (2012) on South America, Austin (1981b) on Australia, Treis (2012) on Africa (with particular attention to Omitic and Cushitic), and Roberts (1997) on Papua New Guinea. Of these 44 languages with switch-reference, 16 also have antipassive constructions. They belong mostly to language families in the Americas, but also Asia (Yukaghir), Australia (Diyari) and the Pacific (Fataluku). Fataluku, like Diyari, has a non-prototypical antipassive, where Oceanic-type detransitivizing reduplication (possibly borrowed) is a lexical property, as only about three verbs have an alternation with that meaning. Reduplication does not productively serve valency-related functions (Heston 2015). Antipassives in Tundra and Kolyma Yukaghir are also unproductive, applying to small lexical sets of verbs, and therefore will not be discussed further here.

The 12 languages with antipassives and switch-reference in the Americas belong to the following genetic groups: Jê, Pano-Tacanan, Siouan, Seri (isolate) and Washo (isolate). All of these languages have only patientless antipassives, and in Washo, Cavineña, and Hidatsa the morpheme which indicates antipassive has other functions as well. All of the antipassives are primarily used to background or omit the patient for discourse purposes, as opposed to having purely syntactic function. Of these languages, Seri has the most prototypical antipassive, in that there is a dedicated marker and antipassivization is productive.²¹

²¹ Marlett has analyzed this type of construction both as having an antipassive/detransitivizing morpheme *o-* and as a stem alternation. Bolding here reflects the first analysis, but glossing reflects the second. Seri was included as having antipassives based on the analysis where there is an antipassive morpheme. It should be noted that even in a stem-alternation analysis, Marlett still calls the detransitivized stem 'derived'.

- Seri:
 (5.16) Poyaam ta, hpsotiin aha
 IRR.DEP.later DS 1SG.SBJ.INTR.IRR.IND.UNSPEC.OBJ.cut.in.strips AUX.DECL
 ‘Later I will cut [it] into strips’ (Marlett forthcoming:506)

None of the languages in the sample with both antipassives and switch-reference exhibits syntactic ergativity, which supports Dixon’s claim that there are no antipassives which have syntactic functions in languages with switch-reference. There are, however, some syntactically ergative languages with switch-reference, which is potentially surprising, since by Dixon’s rationale switch-reference negates the need for extraction- or coordination-based syntactic ergativity, not just for a syntactic antipassive. One such language is Shipibo-Konibo (Pano-Tacanan), in which the relativization of an A argument requires an externally-headed relative clause, while S and O relative clauses may be head-internal. However, switch-reference does not come into play with relativization, as it only applies to the non-finite clauses in a clause chain, and relative clauses involve nominalizations that retain main-clause properties (see Valenzuela 2003:445). The potential for ambiguity in relativization is therefore solved by always interpreting the transitive object as the head.

- Internally-headed O relative clause:
 (5.17a) [Pitso-n bake natex-a]-tonin-ra joshin pi-ke
 parokeet-ERG child.ABS bite-PTCP.COMPL-ERG-EVID banana.ABS eat-COMPL
 ‘The child the parokeet bit ate the banana’
 *‘The parokeet that bit the child ate the banana’
- (5.17b) Externally-headed A relative clause:
 [Bake natex-a] pitso-n-ra joshin pi-ke
 child.ABS bite-PTCP.COMPL parokeet-ERG-EVID banana.ABS eat-COMPL
 ‘The parokeet that bit the child ate the banana’ (Valenzuela 2003:482-3)

The other possible examples of languages in the sample with both syntactically ergative properties and switch-reference (Warlpiri and Zuni) also appear to separate the conditions where switch-reference appears and where syntactic ergativity exists. This suggests that the incompatibility of syntactic antipassivization, coordination-based syntactic ergativity, and switch-reference is supported by the data in this sample.

5.3.3 DIFFERENTIAL OBJECT MARKING

In Chapter 1 I discussed various strategies which share some characteristics with antipassives, such as differential object marking (DOM), non-canonical patient marking, indefinite object marking, noun incorporation, etc. While in some languages all of those strategies separate constructions and separate processes, depending on the language they may all have similar functions, i.e., to alter transitivity in the ways outlined in Hopper and Thompson (1980). Patients in antipassive constructions (when permitted), incorporated objects, and what are generally the unmarked objects in languages with differential object marking, are typically non-individuated (inanimate, indefinite, non-referential). If the antipassive is used when the patient is non-individuated (Cooreman 1994), then one would expect that in those same languages differential object marking would not be permitted, or that the antipassive would have some other primary function.

‘Differential object marking’ for purposes here is defined very broadly to include any instance where patients were systematically marked differently based on factors such as animacy and definiteness, and there is no additional morphology to indicate a change in voice. For the familiar cases in dependent-marking languages, DOM involves the presence or absence of an accusative case marker or other object marker, as in the Hup (Nadahup) examples in (5.18a) and (5.18b). In Hup, object marking is mandatory for animates, optional for animals, and ungrammatical for inanimates. The system also interacts with definiteness, specificity, and number.

(5.18a) Tǎh-ǎn=mah j'ám tih wɔn-máh-ǎh
tapir-**OBJ**=REP DISTPST.CONTR 3SG follow-REP-DECL
‘He followed the tapir, long ago, they say’ (Epps 2008:176)

(5.18b) Yíkán mǎy hid biʔ-píd-íh, póg!
over.there house 3PL make-DISTR-DECL big
‘They built a house, (it was) big!’ (Epps 2008:177)

However, in a head-marking language, DOM generally appears as a loss of object cross-reference when the patient is less definite/animate/specific. Tunica is a head-marking language in which the appearance of object agreement is contingent on all three of these factors. In (5.19a), the definite human patients ‘the boys’ are cross-referenced on the verb via the prefix *sihk-*. This contrasts with (5.19b) where the quantified but indefinite inanimate patients ‘two beans’ are not

cross-referenced with a verbal prefix, and the verb therefore lacks any object cross-reference.

(5.19a) Ta-’oka=sema lapuya **sihk**-yayi-’ik’i=hch, lapuhch
 DET-child=3PL.MASC well **3PL.MASC**-care.for-2SG.MASC.COND=SUB good.thing
 ‘If you take good care of the boys, it will be a good thing’ (Haas 1950:90)

(5.19b) Shihpari-tosu ili (Ø-)chu-yaka-’aki=ani
 bean-seed two take-come-3SG.FEM.be.COMPL=QUOT
 ‘She brought two beans, it is said’ (Haas 1940:136)

There were 57 languages in this sample for which DOM was a recorded feature. This number is likely larger in reality, as this feature was only noted in the sample when it was obvious from the documentation. Of these 57 languages, 6 also have antipassives. They belong to Europe, Asia and the Pacific, and represent 4 different genetic groups (Yukaghir, Tibeto-Burman, Uralic, and Austronesian). All but one dialect of one language have patientless antipassives, all are both head-marking and dependent-marking, and only one is ergative.

For these languages, it was predicted above that DOM would encode features which are mutually exclusive with the antipassive. For example, if object marking encodes definiteness, the antipassive would not also be used for indefinite patients, but perhaps would be used for aspectual reasons or other discourse-related reasons. This is exactly what we find. It is telling that all languages which have both DOM and antipassives (predominantly) have patientless antipassives. This automatically creates a separation of domains, where characteristics of the patient are modified by differentially marking the patient, while antipassives handle characteristics of the verb, typically related to aspect and intransitivity. For example, in Kolyma Yukaghir DOM is sensitive to definiteness, where definite patients get accusative marking while indefinite patients get instrumental marking.²² Notice that this change does not affect the transitivity marking on the verb. The antipassive, on the other hand, deletes the patient, often because it is irrelevant, which is not directly related in any way to definiteness.

DOM, definite:
 (5.20a) Tudel met kønme-**gele** juø-m
 he.NOM my friend-ACC see-TR.3SG
 ‘He saw my friend’

²² This pattern is not a prototypical example of differential object marking, since both options bear a mark. However, the effect is the same, and since the change in marking has nothing to do with voice, it has been included here.

DOM, indefinite:

- (5.20b) Tudel tolow-**le** kudde-m
he.NOM deer-INST kill-TR.3SG
'He killed a deer' (Maslova 2003a:10)

Antipassive:

- (5.21b) Tāt pan-**de-ŋi**
CONN cook-AP-3PL.INTR
'So they were cooking...'

Transitive, for comparison:

- (5.21a) Āj čūl-e pad-u-m
again meat-INST cook-EP-3SG.TR
'She cooked some meat again' (Maslova 2003a:226)

Most of the other languages with both DOM and antipassives have a similar division, although the antipassive may have additional aspectual meaning (e.g., habitual/durative in Udmurt).

However, Puma (Tibeto-Burman, Kiranti) is slightly different in that antipassives have a restriction that the omitted patient be human. This is unexpected given the reasoning above, since DOM in this language is sensitive to animacy and definiteness. But there are some interesting features of Puma that explain this. In Puma, all transitive patients are optionally marked as dative, where marking is more likely with animate, definite patients (like a 'soft' version of DOM, as opposed to mandatory marking/non-marking).

DOM:

- (5.22) Ŋa-a yoŋni(-**lai**) tup-u-ŋ
1SG-ERG friend(-DAT) meet-3SG.O-3SG.A
'I met a/the/my friend' (Bickel et al. 2007:6)

Puma also has an additional 'Ø-detransitive' construction where object agreement and dative case marking are suspended, but the patient is obligatory. While the patient must be non-individuated like an incorporated argument, it may be modified like a full NP, its position is not restricted, and it may be relativized.

'Ø-detransitive':

- (5.23) Ŋa kɬheppaŋ khim cop-ŋa
1SG big house look.at-1SG.S.NPST
'I look at big houses' (Bickel et al. 2007:8)

This construction also contrasts with the antipassive, which does not allow an overt patient, although the predicate must refer to a human entity, and has a verbal voice marker *kha-*.

(5.24) Antipassive:

Kha-lam-on

AP-search-1SG.S.PST

‘I looked for someone’ (Bickel et al. 2007:12)

Bickel et al. argue that this system of categorization targets the interaction of a variety of factors. While DOM deals with definiteness and animacy, the use of the detransitive and antipassive constructions has to do with number and specificity. The detransitive and antipassive forms are neutral with respect to how many patients the action is performed on, or if one even exists. The difference between the antipassive and the detransitive constructions then has to do with grammatical properties of the patient; the detransitive allows lexical specification of the patient and makes it accessible for processes like relativization, while the antipassive completely restricts all specification/individuation/expression of the object. This more elaborate system of patient categorization therefore still separates the function of antipassives and DOM, and our expectation is born out.

Interestingly, there are some languages which exhibit a type of differential patient marking within their antipassive constructions (see also section 8.2.6 on oblique marking). In at least two languages, Chamorro (Austronesian) and Huastec (Mayan), the presence of the oblique marker for the patient phrase in the antipassive construction is conditioned by definiteness: the oblique marker (glossed PREP) appears with definite patients, while it does not appear when the patient is indefinite. The following examples illustrate this phenomenon in Huastec.

Antipassive with an indefinite patient and no oblique marker:

(5.25a) An olom k’ap-**uumath** juun i way
 DEF pig eat-AP.PRF one PART maize.cob
 ‘The pig has eaten a maize cob’

Antipassive with a definite patient and an oblique marker:

(5.25b) An olom k’ap-**uumath** an **ti** way
 DEF pig eat-AP.PRF DEF PREP maize.cob
 ‘The pig has eaten the maize cob’ (Kondic 2016)

Differential patient marking (DPM) within the antipassive construction in Huastec and Chamorro could be considered potential counter-examples to the claims above, since in both

languages the antipassive is obligatorily used to encode indefinite patients, and DOM is operating on the same definiteness parameter. However, the antipassive in both languages has other functions in addition to indicating definiteness. First, the antipassive allows the patient to be omitted entirely from the discourse, since both languages have rather rigid transitivity specifications for verbs. Additionally, Cooreman (1988b:575) reports for Chamorro that the pattern with an oblique patient, in addition to having some aspectual effects, indicates that the patient is less affected by the action of the verb. It is likely that the oblique antipassive pattern in Huastec has to do with manipulating information structure in a way different from the transitive, similar to other Mayan languages (see Chapter 11), although this has not yet been corroborated. These examples of DOM (DPM) in antipassive constructions demonstrate that while the functions of DOM and the antipassive overlap, their co-existence indicates that these two processes need not be identical, and may work together to specify a greater level of detail with respect to the expression of the patient.

5.4 SUMMARY

This chapter explored the distribution of antipassive constructions across languages from different regions and genetic groups, and with different typological features. With respect to region and genetic group, antipassives are found in all populated regions of the world, with a somewhat larger proportion of languages with antipassives in the Americas. Genetic groups where more than half of the languages sampled contained antipassives are located in Europe, Asia, Africa and the Americas, with most of these groups in the Americas.

Possible correlations between the presence of antipassives in a language and word order, locus of grammatical marking, rigidity of transitivity for verb roots, and valency orientation were also investigated in this chapter. While antipassives occur in languages with all possible word orders (except potentially OAV, but there is only one such language in the sample, and extremely few in the world), there are a greater number of languages with VOA, OVA, and highly flexible word orders and antipassives. There does not appear to be a correlation between the presence of antipassives and locus of grammatical marking, and antipassives can occur in languages of all marking types (even those with little to no case or agreement morphology, although rarely).

In terms of valency and transitivity, although we might expect languages which tend to

treat the transitive event structure as basic (underived) to be more likely to have antipassives, results so far are inconclusive. However, it does appear to be the case that languages which have rigid transitivity categories for verbs are more likely to have antipassives. 60.9% of languages reported to ‘care’ about transitivity and have few labile/ambitransitive verbs have antipassives, compared with just 5.3% of languages which have large numbers of ambitransitive verbs.

With respect to passivization, a surprisingly high percentage of languages in the sample with passive constructions also have antipassives (32.8%). Languages with both passives and antipassives are found across the globe and exhibit both ergative and non-ergative verb alignment. Additionally, the hypothesis that switch-reference and syntactic antipassives should be mutually exclusive was borne out in these data, as none of the languages in the sample with both antipassives and switch-reference exhibit syntactic ergativity. Similarly, most languages which have antipassives lack differential object marking (DOM), and vice-versa, which is not surprising since their functions sometimes overlap. Indeed, those few languages which do have both antipassives and DOM deploy them in separate functional domains. Additionally, in the two languages discussed where antipassives and DOM appear in the same domain, the antipassive has additional functions unrelated to the definiteness of the patient.

CHAPTER 6. ANTIPASSIVES AND ERGATIVITY

The observation that antipassives tend to appear in ergative languages has been repeated time and again in the typological literature (e.g., Dixon 1994; Dixon and Aikenvald 2000:10), with some even claiming that it would be highly unlikely that there exist any antipassives in nominative-accusative languages at all (e.g., Palmer 1994:197). However, there are also many who have noted that antipassives are not limited to ergative languages. Foley and Van Valin (1984:173) suggest that ‘backgrounding’ (i.e., non-syntactic) antipassives may appear in ergative or non-ergative languages, which is related to the claim in Lazard (1989) that there are at least structures which are semantic correlates of the antipassive in nominative-accusative languages, which manipulate transitivity in similar ways (although he does not examine any of the non-ergative languages considered here to have antipassives).

More recently, Polinsky (2013, in press(b)) has also discussed the fact that antipassives are not limited to ergative languages, although her definition of ‘antipassive’ is different from that used here, and includes a wider variety of structures which results in more non-ergative languages having ‘antipassive’ constructions. Specific claims about the nature of antipassive constructions in languages with different non-ergative alignments are discussed in Chapter 7. With respect to specific language families, Schröder (2006) discusses the existence of antipassive-type constructions in both predominantly ergative and predominantly accusative Nilotic languages (although all appear to exhibit ergativity in some domains), and how this interacts with diachronic shifts in alignment. Additionally, Janic (2013, 2016) examines the development of antipassive uses for middle voice marking mainly in Indo-European languages, which are morphologically and syntactically nominative-accusative.

The focus of this section is to investigate the relationship between antipassives and ergativity, as well as several claims which have been made about the nature of detransitivizing derivations in various types of languages. In section 6.1 I discuss the sample of ergative languages generally, and then discuss any typological correlates of ergativity in section 6.2. The sample of ergative languages is then broken up in section 6.3 to look more closely at different types of ergative languages and antipassivization. Section 6.4 is dedicated to discussing syntactic ergativity and the ways in which it involves (or does not involve) antipassives. Finally, findings pertaining to antipassives and ergative alignment are summarized in section 6.5.

6.1 OVERVIEW OF ANTIPASSIVIZATION AND ALIGNMENT

Of the 445 languages in the sample, 160 of them are ergative in some aspect of their grammar (36%). This figure is drastically different from what one would expect from the sampling in WALs, where only 16.8% of the sampled languages have ergative-aligned full NPs (Comrie 2013a), 11.8% have ergative-patterned pronouns (Comrie 2013b), and only 5% have ergative person marking (Siewierska 2013). The rather surprisingly large proportion of ergative languages in this sample is partly due to the sampling procedure for this dissertation (see section 4.1), which purposefully included those languages and areas where antipassives were known to or thought possibly to exist. Given the proposed correlation between antipassives and ergativity, naturally languages with ergativity were sampled more extensively. However, because the sample was also constructed for maximal genetic diversity and therefore made an effort to also include many non-ergative languages, it is unlikely sampling alone would account for a disparity of 20 percentage points.

Of those 160 ergative languages in the sample, 69 have antipassives (43.1%). This means that more than half of sampled ergative languages lack antipassives, which is to say that a language that is ergative has less than a 50/50 chance of having an antipassive construction. The remaining 285 non-ergative languages are not uniform with respect to alignment system. The sample includes nominative-accusative languages, active (Split S) languages, languages with symmetrical voice systems, languages with inverse systems, and several languages without any dominant alignment system (languages with split-ergative systems were included in the ‘ergative’ sample). However, if these systems are all treated as a single ‘non-ergative’ category, then it is possible to say that there are 57 non-ergative languages with antipassive constructions, which represent 20% of non-ergative languages. There is therefore a strong correlation between ergativity and the presence of antipassives (β : 1.18 ± 0.30 , $p < 0.001$),²³ as most of the languages in the sample with antipassives are ergative. Figure 6.1 below is a graphic representation of the number of languages with antipassive constructions by alignment type.

²³ Statistical significance was calculated throughout this chapter using a generalized linear mixed effects regression model that was fit to the presence or absence of antipassives, with alignment, region, word order, and locus as predictors. See Appendix D all statistical models.

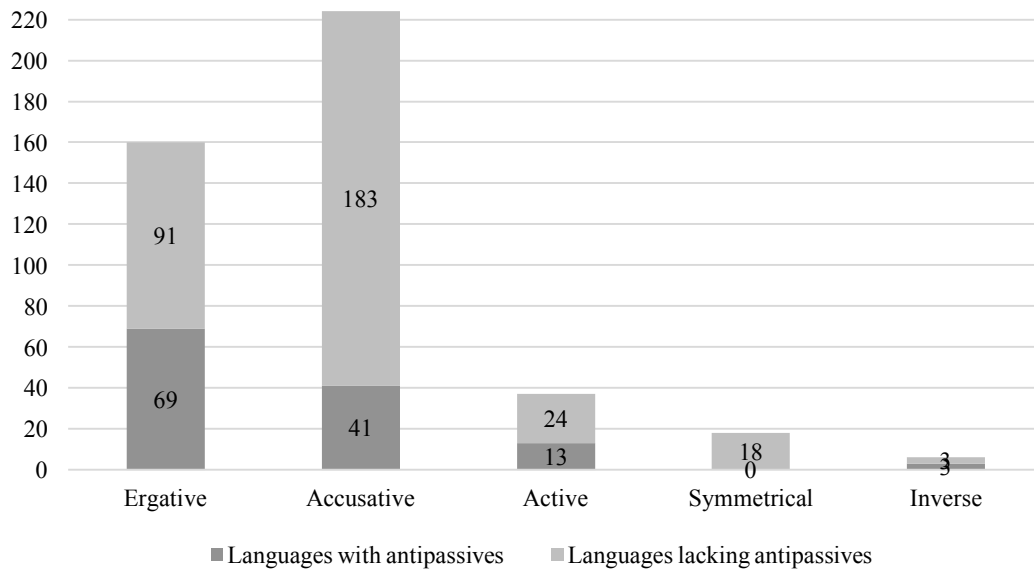


FIGURE 6.1. Distribution of antipassives by alignment type

The dichotomy between ergative languages is greatest with respect to accusative languages; active and inverse languages also appear to contain antipassive structures more frequently than other types of alignment systems. However, the sample size for inverse systems is too small to draw conclusions, not because of sample bias but because very few languages exhibit these types of systems as the dominant pattern. Antipassives were not found in languages with symmetrical systems (e.g., Philippine-type) on definitional grounds; see Chapter 3 and section 7.3.

The geographic distribution of all of the various alignment types in the sample is shown on the map in Figure 6.2. The key for the colors used in the map is as follows:

- Blue: Ergative
- Red: Accusative
- Pink: Active
- Green: Symmetrical
- Black: Inverse

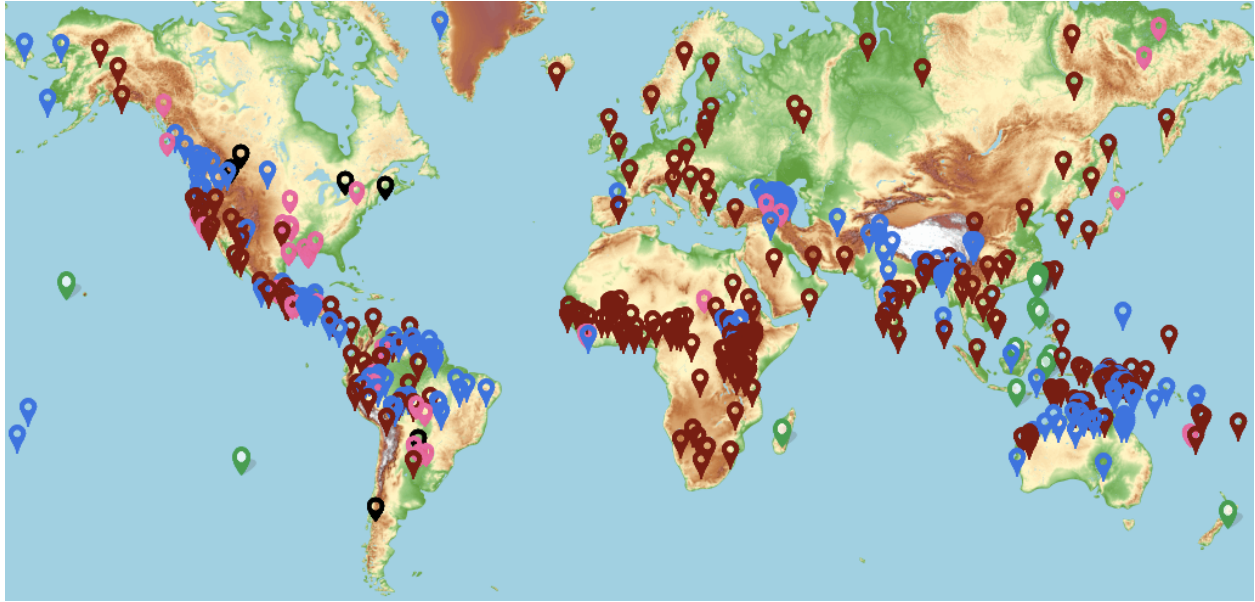


FIGURE 6.2. Geographic distribution of alignment types in the dataset

6.2 TYPOLOGICAL CORRELATES OF ERGATIVITY

This dataset also provides the opportunity to look at correlations between ergativity and the other typological features already discussed with respect to antipassivization in Chapter 5, such as relationships with word order and locus of grammatical marking. This section considers all languages with any variety of ergativity; see section 6.3 for a breakdown of correlations in different types of ergative languages.

First, ergative languages are found in all regions in the sample. The number of ergative languages belonging to each region is shown in Figure 6.3 below. The only region where there were more ergative languages sampled than non-ergative languages was Australia. Also, Africa and the Pacific have significantly fewer languages with ergativity (not including Philippine-type systems): for Africa: $\beta: -2.34 \pm 0.62$, $p < 0.001$,²⁴ and for the Pacific: $\beta: -1.11 \pm 0.49$, $p < 0.05$.

²⁴ All beta values, standard errors, and p-values reported in this subsection were calculated using a generalized linear regression model that was fit to the presence or absence of ergativity in a language, with region, word order, and locus as predictors. Note that alignment here is treated as a binary variable (ergative vs. non-ergative). Correlations involving nominative-accusative languages, active languages, and other alignments are discussed in Chapter 7.

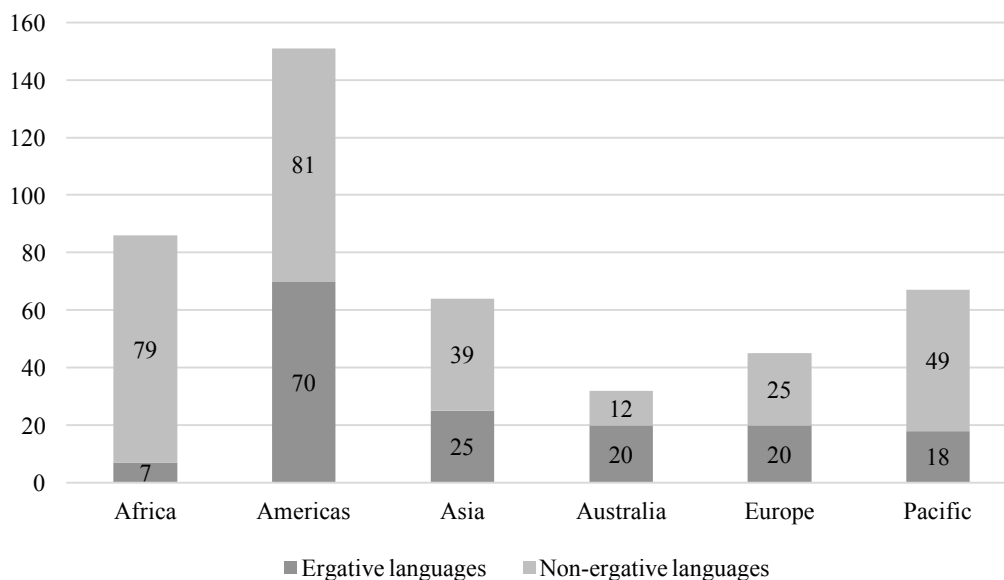


FIGURE 6.3. Distribution of ergativity by region

The distribution of ergativity is also contingent on genetic group. Those genetic groups in the sample which include languages which have been described as ergative are listed in Table 6.1 below. The number of languages in that group exhibiting some amount of ergativity and the total number of languages sampled for that group are given in the two right-hand columns.

There are 51 genetic groups (including 8 isolates) which contain at least one sampled member with ergativity, which represent 35.4% of the 144 genetic groups in the sample. Of the 21 groups with more than one language in the sample, there are 8 for which all sampled members are at least partially ergative, and another 4 groups where more than half of the sampled languages are ergative. The strong presence of antipassives in several of these groups may be overstated due to sampling procedure: if there were any reportedly ergative members in a given family, those members were preferentially included in the sample (for example, despite their representation here, not all Salishan languages are ergative). Of the 51 genetic groups here with attested ergativity, 19 have at least one language that has an antipassive (37.3%), suggesting that genetic relation continues to be a poor predictor of the presence of antipassives (see section 5.1), even in ergative languages. In fact, there are 26 genetic groups in the sample with members which contain antipassives but are not ergative.

TABLE 6.1. Genetic groups with ergativity

Region	Genetic group	# ergative languages	# languages sampled in each group
Europe	Abkhaz-Adyghean	3	3
Asia	Andamanese	1	1
Pacific	Austronesian	9	41
Australia	Bunuban	1	1
Americas	Cariban	8	9
Americas	Chibchan	2	4
Americas	Chinookan	1	1
Asia	Chukotko-Kamchatkan	1	2
Pacific	Dani	1	1
Africa	Eastern Jebel	1	1
Pacific	Engan	1	1
Americas	Eskimo-Aleut	3	3
Australia	Garrwan	1	1
Europe	Indo-European	7	22
Americas	Harákmbut–Katukinan	1	1
Americas	Jê	4	4
Americas	Kariri	1	1
Pacific	Koiarian	1	1
Australia	Limilingan	1	1
Pacific	Lower Sepik-Ramu	1	1
Americas	Mayan	22	23
Australia	Mirndi	2	2
Americas	Mixe-Zoquean	2	2
Pacific	Morehead-Wasur	1	1
Europe	Nakh-Daghestanian	9	9
Africa	Niger-Congo	2	34
Africa	Nilotic	4	8
Pacific	Nuclear Goroka	1	1
Australia	Nyulnyulan	1	1
Australia	Pama-Nyungan	10	14
Americas	Pano-Tacanan	7	7
Africa	Rai Coast	1	1
Americas	Sahaptian	1	1
Americas	Salishan	9	9
Americas	Siouan	1	3
Pacific	Sko	1	1
Australia	Tangkic	1	3
Asia	Tibeto-Burman	22	27
Americas	Tsimshianic	1	1
Americas	Tupian	2	4
Australia	Worrorran	1	1
Australia	Yangmanic	1	1

TABLE 6.1. (Continued) Genetic groups with ergativity

Americas	Yanomaman	1	1
Europe	Basque (Isolate)	1	1
Asia	Burushaski (Isolate)	1	1
Australia	Gaagudju (Isolate)	1	1
Americas	Movima (Isolate)	1	1
Americas	Puinave (Isolate)	1	1
Americas	Trumai (Isolate)	1	1
Pacific	Yéli Dnye (Isolate)	1	1
Americas	Zuni (Isolate)	1	1
	Total:	160	313

In addition, there have been claims that there are correlations between ergativity and basic word order. Figure 6.4 shows the various basic word orders and the number of ergative and non-ergative languages exhibiting each order. The counting procedure here is the same as that used in section 5.2.1; if there is no order which can be called ‘basic’ or ‘dominant’, then the order was termed ‘flexible’. There were also 24 languages in the sample which were reported to have multiple dominant word orders, or there are different orders reported for different dialects. For the purposes of statistical modeling, these 24 languages were assigned to a single word-order category based on either frequency of occurrence or the word-order profile of related languages.

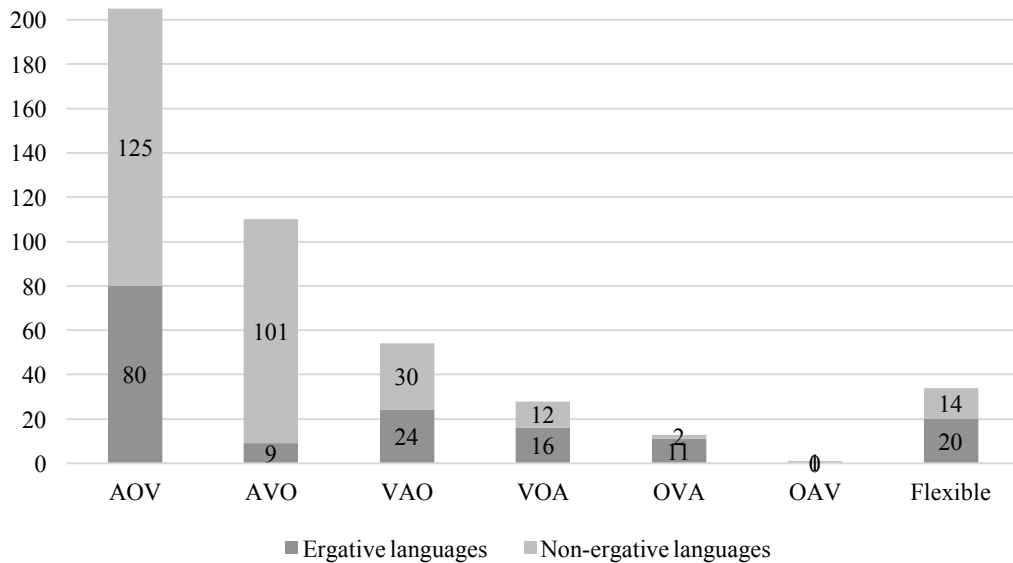


FIGURE 6.4. Distribution of ergativity by basic word order

These data show that ergative languages and non-ergative languages make up an approximately equal proportion of languages with VOA, VAO, and highly flexible word orders. However, there are strong and opposite correlations between word order and ergativity with the two verb-medial word orders: AVO languages are inversely correlated with ergativity (β : -2.36 ± 0.50 , $p < 0.001$), while OVA languages are more likely to be ergative (β : 2.59 ± 0.91 , $p < 0.01$) (though the number of OVA languages worldwide is very small). These 11 ergative OVA languages come from three genetic groups from three different regions: Nilotic (Africa), Cariban (the Americas), and Austronesian (the Pacific).

This dichotomy between the relationship of AVO and OVA orders to ergativity is relevant to the distribution of ergativity over verb-medial and verb-peripheral orders. Some linguists have claimed that ergativity is only found in languages with verb-peripheral word orders, and specifically not in languages with AVO order (e.g., Mahajan 1997:38), known as ‘Mahajan’s Generalization’. However, as demonstrated in Figure 6.4, there are 20 ergative languages in the sample with verb-medial basic word order, which is 16.3% of total verb-medial languages. Nine of those 20 languages have AVO basic word order. In contrast, there are 120 ergative languages with verb-peripheral word orders, which represent 41.7% of total verb-peripheral languages. The difference in the distribution of ergativity across verb-medial and verb-peripheral orders in this sample is significant (β : 0.96 ± 0.32 , $p < 0.01$), where ergativity correlates positively with verb-peripheral basic word orders (there is no significant correlation between VO and OV basic word orders and ergativity). However, the mere existence of ergative verb-medial languages disproves the strong claim above that ergative languages are only verb-peripheral. It would be more accurate to say that ergative languages *tend not* to exhibit AVO word order (or vice-versa), while OVA languages tend to be ergative.

Lastly, there is no significant correlation between ergativity and head-marking or dependent-marking strategies in this dataset. As shown in Figure 6.5 below, ergative languages make up 34.8% of head-marking languages and 39.2% of dependent-marking languages in the sample. However, it appears that ergative languages are more likely to be both head-marking and dependent-marking, and they make up over half of the both head-marking and dependent-marking languages in the sample (52.4%). This correlation is statistically significant (β : 1.93 ± 0.72 , $p < 0.01$).

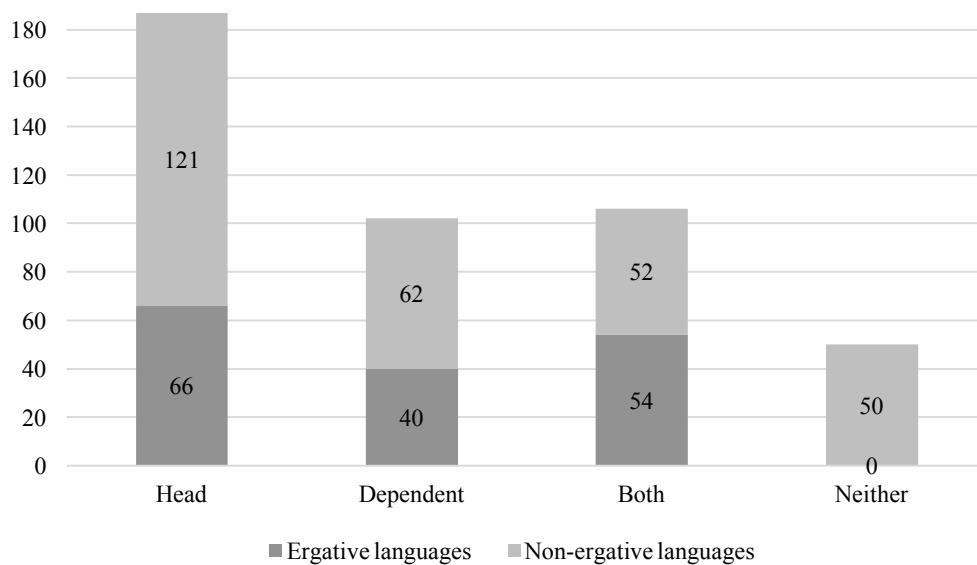


FIGURE 6.5. Distribution of ergativity by locus of grammatical marking

The most noticeable result of this comparison is that there are no languages in the sample that no head-marking or dependent-marking and are also ergative. While there are languages that express ergativity through word order and not case or agreement marking, apparently the languages of that type in the sample also have some sort of head-marking or dependent-marking (or were considered ‘symmetrical’ as opposed to ergative; see section 7.3). Languages in the ‘neither’ category belong almost exclusively to Africa, Asia and the Pacific.

The other typological parameter relevant to the discussion of voice, valency, and alignment is how rigidly verbs belong to transitivity classes, discussed in section 5.2.3. It was found that antipassivization, like other valency-altering processes, are more prevalent in languages which have fixed transitivity values for verbs. This fact on its own is not surprising. However, it is also the case that languages which place most verbs into rigid transitivity categories tend to ergative. Of the sample of 87 languages with rigid transitivity values for verbs, 54 were ergative (62.1%). In contrast, of the 57 languages which reported having large numbers of labile/ambitransitive verbs, only 14 (24.6%) were ergative. This suggests that ergative languages tend to have more rigid transitivity categories, which is interesting considering that Givón had previously proposed something similar, that ergative languages are inherently more sensitive to transitivity (1984:151-164). This conclusion is also supported by the fact that there are no languages in the sample which have antipassives and are at least partially ergative, but

have large numbers of labile verbs. It should be noted, however, that the opposite case where languages with rigid transitivity categories for most verbs lack both antipassives and ergativity, is attested for 15 languages.

6.2.1 PRELIMINARY SUMMARY

To briefly summarize, there is a significant correlation between ergative languages and antipassivization. Ergativity also has several typological correlates. First, ergativity is less common in the languages of Africa and of the Pacific compared with languages in other regions. Additionally, ergativity is negatively correlated with verb-medial word orders, but this is disproportionately due to a negative correlation with AVO orders, as languages with OVA basic word order are quite likely to be ergative. There is also a positive correlation between ergativity and the use of both head-marking and dependent-marking, and there is a complete lack of examples of ergative languages which are neither head- nor dependent-marking.

Finally, there is a correlation between ergativity and rigid transitivity values for verbs. The positive correlations between ergativity and rigidity of transitivity categories, as well as an inverse correlation with a lack of argument indexing (either head or dependent), are correlations which are also shared between these categories and antipassives (see Chapter 5). As such, it is entirely possible that the statistically significant correlation between antipassives and ergativity may not in fact be directly tied to alignment. Rather, it is entirely possible that the correlation between ergativity and these other typological factors relating to the overt indexing of valency and argument structure create a need for antipassives and the conditions necessary to identify them. If this is the case, perhaps the question is not why is there a correlation between antipassives and ergativity, but rather why are there correlations between ergativity, overt argument indexing, and rigid transitivity classes.

6.3 ANTIPASSIVES AND ERGATIVITY

Although ergative languages were treated as if they are a homogenous group in the previous section, the reality is of course that ergativity is not monolithic. This section discusses general correlations between ergativity and antipassivization, then looks at different groupings of ergative languages by type. Although there are many different ways to look at and categorize ergativity (e.g., how ergative case is assigned, or whether diachronically ergativity is nascent or

the language lost ergativity in part of the system), this section focuses more on the extent to which a language is ergative. Possible correlations between all ergative languages in the sample and antipassivization are investigated in 6.3.1, the profile of predominantly ergative languages is discussed in section 6.3.2, various types of split ergativity and the presence of antipassives in these languages are discussed in section 6.3.3, and finally languages which have been considered here to be ‘minimally’ ergative are dealt with in section 6.3.4.

A few of the languages here might also be characterized as active, since, as Woolford (2015) pointed out, for many so-called ergative languages, there are instances where ergative morphology can also appear on agentive intransitives (e.g., Kashmiri and Basque). Because this is sometimes a difficult issue (cf. Coon (2010) on split ergativity in Ch’ol, where she considers Ch’ol to be an ergative language and the apparent split to be the result of nominalization, as opposed to others who have characterized Ch’ol as split-ergative or active), and different authors have different opinions, some of these languages have been treated as ergative based on descriptions in primary sources, with notes indicating that active analyses also exist.

6.3.1 OVERALL DISTRIBUTION

Prior to the discussion of languages with different types and degrees of ergativity, it is important to discuss the relationship between antipassives and ergativity in general. Figure 6.1 above showed that somewhat less than half (43.1%) of the ergative languages in the sample have antipassives. This section looks for other characteristics which might have different rates of occurrence in those ergative languages with antipassives and those lacking antipassives.

The 69 ergative languages with antipassives in this sample are found in all regions. There are approximately equal numbers of ergative languages sampled in Asia, Europe, and the Pacific, but many fewer exist in Africa, and more than twice as many in the Americas (Figure 6.6; compare also with Figure 6.3 above). Although there are ergative languages that lack antipassives in all regions, the largest proportion of ergative languages with antipassives exist in the Americas (78.3%). This correlation is significant (β : 1.93 ± 0.72 , $p < 0.01$).²⁵

²⁵ Statistical significance was calculated using a generalized linear regression model that was fit to the presence or absence of antipassives in a dataset containing only the ergative languages from the complete dataset, with region, word order, and locus as predictors. See Appendix D.

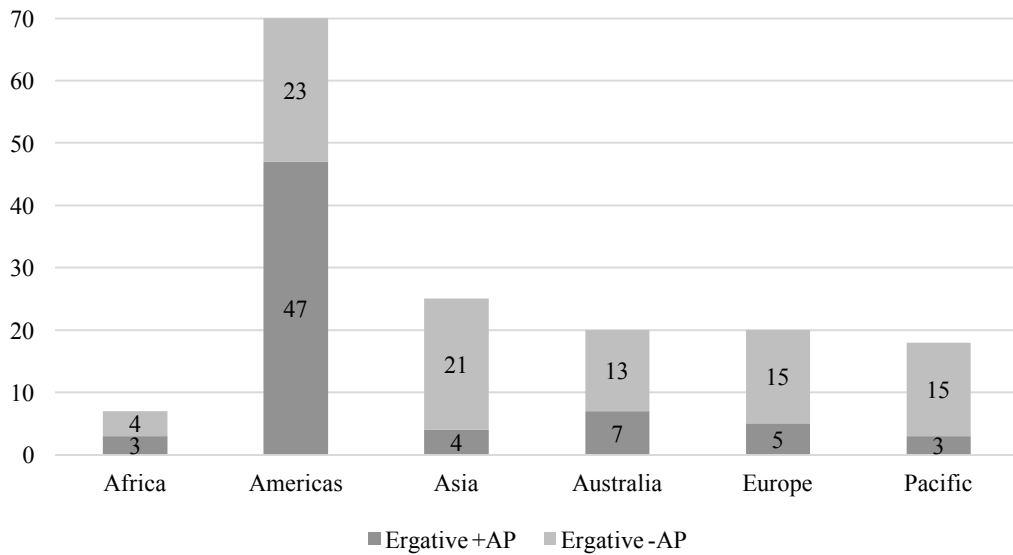


FIGURE 6.6. Distribution of antipassives in ergative languages by region

With respect to basic word order, the negative correlation between ergativity and AVO basic word order and the positive correlation between ergativity and OVA basic word order is not reflected in the ergative antipassives data; there are approximately equal numbers of ergative AVO and OVA languages in this sample, and most have antipassives. There is, however, a surprising negative correlation between antipassives and ergative languages with VAO basic word order ($\beta: -2.41 \pm 1.0, p < 0.05$).

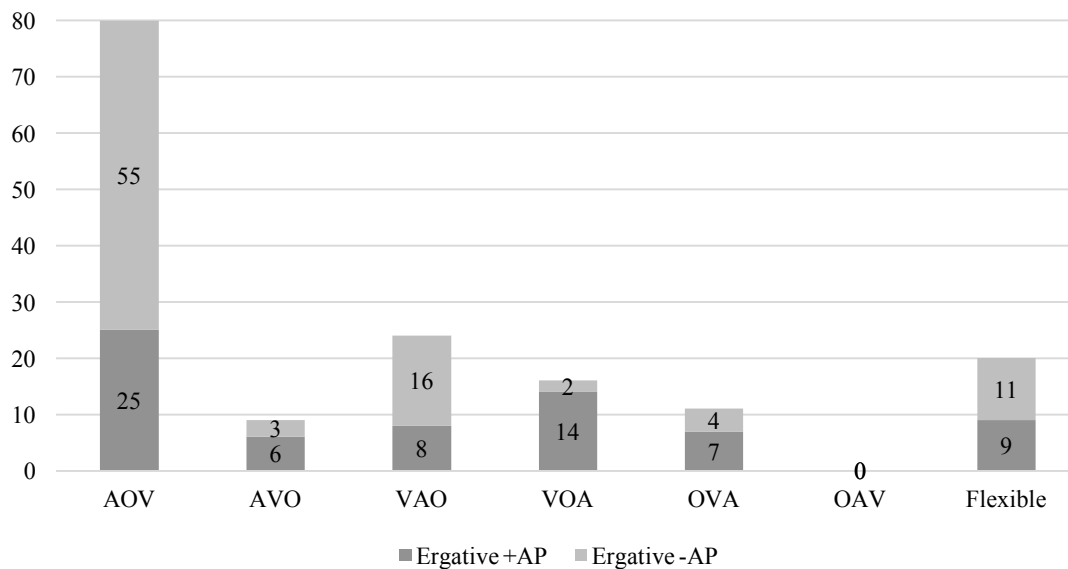


FIGURE 6.7. Distribution of antipassives in ergative languages by basic word order

Antipassives are attested in ergative languages with all possible basic word order except OAV. Ergative languages with antipassives make up the majority of the languages sampled with AVO, VOA and OVA languages. In fact, ergative languages with antipassives make up 65% of ergative verb-medial languages, although the difference between antipassives and verb-medial vs. verb-peripheral basic word orders (or VO vs. OV orders) is not significant. Interestingly, while most ergative languages in the sample are AOV (as are most languages in the world), ergative languages with antipassives and AOV basic order make up a smaller percentage of the total than other word orders (31.3%).

With respect to locus of grammatical marking, there appear to be fewer ergative languages which are both head- and dependent-marking and also have antipassives ($\beta: -1.31 \pm 0.53, p < 0.05$) (there is no significant difference between head-marking vs. dependent-marking ergative languages and the presence of antipassives). This negative correlation is somewhat surprising given a lack of any significant correlation (positive or negative) between antipassives and locus of grammatical marking in general (see section 5.2.2), and better visibility of antipassives in languages with extensive argument indexing.

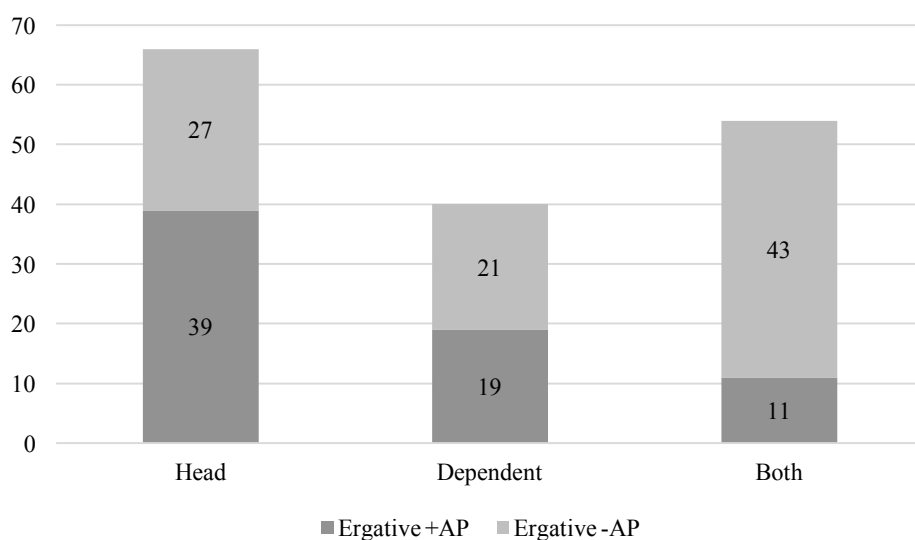


FIGURE 6.8. Distribution of antipassives in ergative languages by locus of grammatical marking

Lastly, as noted above in section 6.2, of the 87 languages reported to have strict transitivity classes for verbs, 54 (62.1%) are ergative, whereas only 14 ergative languages (24.6%) were reported to have primarily ambitransitive verbs. Antipassives also correlate positively with strict transitivity classes (53 languages, 60.9%) and negatively with large

numbers of ambitransitive verbs (3 languages, 5.3%). It is also relevant that the proportion of ergative languages with antipassives increases when only looking at languages with rigid verbal transitivity categories: while ergative languages with antipassives make up 43.1% of ergative languages, ergative languages with antipassives make up 70.4% of languages with strict transitivity classes. This suggests that the presence of a strict transitive/intransitive distinction in a language increases the chances that it will be ergative and also have an antipassive.

In sum, the vast majority of ergative languages with antipassives in the sample come from the Americas. Antipassives are also well-attested in those few ergative verb-medial languages, despite the overall correlation between verb-peripheral basic orders and ergativity. Head-marking vs. dependent-marking strategies do not correlate with antipassives in ergative languages, which is expected based on the results for the overall sample (see section 5.2.2). Also, there appear to be a greater-than-average number of ergative languages with strict transitivity classes for verbs.

6.3.2 PREDOMINANTLY ERGATIVE LANGUAGES

This section is called ‘predominantly ergative languages’ (as opposed to something like ‘ergative languages’ or ‘fully ergative languages’), as it is generally believed that there is no such thing as a language which is ergative in every aspect of its grammar (cf. Dixon 1979:71). However, there certainly are languages which exhibit ergativity in almost all of their morphology, and can be said to be ‘more’ ergative than languages which exhibit the common types of ergative ‘splits’ which Dixon describes, which play a meaningful role in the grammar. This is what is meant here by a ‘predominantly’ or ‘highly’ ergative language: a language which does not have any significant splits with respect to person, control/volition/predicate class (here considered ‘Active’, see section 7.2), tense/aspect, clause type, NP type, or case vs. agreement. However, such a language need not be ergative beyond the morphological level (i.e., lacking syntactic ergativity, which is dealt with separately in section 6.4), and may have one or two constructions which can be called non-ergative, but which play a relatively minor role in the grammar. While determining how much of a role certain constructions have in a language is rather subjective, such a division is necessary for answering the question being posed here: does the degree of ergativity in a language correlate with the likelihood of having antipassive structures? Again, the ability to classify languages in this way was dependent on the

documentation available: many languages are noted as ergative in main clauses, but there has not been a detailed investigation into what minor patterns they may also exhibit (e.g., Embaloh (Adelaar 1995), among others).

A definitional issue must be addressed prior to a discussion of the data from this sample. There are a number of languages which have sometimes been called ‘semi-transitive’ constructions which alternate with a fully transitive construction, which have been identified by some authors as split-ergative patterns (e.g., Coon and Preminger (forthcoming) on Samoan, interpreting the ‘middle’ as the incompletive counterpart of a TAM split). Note that the line is blurry as to what counts as a ‘split’: there are many constructions which involve something other than canonical transitive marking for various reasons. If non-ergative patterning in some part of the grammar constitutes a ‘split’, then there are many languages which also have splits based on transitivity, which, to my knowledge, is not typically considered a common parameter along which splits occur. Additionally, if all non-canonical case-marking or agreement patterns are considered, we would also have to consider, for example, dative-marked patient constructions in some European languages as instances of splits in nominative-accusative languages. In practice, this is of course not the case; instead, splits are usually defined as a combination of two different established alignment systems, e.g., ergative in one area of the grammar, and accusative in another. The fact that most semi-transitive constructions have absolutive (intransitive) marking dissuades one from a nominative-accusative analysis, since it would equate to a marked nominative construction, which is typologically less frequent. For example, Aïwoo has grammaticalized the agent vs. patient Western Austronesian voice system into an ergative OVA pattern and a morphologically intransitive but syntactically transitive AVO pattern.

OVA pattern:

- (6.1a) Sime nuobu vili i-wâ-pu-nâ-gu-i Jises
 person thousand five PFV-CAUS-eat-TR-3MIN.A-3AUGN.O Jesus
 ‘Jesus feeds five thousand people’ (Naess 2013:111)

AVO pattern:

- (6.1b) Pe-sime-engâ li-epave=to sii=kâ
 BN.COLL-person-DEM.DIST 3AUG.S-cook=CS fish=DEIC.DIST
 ‘The people cooked fish’ (Naess 2013:113)

Naess (2013:115) states the patterns are not directly related, so it would be possible to analyze Aïwoo as split-ergative, although this does not appear to be the analysis adopted by Naess, and

was likewise not adopted here. Given this sort of difficulty in defining splits, I have only considered here those common splits discussed in Dixon (1979).

While some Mayan languages indeed have split ergativity, many Mayan languages fall into the ‘highly ergative’ category, including Kaqchikel. A typical transitive Kaqchikel sentence is presented below. As Mayan languages do not have morphological case marking on nouns, grammatical relations are indicated solely via agreement morphology on verbs.

(6.2) X-in-a-tzu’
 COMPL-1SG.ABS-2SG.ERG-see
 ‘You saw me’

There is one construction present in many Mayan languages which does not fit this pattern. It has been referred to in the literature as a ‘raising’ construction (cf. Law et al. 2006, Robertson 1993), where genitive/ergative marking appears on the nominalized complement of an auxiliary verb which is used to form the progressive. The verb in (6.3a) has been detransitivized by the passive marker *-Ix* and nominalized by *-ik*, and the patient, not the agent, is referenced by the possessive/ergative prefix.

(6.3a) Y-in-ajin chi [ki-q’ete-x-ik ri ak’wal-a’]
 INCOMPL-1SG.ABS-PROG PREP 3SG.ERG/POSS-hug-PASS-NMLZ DET child-PL
 ‘I am hugging the children’

However, unlike in other Mayan languages where several different auxiliary constructions mandatorily take possessive/ergative-marked complements, there are only a few in Kaqchikel (the progressive, a movement construction, and ‘begin to’), and for all but ‘begin to’ there is a parallel, fully verbal construction. For example, in the progressive a full verbal complement is also permitted, and is in fact much more frequent than the nominalized version, as illustrated in (6.3b).

(6.3b) Y-in-ajin y-e-in-q’ete-j ri ak’wal-a’
 INCOMPL-1SG.ABS-PROG INCOMPL-3PL.ABS-1SG.ERG-hug-TR DET child-PL
 ‘I am hugging the children’

Kaqchikel is illustrative of what was considered here to be a highly ergative language. Even though Kaqchikel (and other K’ichean languages) could be considered to have an aspect-based

split based on the progressive construction above, the non-ergative construction does not have a large role in determining the alignment of the language.

The rationale for dividing ergative languages into types based on degree of ergativity is as follows: since antipassivization is correlated with ergativity, it is possible that languages which are more ergative (exhibit ergativity in more environments/constructions) are more likely to have antipassives, and vice-versa. This can be investigated by first looking at languages which exhibit ergativity in all but maybe one or two relatively insignificant domains. There are 44 such languages in this sample, hailing primarily from the Americas, Europe and the Pacific, but also Great Andamanese in Asia. These languages represent 14 different genetic groups, which includes two isolates. Of these 44 languages, 29 have antipassives. Highly ergative languages with antipassives therefore represent 65.9% of all highly ergative languages, which is substantially higher than the 43% incidence of antipassives in ergative languages generally. While this fact confirms the basic hypothesis that languages which exhibit more ergativity are more likely to have antipassive structures, it is not a sufficiently strong result to attribute the correlation between ergativity and antipassivization to a strong correlation with highly ergative languages. In fact, there are at least 15 highly ergative languages which lack antipassives.

As for other potentially relevant correlations, highly ergative languages are roughly equally split between head-marking and dependent-marking strategies (16 dependent-marking vs. 19 head-marking). Additionally, 75.9% (22) of these 29 highly ergative languages with antipassives come from the Americas, and, with the exception of Eskimo-Aleut, entirely from Central and South America. This percentage is comparable to general geographic distribution of ergative languages with antipassives.

6.3.3 SPLIT-ERGATIVE LANGUAGES

As discussed above, ‘splits’ in ergative languages are not necessarily as clear-cut as they might appear, particularly since all ergative languages could be discussed as having a ‘split’, no matter how minor or major. With that in mind, the previous section described the characteristics of languages which were almost entirely ergative, and section 6.3.4 below discusses languages which only exhibit ergativity in a small portion of their grammars. This method therefore defines what are being called ‘split-ergative’ languages here by default, i.e., non-inclusion in the other two categories. These languages vary widely in terms of what conditions the split in alignment.

There are multiple examples of the well-known splits based on aspect, person, case vs. agreement or clause type, where some constructions show ergative-absolutive alignment while others are nominative-accusative, but there are also some alignment patterns which are more mixed. For example, there are a number of languages for which the non-ergative part of the system is active, tripartite, or does not follow any dominant pattern of alignment, rather than the more typical nominative-accusative pattern. This is true for example of Kiranti languages, which in general have ergative case marking, but either inverse or mixed verb agreement (cf. Schikowski et al. 2015 on Chintang). Languages may also exhibit multiple splits, e.g., Athpare (also of the Kiranti group) which has the case vs. agreement split of the other Kiranti languages, but also has a person split where ergative marking does not appear on first person pronouns (Ebert 1997). This section looks specifically at the properties of this heterogeneous group of partially ergative languages, and comments on the major split types present in the data.

Of the 160 ergative languages in this sample, 88 were considered here to have split ergativity. These languages belong to all regions and represent 37 different genetic groups. Of these 88 languages, 38 (43.2%) have an antipassive construction, which is very close to the 43% of ergative languages with antipassives in the overall sample. Most of the split-ergative languages with antipassives are spoken in the Americas and Australia, whereas most of the split-ergative languages in the other regions mostly lack antipassives. The distribution of basic word orders for split-ergative languages with antipassives mirrors the general distribution discussed in section 6.3.1. Most of the split-ergative languages with antipassives in this sample also have at least some head-marking (22/38, 58%).

It is also a possibility that ergative languages with certain types of splits have a greater incidence of antipassives than languages with other types of splits. Although there is a wide variety of split types attested in the dataset, only the major ones are discussed here. First, there are 12 languages in the sample with split ergativity based primarily on tense/aspect, typically with an ergative pattern in the completive, past, or perfective forms. These 12 languages belong to 8 different genetic groups and are present in all regions except Australia. Five of twelve (41.7%) have antipassives, all of which are languages of the Americas and have verb-peripheral word orders.

There are also 32 languages which have a primary split between case and agreement, where case marking is ergative and agreement involves any variety of non-ergative patterns. Of

these 32 languages, five have antipassives (21.9%). These five languages belong to Tibeto-Burman, Siouan (Hidatsa, which has ergative case but active agreement (Park 2012)), and Chukotko-Kamchatkan, although languages with a case vs. agreement split are also found in Australia and the Pacific. All of these languages with a case vs. agreement split have verb-peripheral or flexible basic word orders. Unlike split-ergative languages and ergative languages in general, languages with case vs. agreement splits overwhelmingly use both head-marking and dependent-marking strategies (26 of 32 languages, or 81.3%).

Additionally, there are 17 languages with ergative splits conditioned by clause type. This is a more heterogeneous group than the previous two types of split ergative languages, since although many languages have a main/subordinate split in clause type (e.g., Jakalteko/Popti'), Ingush, for example, has ergative alignment in most of the grammar, but light verbs exhibit nominative-accusative alignment (Nichols 2011:11). Of these 17 languages, 11 have antipassives, or 64.7%. These languages with splits based on clause type are found in Europe, Africa and the Americas, although all 11 of these languages with antipassives come from groups in the Americas. Also, 6 of the languages in this group have OVA basic word order, and all but 2 are head-marking (88.2%).

Lastly, there are 12 languages in the sample that have primary splits based on NP type. All of these languages are from Australia, with the exception of Roviana (Austronesian). In the Australian languages in question, pronouns generally show nominative-accusative alignment, while full NPs get ergative case. The NP type split in Roviana is different from Australian systems in that the split is based on absolutive marking: while proper nouns, pronouns, and numerical phrases may receive absolutive marking, common nouns are not eligible for absolutive marking (Peter Schuelke p.c. 2015). Of these 12 languages, 7 have antipassives (58.3%), all of which are dependent-marking Pama-Nyungan languages.

Based on this sample of 88 split-ergative languages, the percentages of antipassives for the majority of major types of splits fall in the 20-65% range. Ergative languages with clause-type splits have the highest incidence of antipassives among split-ergative languages (64.7%), while split-ergative languages with a case vs. agreement split had the lowest incidence of antipassives (21.9%). More data would be necessary to establish if this is a persistent trend.

6.3.4 MINIMALLY ERGATIVE LANGUAGES

As mentioned above, the literature has generally treated all languages with any vestige of ergativity as ‘ergative’ languages. All ergative languages can indeed be considered to have splits, but as shown above, some languages are predominantly ergative, while some are more equally divided between ergative alignment and another alignment. There are also a number of languages which only exhibit ergativity in one corner of the grammar, or only with respect to a single construction, person, etc. Such languages have been termed here ‘minimally ergative’ languages, although they are usually discussed elsewhere as split-ergative. For example, in some Salishan languages, the agent of the transitive clause only agrees with the verb in the third person singular in main clauses. This is an ergative pattern, but it is quite restricted. Other languages have even more restrictions, like Punjabi, where ergative marking only appears with the third person in the perfective.

The other major genetic group (besides Salishan and Indo-Aryan/Indic) with members in the ‘minimally ergative’ category is Tibeto-Burman. While some Tibeto-Burman languages have rather a rigid distribution of the ergative case marker (e.g., Mizo (Chhangte 1993:61)), others have what has been called a pragmatically ergative system (LaPolla 1995, Chelliah 1997, Hyslop 2010, DeLancey 2011), where the presence or absence of the ergative case marker is sensitive to discourse/pragmatic factors. DeLancey (2011:15-16) even suggests that this phenomenon does not constitute an alignment system, since it is not clear there is any change in grammatical relations, and it is not typically accompanied by the morphosyntactic correlates of ergative marking. For this reason, those Tibeto-Burman languages with a pragmatically-based distribution of the ergative marker have been included in the ‘minimally ergative’ category, even if the case marker is relatively frequent.

This ‘minimally ergative’ category also includes languages where any ergative-type marking was reported to be ‘optional’, e.g., in Jaminjung (Schultze-Berndt 2015). It additionally includes two languages which have been described as having ‘mixed’ alignment systems, where there is no strong case to be made for the language having any particular alignment: Ayulta Mixe (Mixe-Zoquean, Americas) and Limilingan (Australia). Limilingan has pronominal prefixes which could be described as having at least four different patterns:

The 1M shows a nominative vs. accusative grouping, as does the 2M in tenses other than the Future. in the Future, the 2M shows three way split. the 1+2M, 2A, and 1+2A all show an absolutive vs. ergative grouping. the 1A does not show any categorical grouping

in prefix forms. Distinctions within the 1A are indicated by the position of the 1A in relation to other pronominal prefixes. (Harvey 2001:89)

Mixe similarly has been described as having four different alignment patterns with respect to its person marking. Although most Mixe-Zoquean languages are ergative, where the person indexed on the verb varies based on an inverse or hierarchical system, Romero-Mendez (2009) reports that Ayutla Mixe no longer has ergative alignment, and instead has innovated a mixed person system, where first person independent forms have a tripartite pattern, but dependent forms have a nominative-accusative pattern; the second person has the opposite pattern from the first person, and the third person has ergative alignment for dependent and independent forms. Although it is clear that the typical types of alignment categorizations do not directly apply to these languages, they have been considered here as ‘minimally’ ergative, since an ergative pattern regularly appears with some persons, not unlike the systems of many other minimally ergative languages.

There are 28 minimally ergative languages in the dataset. They are found in all regions and belong to 14 different genetic groups, the largest of which were already mentioned above (Salishan, Tibeto-Burman, Indo-European (Indic)). Some of these 28 languages also have syntactic ergativity (see section 6.4), which suggests that even though these languages are only minimally ergative with respect to their morphology, ergative properties may still carry over into the syntactic domain. All but 6 of these languages have verb-peripheral basic word orders, with 2 AVO languages and 4 languages with flexible orders. Unlike highly ergative languages which had an even split between head-marking and dependent-marking strategies, minimally ergative languages show equal preference for head-marking (13/28, 46.4%) and both head-marking and dependent-marking (12/28, 42.9%), while strongly disfavoring dependent-marking strategies (3/28, 10.7%).

Of these 28 languages, only two—Sinaugoro (Austronesian) and Gaahmg (Eastern Jebel)—have antipassive constructions. These two languages represent only 2.9% of ergative languages with antipassives, and only 7.1% of all minimally ergative languages in the sample. This is much less than the 43% incidence of antipassives amongst ergative languages, suggesting that the correlation which exists between ergativity and antipassives is weaker or simply does not hold for minimally ergative languages.

The idea that languages with minimal amounts of ergativity do not have a strong correlation with antipassivization is supported by the characteristics of antipassives in minimally ergative languages. Neither Gaahmg nor Sinaugoro have prototypical antipassives; Gaahmg has only a patientless antipassive, and apparently exhibits ergativity in assertive object focus constructions (Stirtz 2014:244-245). Sinaugoro has optional ergative marking and Oceanic-type detransitivizing reduplication (Tauberschmidt 1999).

6.3.5 PRELIMINARY SUMMARY

It does appear to be the case that the degree to which ergativity is an important feature of the grammar of a language has some effect on the incidence of antipassives in that language. Of the 160 ergative languages in this sample, languages which are ergative with respect to almost every aspect of their morphology also had a 66% incidence of antipassives. This contrasts with languages which exhibit ergativity with respect to only a single construction, person, etc., which had a 7% incidence of antipassives. The numbers and percentages for the types of ergative languages and whether they have antipassives are summarized in Table 6.2.

TABLE 6.2. Distribution of antipassives by degree and type of ergativity

Class	Languages with antipassives	Total	Percentage
Highly ergative	29	44	65.9%
Split-ergative	38	88	43.2%
Tense/aspect	5	12	41.7%
Case/agreement	5	32	21.9%
Clause type	11	17	64.7%
NP type	7	12	58.3%
Minimally ergative	2	28	7.1%

6.4 SYNTACTIC ERGATIVITY

Since antipassives were ‘discovered’ in languages like Dyirbal where they have syntactic functions, there has been what is arguably a disproportionate focus on the role of antipassives in syntactic ergativity, i.e., to circumvent syntactic restrictions on ergative arguments by turning them into absolutive arguments (see for example the treatment of antipassives in Dixon 1994 and Foley and Van Valin 1984). However, in Chapter 3 I discussed Cooreman’s (1994:75) conclusion that the use of antipassives purely for syntactic purposes is generally a secondary

development. The idea that antipassives were extended from contexts where they already existed serving pragmatic/information structure-type functions to serve so-called pivot functions is supported by the observation that there are very few languages where the antipassive only serves syntactic functions, and cannot be used elsewhere in the language.²⁶ With this said, the purpose of this section is to look at languages described as having at least some syntactic patterns which exhibit ergativity, and to see how these patterns interact (or do not interact) with the antipassive.

The second issue which must be addressed here is the definition of syntactic ergativity. At the most general level, syntactic ergativity is the differential treatment of A arguments with respect to S and O arguments (which are treated alike) in certain syntactic constructions. However, some argue for a narrower definition, where syntactic ergativity is more specifically restrictions placed on ergative arguments (but not S and O arguments) with respect to A' extraction,²⁷ which includes syntactic processes like relative clauses, *wh* movement, focus movement, and topicalization (Polinsky in press(a)). This section looks at antipassivization with respect to both a narrow and a broad definition of syntactic ergativity. For purposes of creating an initial list of syntactically ergative languages, any process which only applies to A arguments was considered. For example, many Mayan languages have a restriction on the relativization, questioning, and focusing of ergative arguments. However, some Mayan languages (e.g., Tsotsil), although they maintain the agent focus pattern used to focus A arguments, also allow ergative arguments to be focused in all contexts. When the ban on A' extraction is optional and there is a choice between two constructions, that choice is conditioned by information-structure pressures (cf. Aissen 1999), similar to the choice between an object relative clause or a passivized relative clause in English, not syntax, and would therefore not be considered to be an instantiation of syntactic ergativity under a strict definition. However, since the agent focus

²⁶ The only languages here considered to have a truly syntactic antipassive which 1. qualifies as antipassive by the definition used here, and 2. only appears in service of a syntactic 'pivot' is the Movima *kwey* antipassive (cf. Haude 2012) and a number of Mayan languages where a particular antipassive pattern is limited to contexts where the agent is focused (see Chapters 11 and 12). There are other constructions which are antipassive-like and exclusively exist in focused-agent-type contexts, including Mayan agent focus and the various instantiations of a Philippine-type agent voice pattern, but these have not been considered 'antipassive' here. To my knowledge Dyirbal-type antipassives in Pama-Nyungan languages are not strictly limited to syntactic contexts, and can also appear for pragmatic reasons.

²⁷ A' extraction or A' movement in a generative framework refers to the movement of an argument to a higher non-argument position.

pattern is still only available to A arguments and not S or O arguments in these languages, they were counted as syntactically ergative here. For a more complete discussion of syntactic ergativity in Mayan see Chapters 11 and 13.

As with morphological ergativity, languages can exhibit syntactic ergativity in more or fewer constructions. There are no known languages which exhibit ergativity in every aspect of their syntax (see Dixon (1994:14), and also Anderson (1976) on constructions like raising and some types of binding that are consistent regardless of alignment type). However, some languages have ergative patterns in more constructions than others. As Polinsky (In press(a)) notes, Chukchi is ergative with respect to relativization (6.4c), but not with respect to *wh* movement (6.4b), where A arguments can undergo *wh* movement with a gap but cannot be relativized with a gap.

Transitive:

- (6.4a) Ənpənačg-e milger kun-nin
 old.man-ERG gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ
 ‘The old man bought a gun’

Wh question:

- (6.4b) **Mikəne** milger kun-nin?
 who.ERG²⁸ gun.ABS buy-AOR.3SG.SBJ.3SG.OBJ
 ‘Who bought a/the gun?’

Subject relative clause:

- (6.4c) *[___i milger kənnə-lʔ-ən] ənpənačg-əni
 gun.ABS buy-PTCP-ABS old.man-ABS
 Target: ‘The old man who bought the gun’ (Polinsky in press(a):ex.16)

To circumvent this ban on relativizing A arguments with a gap, Chukchi uses an antipassive construction to create a grammatically intransitive sentence. Absolutive S arguments in Chukchi are freely relativized with a gap:

²⁸ Given the position of the *wh* word and the ergative in these examples, one might wonder if this is actually an example of *wh in situ*. Polinsky offers two pieces of evidence that there is indeed movement: (1) typical ergative arguments need not be initial (Chukchi word order is fairly free), but the *wh* word can only be initial, and (2) the *wh* word cannot appear in adjunct islands or inside relative clauses. See Polinsky (in press(a)) for details.

Absolutive (detransitivized) relative clause:
 (6.4d) [Məlgr-epə **ine**-kune-lʔ-ən] ənpənačg-ən
 gun-ABL AP-buy-PTCP-ABS old.man-ABS
 ‘The old man that bought a gun’ (Polinsky in press(a):ex.24)

These examples from Chukchi illustrate the function of antipassives in languages that use them to create non-ergative arguments for syntactic purposes.

There are 37²⁹ languages in this dataset which were described as being syntactically ergative with respect to at least one construction. This includes all languages which treat A differently from S and O at the syntactic level, and not just in terms of extraction. These languages only make up 23.6% of ergative languages in the sample, which corroborates Dixon’s (1994:172) claim that only a small portion of morphologically ergative languages exhibit syntactic ergativity. The majority of these 37 syntactically ergative languages come from the Americas (26), although they appear in every region except Africa. They also represent 14 different genetic groups, both those well-known for syntactic ergativity such as Mayan, Salishan, Eskimo-Aleut, Chukotko-Kamchatkan, Pama-Nyungan, and Austronesian, as well as some members of other groups including some Kiranti languages (Tibeto-Burman), Ingush (Nakh-Daghestanian), Karo (Tupian), Coast Tsimshian (Tsimshian), Shipibo-Konibo (Pano-Tacanan), Katukina, Trumai, and Movima.

In terms of word order, most of these languages are verb-initial (12 VAO, 8 VOA). However, there are also 9 languages with AOV basic word order, 3 with AVO basic order, and 5 with highly flexible word order. As such, 62.2% have VO basic orders, and 75.7% have verb-peripheral basic orders. This is somewhat at odds with the general sample of ergative languages, where over half had AOV basic word order, which suggests that syntactically ergative languages are more likely to be V-initial than ergative languages generally.

Additionally, the majority of syntactically ergative languages in this sample are head-marking (20/37, or 54.1%), all of which are languages of the Americas (Mayan, Salishan,

²⁹ This total excludes those Tibeto-Burman languages which exhibit pragmatic ergativity, as the distribution of the ergative marker is primarily based on pragmatics, not syntax. It also excludes Nilotic languages with OVA/SV word order. Since these languages indicate grammatical relations through word order, the position of S and O vs. A was considered evidence of morphological ergativity, even though word order is generally considered to be an aspect of syntax.

Tupían, Movima).³⁰ Only 7 are dependent-marking (18.9%), which includes several Pama-Nyungan languages, Trumai, and Tongan. The remaining 10 languages (27%) have both head-marking and dependent-marking strategies, and include Eskimo-Aleut, Chukchi, Shipibo-Konibo, Katukina, Athpare and Belhare (Kiranti), Roviana (Austronesian), Warlpiri, and Coast Tsimshian. This finding that most syntactically ergative languages are head-marking is somewhat at odds with Dixon's (1994:145) claim that there is a significant inverse correlation between head marking and syntactic constraints on clause combination and NP omission. Indeed, those seven languages in the sample which are syntactically ergative with respect to coordination or clause chaining are all either dependent-marking or both head- and dependent-marking. However, this is a narrow and rather Pama-Nyungan-centric definition of syntactic ergativity; when considering the larger sample and a broader definition, the tendency for syntactically ergative languages to be dependent-marking disappears.

All of the languages in this sample which exhibit syntactic ergativity are also morphologically ergative. This is in line with the well-known observation that there are no known languages which are ergative with respect to some aspects of their syntax but not with respect to aspects of their morphology. However, it is possible that the degree to which a language is morphologically ergative has something to do with whether it also exhibits ergativity in its syntax. In fact, Aldridge (2008:969) claims that “in split-ergative languages such as Hindi, ergativity does not extend to syntactic operations.” Hindi was considered here to be ‘minimally’ morphologically ergative, so the fact that it lacks syntactic ergativity suggests that degree of morphological ergativity might relate to ergativity in syntax (as Aldridge seems to be suggesting in general). It is possible to evaluate any possible correspondence between degree of morphological ergativity and syntactic ergativity by looking at syntactically ergative languages in terms of the categories established in sections 6.3.2, 6.3.3, and 6.3.4, which discussed the properties of highly ergative, split-ergative, and minimally ergative languages, respectively.

³⁰ Deal (2016) argues that head-marking languages which lack case marking (e.g., Mayan and Salishan) may not actually be syntactically ergative in the formal sense that they have a restriction on the extraction of ergative arguments. Special morphology in the context of transitive subject extraction may instead be due to agreement/extraction interactions which are not necessarily limited to ergative arguments. Since languages like Mayan languages have traditionally been treated as A'-movement, they have been included below as languages which have extraction-related ergativity. However, it is duly noted that these languages may not have the same type of extraction restriction as in Eskimo-Aleut languages, for example.

Table 6.3 gives the distribution of syntactically ergative languages in this sample across these three categories.

TABLE 6.3. Correspondence between degree of morphological ergativity and syntactic ergativity

Ergativity class	# with syntactic ergativity	Total #	Percent
Highly ergative	14	44	31.8%
Split-ergative	21	88	23.9%
Minimally ergative	2	28	7.1%

With respect to the categorization here, all types of ergative languages have the possibility of being syntactically ergative, regardless of how great or small a role ergativity plays in the morphology (as long as it exists). However, it does appear that languages which are more morphologically ergative are *more likely* to also exhibit syntactic ergativity, since 31.8% of highly ergative languages are also syntactically ergative, while only 7.1% of minimally ergative languages are syntactically ergative.

There are a wide variety of constructions across the 37 syntactically ergative languages in the sample which exhibit ergativity. Some of these are patterns which appear in many languages, e.g., with respect to relativization (30), *wh* questions (16), focus (15), topicalization (2), coordination (6), and other subordinations (3), but there are other minority patterns as well, including quantification (2, Halkomelem, Warlpiri), possessor extraction (1, Halkomelem), yes/no questions (1, Karo), ostension (1, Katukina), and clause chaining (1, Ingush). Based purely on the frequency with which ergativity appears in a particular syntactic construction, it would seem that relativization is the most common and therefore potentially the best diagnostic of whether a language has syntactic ergativity. This is what Polinsky (In press(a)) suggests with reference to Chukchi, which only exhibits ergativity in relative clauses. If we look at the frequency with which syntactic ergativity is a consistent pattern with reference to only one construction, there are 9 languages where ergativity is only expressed in relative clauses (although even fewer are relative clause types that involve extraction, see below), but there are an additional 7 languages where *wh* questions are the only constructions which consistently exhibit syntactic ergativity. Ergativity is less common in all of the other constructions above. However, all of the languages with a mandatory ergative pattern in *wh* questions are Mayan languages, while languages where ergativity appears only in relative clauses are more genetically diverse (6 groups). As such, relativization may indeed be the better indicator of syntactic

ergativity, but is certainly not a perfect indicator, and perhaps there is no single construction which is the best indicator of the presence of syntactic ergativity in a language.

As mentioned above, languages can also be syntactically ergative to different extents, and some languages only exhibit ergativity in one type of construction. In fact, this is true for the majority of syntactically ergative languages in this sample: three languages have entirely optional ergative syntactic patterns (8.1%), and 21 languages (56.8%) only have one construction which is consistently ergative. In addition, 8 languages were described as consistently exhibiting ergativity in two constructions (14%). There are apparently very few languages for which it is possible to say that most syntactic operations are organized in an ergative pattern. The language in this sample which is syntactically ergative with respect to the most diverse structures is Katukina, a language isolate in South America. According to Queixalós (2010:258), Katukina exhibits syntactic ergativity in ostension, true contrastive focus, coordination, interrogation, relativization, co-reference pivoted in clause coordination, and clause subordination. The ban on ergative arguments in these constructions is circumvented by the use of an antipassive-type detransitivizing construction that allows the transitive agent to be relativized, questioned, etc. (see Queixalós 2012 for a discussion of this antipassive-type construction). An example illustrating syntactic ergativity with respect to the coordination of A arguments in Katukina is given in (6.5).

Coordination of O arguments:

- (6.5a) Nodia no=hoho-nin Owi Hanani
Nodia MKCASE=call-DUR Owi Hanani
'Nodia is calling Owi and Hanani'

Coordination of S arguments:

- (6.5b) Tyuku Nodia Owi
die Nodia Owi
'Nodia and Owi died' (Queixalós 2010:244)

Coordination of A arguments:

- (6.5c) Nodia Hanani **wa**-hoho-nin Owi
Nodia Hanani AP-call-DUR Owi
'Nodia and Hanani are calling Owi' (Queixalós 2010:258)

While it is hypothetically possible that there might be a correlation between the number of constructions which exhibit syntactic ergativity and the extent to which a language is

morphologically ergative, this does not appear to be the case. Many languages in the split-ergative category are ergative with respect to several major constructions, particularly Australian languages. Also, several highly ergative Mayan languages do not exhibit syntactic ergativity to the extent discussed in the literature, since the agent focus construction is optional in at least some contexts (see Chapter 13).

Prior to a discussion of the relationship between syntactic ergativity and antipassives, it is important to look at the sample with respect to a more restrictive definition of syntactic ergativity. As mentioned above, many researchers discuss syntactic ergativity primarily in the context of ergative (A') extraction. If the sample is limited to languages which have been described as having a ban on the extraction of ergative arguments, there are 31 languages which have at least one relevant construction that could be described as A' extraction. Three of these languages are less canonical examples as they involve a ban on ergative arguments in internally-headed relative clauses, but allow ergative arguments in externally-headed relative clauses, and as mentioned above, another three have the ergative pattern optionally (not a ban). Additionally, Deal (2016) proposes that entirely head-marking languages may not have a ban on ergative extraction, but rather have what is essentially specialized morphology due to the interaction of agreement and extraction, rather than to properties of ergative case. In this view, if we exclude exclusively head-marking languages, there are potentially only 12 languages in the sample with syntactic ergativity produced by a ban on the extraction on ergative arguments. This is a very small number, constituting only 2.7% of the 445 languages in the sample. Under such a definition, syntactic ergativity is a very rare phenomenon, perhaps rarer than generally thought.

6.4.1 ANTIPASSIVES AND SYNTACTIC ERGATIVITY

The goal of this section is to determine the extent to which antipassives interact with syntactic ergativity, since this has been a major point of discussion in the literature (e.g., Dixon 1994, Foley and Van Valin 1984). Of the 37 syntactically ergative languages in this sample, 23 have antipassive constructions (62.2%). This is a higher percentage than the incidence of antipassives in ergative languages in general (43%, see section 6.1), more comparable to the incidence of antipassives in predominantly ergative languages (65.9%, see section 6.3.2). Almost all of these 23 languages belong to the Americas and Australia, with one in Asia (Chukchi). The antipassive constructions in these languages have many of the antipassive features tracked in this

study (see Chapters 8 and 9), as they are productive processes and generally allow for the expression of the patient in an oblique phrase. However, the fact that there are 14 syntactically ergative languages in the sample which lack antipassive constructions goes against Dixon's (1994:17) claim that languages with ergative syntax "almost always (or always?)" have an antipassive derivation. Although the majority of syntactically ergative languages have antipassives based on this sample, 37.8% of syntactically ergative languages lack antipassives and use other means to get around restrictions on the ergative argument. This observation also holds under a more restrictive definition of syntactic ergativity: of the 31 languages with ergative patterns in A' extraction contexts, 11 languages lack antipassive constructions. In fact, by these numbers, languages in which syntactic ergativity exists in A' extraction contexts are less likely to have antipassives, as these 11 languages account for 78.6% of syntactically ergative languages lacking antipassives.

Although Dixon's (1994:17) statement that syntactically ergative languages almost always have antipassives does not hold for the languages in this sample, the idea behind it was that languages with ergative syntactic pivots have antipassive constructions in order to manipulate the grammatical roles of the arguments in the sentence to circumvent restrictions on ergative arguments. It is possible that in those syntactically ergative languages which do have antipassives, the antipassive construction is always or almost always used in this way, i.e., to circumvent the restrictions on ergative arguments. However, this also does not appear to be the case. Of the 23 syntactically ergative languages with antipassive constructions, only 10 languages rely primarily on the antipassive to serve this function (e.g., as in Dyrirbal or Chukchi). In most of the 37 syntactically ergative languages, the antipassive may be used in the construction in question, but it is not the primary means by which the language relativizes, coordinates, etc. ergative arguments. For example, in many Mayan languages the agent focus construction (which is not an antipassive, see Chapter 11) is used to circumvent the restrictions on ergative arguments. The antipassive may be used as well, but only appears at about a fourth of the rate of agent focus, if at all (cf. Stiebels 2006). An example from Tz'utujil is given in (6.6), where (6.6a) shows a transitive construction with a focused patient, (6.6b) shows the agent focus construction with a focused agent (A argument), and (6.6c) shows the oblique antipassive construction which likewise can be used when the agent of a transitive verb is focused. See

Chapter 11 for an overview of the properties of the various antipassive-type constructions in Mayan languages.

Transitive:

- (6.6a) Jar aachi (ja) x-Ø-aa-ch'ey x-Ø-b'e
 FOC man REL COMPL-3SG.ABS-2SG.ERG-hit COMPL-3SG.ABS-go
 'The man who you hit took off' (Dayley 1985:373)

Agent Focus:

- (6.6b) Jar iixoq-ii' x-in-ch'ey-ow-i
 FOC woman-PL COMPL-1SG.ABS-hit-AF-INTR
 'The women were the ones who hit me' (Dayley 1985:349)

Antipassive:

- (6.6c) Inin x-in-ch'ey-o aw-xiin
 1SG COMPL-1SG.ABS-hit-AP 2SG-OBL
 'I was the one who hit you' (Dayley 1985:350)

The Chukchi examples in (6.4) above demonstrate the use of the antipassive to circumvent syntactic restrictions on ergative arguments. The following examples in (6.7) from Shipibo-Konibo demonstrate one alternate method for circumventing a restriction on an ergative argument, which does not involve the antipassive. In Shipibo-Konibo, ergative arguments cannot appear in an internally-headed relative clause construction (6.7a), although absolutive arguments can. To relativize an ergative argument, one uses an externally-headed relative clause (6.7b). This strategy does not require the use of an antipassive, and exemplifies one option for circumventing a restriction on an ergative argument in a language which lacks an antipassive construction.

Internally-headed O relative clause:

- (6.7a) [Pitso-n bake natex-a]-tonin-ra joshin pi-ke
 parokeet-ERG child.ABS bite-PTCP.COMPL-ERG-EVID banana.ABS eat-COMPL
 'The child the parokeet bit ate the banana'
 *'The parokeet that bit the child ate the banana'

Externally-headed A relative clause:

- (6.7b) [Bake natex-a] pitso-n-ra joshin pi-ke
 child.ABS bite-PTCP.COMPL parokeet-ERG-EVID banana.ABS eat-COMPL
 'The parokeet that bit the child ate the banana' (Valenzuela 2003:482-3)

Syntactic ergativity has also been discussed extensively in Tongan (e.g., Otsuka 2002, 2006, forthcoming). With respect to relativization, Tongan exhibits a pattern akin to that of Shipibo-Konibo, where there are two strategies available to absolutive arguments, but only one available to ergative arguments. In the case of Tongan, relativizing ergative arguments requires a resumptive pronoun, while absolutive arguments may use a gap strategy (Otsuka forthcoming:116). However, Tongan exhibits ergativity with respect to coordination as well, where the conjunction *pea* may only coordinate S and O or A and A arguments, not S and A, as shown in (6.8a) (bolding is mine).

(6.8a) Na'e taa'i 'e Hina_i 'a Mele_j **pea** tangi *e*_{*i/j}
 PST hit ERG Hina ABS Mele **and** cry
 'Hina hit Mele and (*Hina/Mele) cried' (Otsuka forthcoming:123)

In order to get an S and A reading, the conjunction *mo* must be used instead:

(6.8b) Na'e taa'i 'e Hina_i 'a Mele_j **mo** kata *e*_{i/*j}
 PST hit ERG Hina ABS Mele **and** laugh
 'Hina hit Mele and (Hina/*Mele) laughed' (Otsuka forthcoming:129)

Both Tongan relative clauses and coordinate NPs exhibit a type of syntactic ergativity which involves restrictions on processes involving ergative arguments. However, neither of them use voice as a way to resolve it. Instead, Tongan uses two separate types of strategies which would have both been subsumed under the function of the antipassive in a language like Dyirbal.

The finding that not all languages with syntactic ergativity have antipassive constructions, and additionally that antipassives only regularly participate in syntactic ergativity in fewer than half of the syntactically ergative languages in which they occur, demonstrates that syntactic constraints can be circumvented in a variety of ways. Although the antipassive is a common solution to an ergative restriction, it is certainly not the only one, and not even the primary one, since only 10 of the 37 syntactically ergative languages in this sample have adopted it (27%). This further supports the idea put forth at the outset of this section that syntactic uses of antipassive constructions are secondary functions.

6.5 SUMMARY

In this section I have explored the relationship between antipassivization and ergativity. Ergative languages make up 36% of the total dataset, which is probably greater than the proportion of ergative languages globally. Several possible correlations involving ergativity and other typological features were examined in section 6.1. It was found that although there have been proposals that verb-medial word orders and AVO word order in particular are incompatible with ergativity (Mahajan's Generalization), there are 20 verb-medial ergative languages in this dataset, so the generalization was amended such that ergative languages *tend not to* exhibit AVO word order (or vice-versa), while OVA languages tend to be ergative.

Somewhat less than half of the ergative languages in the sample have antipassive constructions (43%). Therefore, it is not the case that most ergative languages have antipassives; given any ergative language, there is a less than 50/50 chance it will have an antipassive construction. Nevertheless, there is a significant correlation between antipassives and ergativity with respect to other alignment types. This could also be stated as a negative correlation, that languages with non-ergative alignment types are even less likely to have antipassives. Since the vast majority of antipassives in ergative languages do not serve syntactic functions, it seems that the explanation might lie outside of syntax. It was suggested that this correlation is likely due, at least in part, to a confluence of other typological features. Correlations between antipassives, ergativity, rigidity of transitivity, and an inverse correlation with a lack of morphological argument indexing compound to produce the effects which we see here, such that the valency-related characteristics of ergative languages lend themselves to the development of an antipassive construction.

In sections 6.3.2-6.3.4 I investigated the hypothesis that languages which are more ergative (that exhibit ergativity in more environments/constructions) are more likely to have antipassives. To evaluate this, ergative languages were broken into three primary classes: highly ergative languages, split-ergative languages, and minimally ergative languages. The split-ergative category was further subdivided based on the major types of splits: case vs. agreement, NP type, aspect, and clause type. The distribution of antipassives in ergative languages based on this categorization is given in Table 6.2 below, reproduced from the preliminary summary in section 6.3.5.

TABLE 6.2. (repeated from 6.3.5) Distribution of antipassives by degree and type of ergativity

Class	Languages with antipassives	Total	Percentage
Highly ergative	29	44	65.9%
Split-ergative	38	88	43.2%
Tense/aspect	5	12	41.7%
Case/agreement	5	32	21.9%
Clause type	11	17	64.7%
NP type	7	12	58.3%
Minimally ergative	2	28	7.1%

This categorization shows that there does appear to be a difference in the distribution of antipassives based on the degree to which the language is morphologically ergative. 66% of highly ergative languages have antipassives, whereas less than half of split-ergative languages have antipassives (43%), and even fewer minimally ergative languages have antipassives (7%). It also appears that languages with partially ergative alignment systems have different incidences of antipassives based on the type of split they exhibit. Based on this sample, languages with a split based on clause type are more likely to have antipassives than languages with a case/agreement split. However, the sample would need to be expanded to see if these tendencies hold up with respect to more of the world’s languages.

Syntactically ergative languages make up 23.1% of ergative languages in the sample, and 8.3% of the total sample. All of these languages are also morphologically ergative, and syntactic ergativity is found in ergative languages of all types—highly ergative, split-ergative, and minimally ergative. These languages exhibited ergativity with respect to ten different types of constructions, although most were what might be considered ‘minimally’ syntactically ergative, as they only exhibited ergativity with respect to one type of construction, e.g., only relativization or only *wh* questions. A total of 23 of the 37 syntactically ergative languages in this sample have antipassive constructions (62.2%). However, that means that the remaining 14 syntactically ergative languages (37.8%) lack antipassives and therefore have some other way in which they differentiate ergative and absolutive arguments with respect to syntax. In addition, only 10 of those languages which do have an antipassive construction use it as their primary mechanism for circumventing restrictions on ergative arguments, which suggests that discussions of the syntactic functions of antipassive constructions generally overstate the role that syntactic restrictions play in the distribution and purpose of antipassive constructions around the world.

CHAPTER 7. ANTIPASSIVES AND OTHER ALIGNMENTS

7.1 NOMINATIVE-ACCUSATIVE ALIGNMENT

A number of authors have noted that there is not necessarily any reason why antipassives should not exist in non-ergative languages, and in fact that structures which are at least antipassive-like do exist in nominative-accusative languages (Foley and Van Valin 1984, Lazard 1989, Janic 2013; Polinsky 2013, In press(b)). However, different accounts use different definitions of antipassives, which makes their claims less comparable. If we look primarily at semantic characteristics, as pointed out in Cooreman (1994) and Lazard (1989), the semantic correlates of antipassives are the same as those for decreased transitivity—mainly incomplete or habitual action, non-individuation of patient arguments, non-volitional agents—as described in Hopper and Thompson (1980). Different ways to achieve these effects are found in a majority of languages. On the other hand, there is also a wide range of structural correlates for decreased transitivity, including phenomena like noun incorporation, differential object marking, non-canonical case marking, and middle voice, in addition to the antipassive. However, by most definitions, most of these structures are not themselves types of antipassives. The central contention of this section and the following sections is that there are in fact constructions which meet a structural definition of antipassives in non-ergative languages. All languages have some way of performing (or often a collection of different mechanisms which perform) the various functions of antipassives in ergative languages. However, only a subset of languages has something structurally equivalent that we can consider an antipassive.

7.1.1 OVERALL DISTRIBUTION

Of the 445 languages in the sample, 225 (50.6%) are primarily nominative-accusative languages. WALs (the *World Atlas of Language Structures*) identifies 212 languages with nominative-accusative verbal person marking in a sample of 380 (Siewierska 2013), or 55.8%, which is slightly higher but comparable proportion to the sample here. This makes nominative-accusative alignment the most common alignment type, appearing as the dominant morphological alignment type in more than half of the world's languages. This number of course

increases if one takes into account those languages with split-ergativity where a portion of the system shows nominative-accusative alignment.

Nominative-accusative languages are found in every region, although they are much more prevalent in Africa than in any other region ($\beta: 2.13 \pm 0.55, p < 0.001$).³¹ Europe, Asia, and the Pacific have approximately equal numbers of nominative-accusative and non-nominative-accusative languages, while the Americas have the smallest percentage of nominative-accusative languages, which is not surprising since the Americas contain the greatest number of ergative languages, discussed in section 6.2.

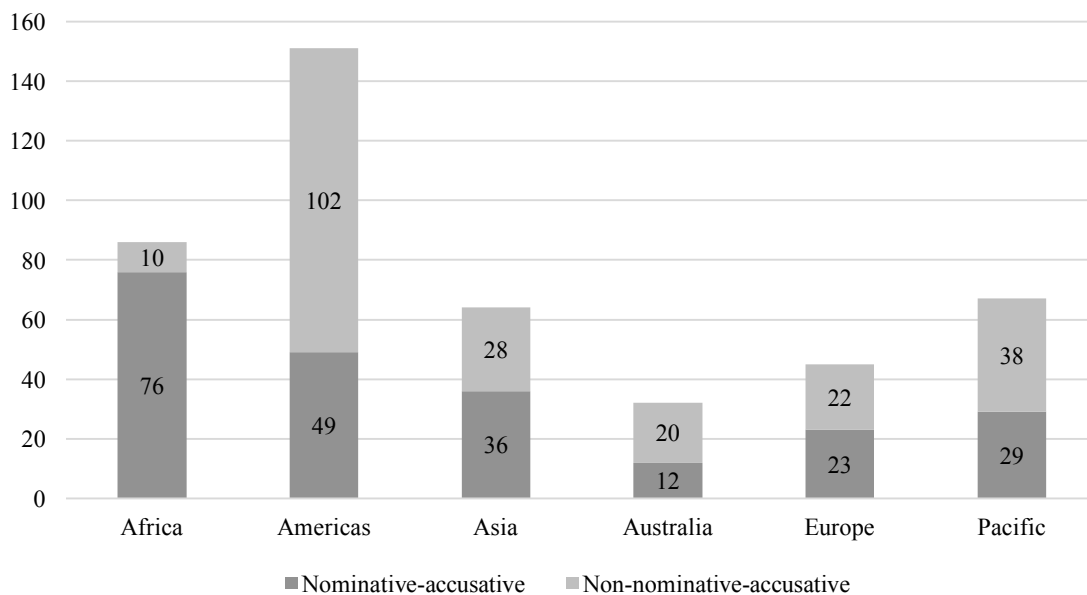


FIGURE 7.1. Distribution of nominative-accusative languages by region

Nominative-accusative languages are found in 80 different genetic groups, 16 of which are language isolates. These languages therefore represent 55.6% of the linguistic diversity in the sample and 25% of the current linguistic diversity on the planet.³²

³¹ Statistical significance was calculated throughout this section using a generalized linear regression model that was fit to alignment (which was here defined as a binary variable: accusative vs. non-accusative), with region, word order, and locus as predictors.

³² This figure does not include the 100 language families Campbell (2013:159) lists as extinct, that is, language families (including isolates) where no language which is a member of the family has any known speakers. If we were to take into account all known linguistic diversity, then nominative-accusative languages belong to families which represent 19% of the planet's linguistic diversity.

In terms of other typological features, the nominative-accusative languages in the sample are about equally distributed over the different types of argument marking. However, there are significantly more nominative-accusative languages which are neither head-marking nor dependent-marking. These nominative-accusative languages make up 90% of all languages in the sample without any grammatical role-related marking. This correlation is somewhat significant ($\beta: 1.29 \pm 0.57, p < 0.05$).

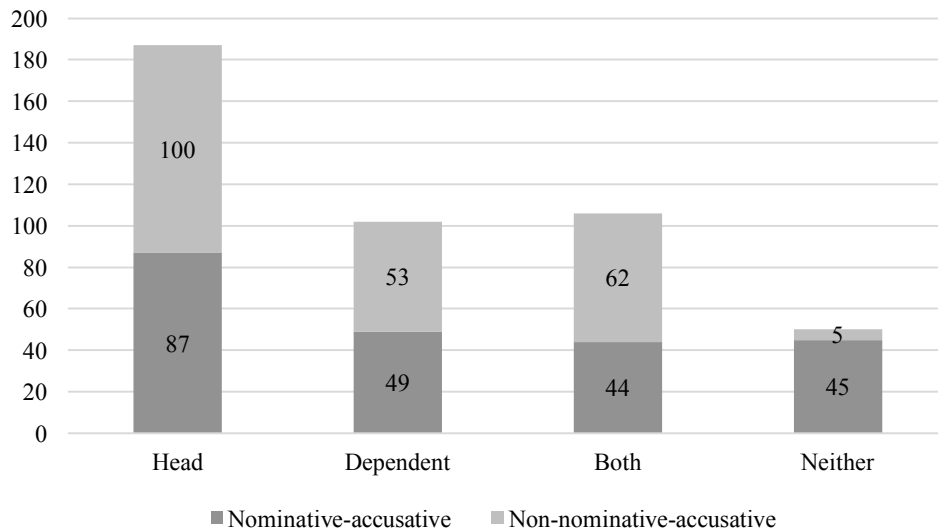


FIGURE 7.2. Distribution of nominative-accusative languages by locus of grammatical marking

The tendency for neither head- nor dependent-marking languages to be nominative-accusative mirrors their tendency to also have large numbers of labile/ambitransitive verbs. While there are nominative-accusative languages with rigid transitivity classes for most verbs (23 languages, 26.4%, e.g., Seri, Pohnpeian), a much greater percentage have fluid transitivity for verbs (39/57 languages, 68.4%). This is the opposite tendency than what was observed in section 6.2 for ergative languages, which tend to have rigid transitivity specifications for verbs. The lack of rigid transitivity specifications in nominative-accusative languages might have to do with the identity in subject marking between transitive and intransitive clauses, while in ergative languages attention is constantly drawn to the transitive/intransitive contrast by having different sets of markers for transitive vs. intransitive subjects. Also, in general, languages which have large numbers of ambitransitive/labile verbs do not need valency increasing or decreasing operations to create transitive or intransitive forms of the same root. That this fluid transitivity is

an attribute of nominative-accusative languages provides an explanation as to why valency-changing operations like the antipassive would be less frequent in these languages.

With respect to basic word order, nominative-accusative languages show almost exactly the opposite set of characteristics described for ergative languages (see section 6.2). While ergative languages tend to have VOA, VAO, OVA, and highly flexible basic word orders, there are only a handful of nominative-accusative languages in the sample with these orders (33). In contrast, the vast majority of languages with basic AVO order are nominative-accusative (which is highly significant: $\beta: 1.76 \pm 0.43, p < 0.001$), while only 9 AVO languages are ergative (see section 6.2).

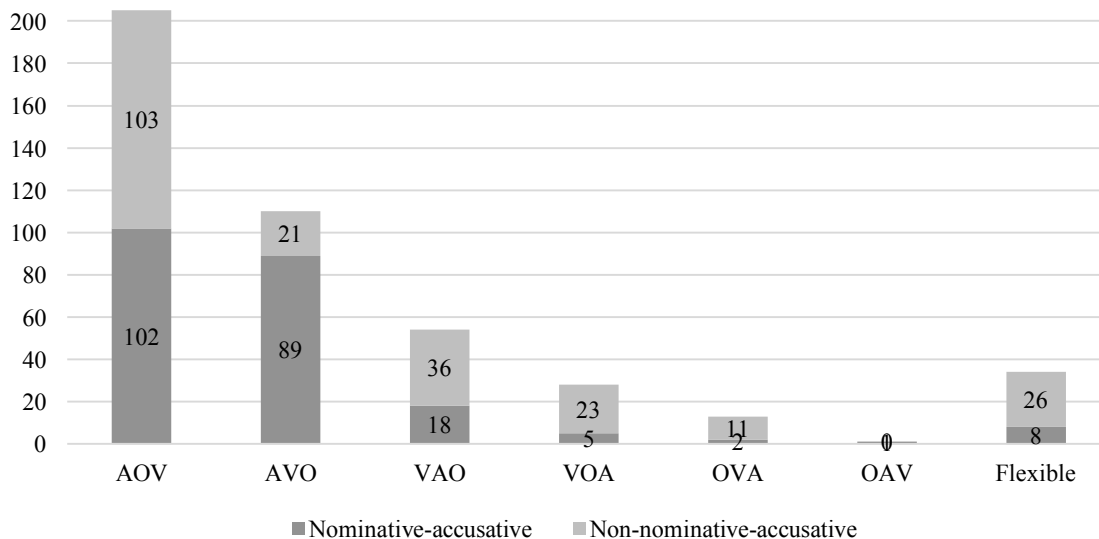


FIGURE 7.3. Distribution of nominative-accusative languages by basic word order

Since there is a strong correlation between AVO order and nominative-accusative alignment, it is not surprising that nominative-accusative alignment positively correlates with verb-medial word orders ($\beta: 0.87 \pm 0.29, p < 0.01$), although OVA languages are almost entirely non-nominative-accusative. There is no significant correlation between nominative-accusativity and VO vs. OV basic word order.

7.1.2 DISTRIBUTION OF ANTIPASSIVES IN NOMINATIVE-ACCUSATIVE LANGUAGES

The definition of ‘antipassive’ developed in Chapter 3 requires that (1) the antipassive construction correspond to a transitive verb which is more basic/less marked than the

antipassive; (2) there be a verbal voice morpheme that has antipassive as at least one of this functions; (3) the resulting predicate be intransitive, and (4) that the single argument of that transitive predicate is (or can be) an agent. The claim in this section is that there are structures in nominative-accusative languages which fit this definition. I also explore the distribution and some of the properties of languages with antipassives in this sample, and then briefly look at the properties of antipassives in nominative-accusative languages and how they compare to the properties of antipassive constructions in ergative languages.

Of the 225 nominative-accusative languages in the sample, 41 were considered to have antipassive constructions. These languages only represent 18.2% of nominative-accusative languages, and a mere 9.2% of all languages in the sample. So while it is not particularly common for nominative-accusative languages to have antipassive constructions, and antipassives are not nearly as frequent in nominative-accusative languages as they are in ergative languages (43%), it is the case that antipassives can exist in nominative-accusative languages. A graphic representation of the number of languages in the sample with different some of the major verb alignment types and whether they have antipassive constructions is given in Figure 6.1, reproduced here from section 6.1.

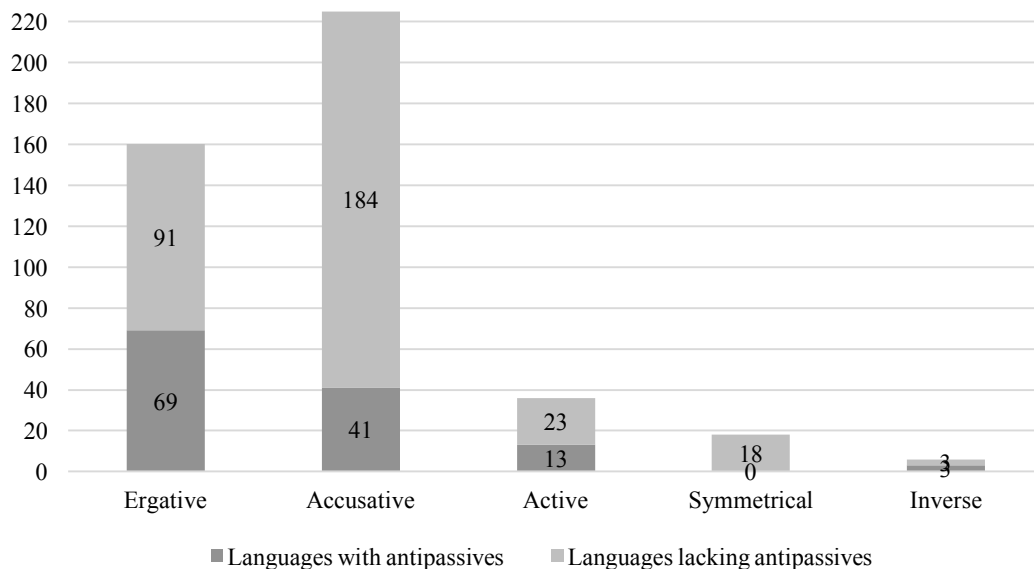


FIGURE 6.1. (repeated from 6.1) Distribution of antipassives by alignment type

The 41 nominative-accusative languages in this sample which have antipassives come from all regions of the world except Australia. Given the prevalence of nominative-accusative

languages in Africa, it is perhaps not surprising that more nominative-accusative languages with antipassives in this sample come from Africa than other regions.

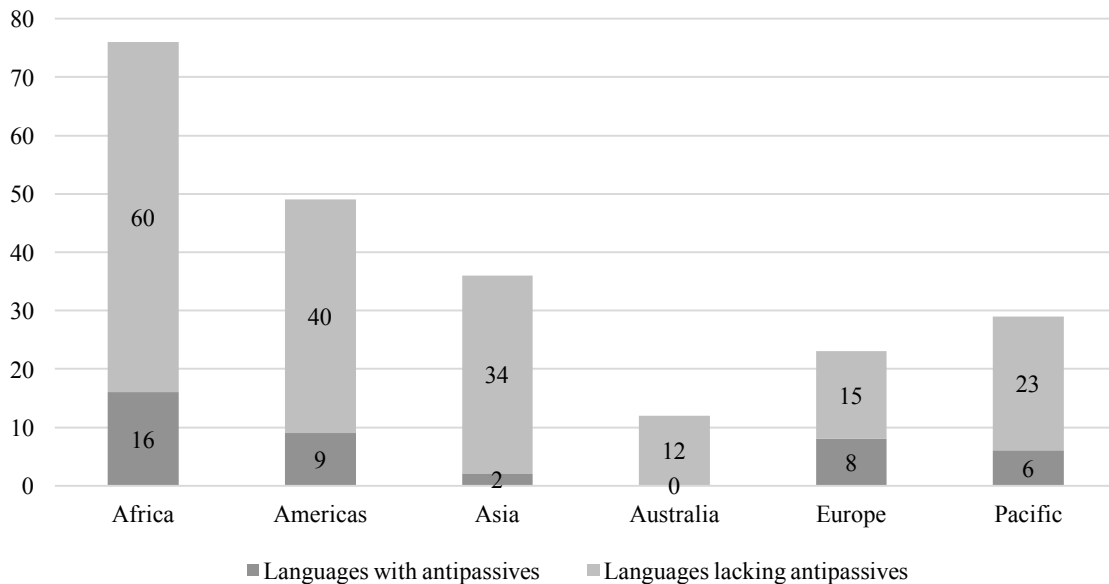


FIGURE 7.4. Geographic distribution of nominative-accusative languages with antipassives

All of the nominative-accusative languages with antipassives in the sample (with the exception of linguistic isolates) are related to languages which do not have antipassives, or do have antipassives but are not nominative-accusative languages. In some cases, the antipassive appears to be an innovation, where an existing morpheme gained an additional sense (e.g., Slavonic, see Janic 2013), but in others an existing antipassive construction was maintained, even though the language changed its alignment system (e.g., Itelmen). In yet others, it seems that this type of detransitivizing derivation was part of the original system, and some languages have retained it while others have lost it (e.g., Athabaskan-Eyak-Tlingit ‘D-element’, Oceanic reduplication). Those nominative-accusative languages which have an antipassive construction are listed below by genetic group, with the percentage that those languages represent within the sample for that genetic group. Should readers be surprised to see some language on this list, it should be noted that this list includes languages which have productive and unproductive or lexicalized antipassives. Also, this only includes nominative-accusative languages; for a discussion of antipassives in languages with other non-ergative, non-accusative alignment systems, see sections 5.1 and 6.2.

As shown in Table 7.1, these 41 nominative-accusative languages with antipassives represent 18 different genetic groups, which corresponds to 20% of the genetic diversity represented by nominative-accusative languages in the sample. More broadly, this represents 12.5% of the total genetic diversity of languages in the sample, as well as 5.6% of genetic diversity on the planet. As mentioned above, there is no language family with a sample size greater than 1 where 100% of the languages sampled are both nominative-accusative and have antipassives. This demonstrates that the appearance of antipassives in nominative-accusative languages does not correlate particularly well with genetic affiliation (with the possible exception of closely related languages, e.g., subgroups within a family, such as Slavic within Indo-European).

TABLE 7.1. Nominative-accusative languages with antipassives by genetic group

Language	Genetic group	Percentage of genetic group sample
Neuverver	Austronesian	12.2%
Irarutu		
Paluai		
Tamambo		
Pohnpeian		
Fataluku	Timor-Alor-Pantar	33.3%
Car Nicobarese	Austroasiatic	16.7%
Itelmen	Chukotko-Kamchatkan	50%
Yine	Arawakan	33.3%
Seri	Isolate	100%
Washo	Isolate	100%
Takelma	Isolate	100%
Eyak	Athabaskan-Eyak-Tlingit	33.3%
Tolowa		
Ixcatec	Otomanguean	20%
Hixkaryana	Cariban	11.1%
Mocoví	Guaicuruan	50%
Tundra Nenets	Uralic	33.3%
Udmurt		
Russian	Indo-European	27.3%
Slovene		
Czech		
Polish		
Latvian		
Lithuanian		
Kwegu	Surmic	57.1%
Murle		
Tirmaga		
Tennet		
Humburri Senni	Songhay	50%
Koyraboro Senni		
Maa	Nilotic	12.5%
Soninke	Niger-Congo	26.5%
Jenaama Bozo		
Bobo		
Tira		
Wolof		
Kinyarwanda		
Kirundi		
Gikuyu		
Cilubá		

Interestingly, nominative-accusative languages with antipassives do not share the strong correlation with AVO basic word order that was discussed for nominative-accusative languages generally in section 7.1.1. There are approximately equal numbers of nominative-accusative languages with antipassives which have AOV and AVO basic word orders (15 and 20, respectively). However, nominative-accusative AVO languages make up 77% of all AVO languages with antipassives (20/26, see section 5.2.1), which suggests that alignment does have something to do with the frequency of this order in languages with antipassives. There was no real correlation between VO/OV order or verb-medial vs. verb-peripheral orders and the presence of antipassives in a nominative-accusative language.

In terms of locus of grammatical marking, the distribution of languages with antipassives differs from the general distribution of nominative-accusative languages. Nominative-accusative languages in this sample showed an approximately even distribution across head-marking, dependent-marking, and both head-marking and dependent-marking strategies, while composing 89.8% of languages in the sample that are neither head-marking nor dependent-marking. However, there are only two nominative-accusative languages with antipassives which are dependent-marking, and only 9 which are neither head- nor dependent-marking. Interestingly these 9 nominative-accusative languages make up all examples in the corpus of languages with antipassives in the ‘neither’ category. This is understandable given the fact that there are no ergative languages, with or without antipassives, which have this marking type (see section 6.2). Examples of ergative and non-ergative languages with each different locus type are given in section 5.2.2.

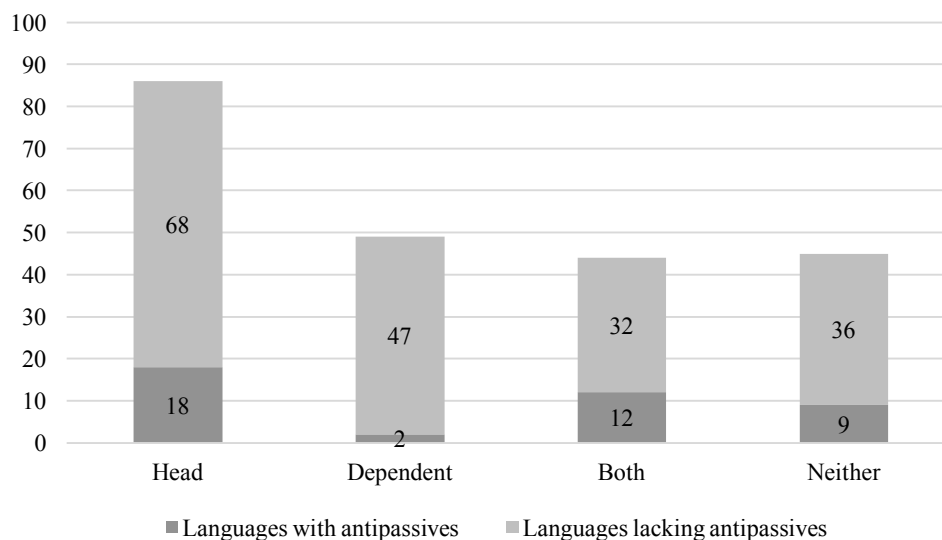


FIGURE 7.5. Distribution of antipassives in nominative-accusative languages by locus of grammatical marking

Related to the issue of locus of grammatical marking, Nichols (1992:158) states that “antipassives are rare in accusative languages that lack object agreement.” The reasoning behind this is that antipassives should exist in languages where objecthood is central to clausal morphosyntax, which Nichols’ (1992) sample suggests includes ergative languages and nominative-accusative languages which cross-reference objects. However, the generalization that antipassives are rare in accusative languages that lack object agreement is not supported in this sample, with the definition of ‘antipassive’ used here: 29 of the 41 accusative languages with antipassives lack object agreement, or 70.7%.

Finally, in section 7.1.1 above I discussed the fact that based on this sample, languages with a large number of ambitransitive/labile verbs are more likely to be nominative-accusative (or vice-versa), and that languages with labile verbs have less need of an antipassive derivation. In general, this appears to be the case, since there are only three examples in the sample of nominative-accusative languages with relatively fluid transitivity and antipassives: Murle (Surmic), Bobo (Niger-Congo, Mande), and Yine (Arawakan). All three have less than prototypical antipassive constructions. Murle and Bobo both have only patientless antipassives, and in Bobo the antipassive marker appears fossilized (cf. Creissels 2012; Le Bris and Prost 1981), while in Murle it only appears with a number of high-frequency verbs (cf. Arensen 1982). Yine, on the other hand, has a ‘characteristic action’ morpheme which has some properties of the

antipassive and allows the patient to be expressed in an extended “E” phrase (cf. Hanson 2010), but because it is nominative-accusative and verbs are generally labile it is difficult to determine whether the ‘characteristic action’ construction is truly intransitive.

In contrast, it appears that it is much more common for nominative-accusative languages with rigid transitivity classes to have antipassive constructions. Of the 23 nominative-accusative languages identified in their descriptions as having relatively rigid transitivity specifications for most verbs, 10 have antipassive constructions (43.5%, compared with 7.7% above for nominative-accusative languages with antipassives and fluid transitivity). This includes languages such as Lithuanian (Indo-European), Soninke (Niger-Congo, Mande), Seri (Isolate), and Eyak (Athabaskan). While the percentage of nominative-accusative languages with antipassives and rigid transitivity is not as high as the percentage of ergative languages with antipassives and rigid transitivity (38/54, or 70.4%), it is clear that rigid transitivity plays a role in the presence or absence of antipassives in a language, regardless of alignment.

7.1.3 FEATURES OF ANTIPASSIVES IN NOMINATIVE-ACCUSATIVE LANGUAGES

Now that we have looked at the distribution of nominative-accusative languages with antipassives, the question becomes, what do these antipassive constructions look like, and are they really equivalent to antipassive structures in ergative languages? The answer to these questions depends on which characteristics of antipassives one considers most important. As mentioned in section 6.3.4 on minimally ergative languages, ergative languages which have antipassive constructions can have more prototypical or less prototypical antipassives, i.e., constructions that have more or fewer antipassive characteristics. There is therefore not any single definition of what an antipassive in an ergative language is. For example, many of the antipassives in nominative-accusative languages are patientless, meaning that they do not allow the patient to be expressed overtly in an oblique phrase. However, there are also 38 ergative languages in the sample which also only have patientless antipassives. So instead of comparing the antipassive constructions in nominative-accusative languages to antipassive constructions in ergative languages, it makes more sense to look at these constructions with respect to the different kinds of features one might expect to see in an antipassive construction in general (see Chapter 4 for an overview of the antipassive features tracked in this study). A full analysis of the

data based on features is given in Chapter 8, so only those observations relevant to nominative-accusative alignment are included here.

Since no language is ergative with respect to its syntax only and not its morphology, it is improbable that a non-ergative language could have a purely syntactic antipassive construction. So with respect to that component of some scholars' definitions (see Chapter 3), none of the antipassives in non-ergative languages would be considered entirely prototypical. However, the data presented in section 6.4 showed that there are very few languages with syntactic antipassives, and in general these languages may also use the antipassive construction for semantic/pragmatic reasons. Many of the antipassives in nominative-accusative languages in this sample have semantic/pragmatic uses; however, many also have transitivity-related uses, i.e., to render the verb intransitive and delete the patient from the conceptual structure of the predicate. See section 8.2.9 for a discussion of the functions of antipassive constructions.

Additionally, aside from the syntactic component to some antipassives, there are a few nominative-accusative languages with a relatively prototypical antipassive construction. Tundra Nenets (Uralic) has an antipassive construction where the antipassive is marked on the verb with *-ŋko/-nc'o-* or *-ŋkur-*. Eastern varieties of Tundra Nenets do not allow the patient to appear in an oblique phrase, but Western varieties allow a plural patient marked obliquely with the prolative case (canonically 'by means of'), as in (7.1b) below.

(7.1a) *Ŋoka kniga-m tolaə-d°m*
1SG book-ACC read-1SG
'I read many books' (Nikolaeva 2014:162)

(7.1b) *Kniga-**qm°na** tola-**nc'o**-rka*
book-PL.PROL read-AP-COMP
'He reads books [from time to time]' (Nikolaeva 2014:226)

This construction meets all the definitional requirements of antipassive used here, as well as those of most other definitions. First, there is a dedicated marker which applies to basic transitive verbs to create an intransitive predicate with an agentive subject. Second, although there is no visible change from A to S because Tundra Nenets is a nominative-accusative language, the resultant construction is intransitive as the patient can either be completely removed from the predicate, or it is marked as a non-core argument in the prolative case. As such, structurally

prototypical antipassives can and do appear in nominative-accusative languages (see Chapter 9 for a discussion of antipassive prototypes).

However, there are a number of ways in which antipassive constructions can be less prototypical. First, they can be unproductive or lexicalized, which is true of any alternation—particularly of voice alternations—which tend not to apply with complete consistency across all verbs in the language. In section 4.1 I discussed the fact that it was often hard to find explicit mention of how productive a particular antipassive derivation was in grammatical descriptions, so in the absence of information, if there were only one or two examples, it was generally assumed that the derivation was not productive. With that caveat, 23 of the 41 of the antipassives in nominative-accusative languages in the sample (56%) are listed as unproductive or potentially unproductive. Any voice operation which ceases to be productive in a language is less prototypical than one which is productive. However, Tamambo (Oceanic, Vanuatu) exemplifies a nominative-accusative language with a productive antipassive in the form of a prefix *vari-* whose function is to detransitivize the predicate.

(7.2a) Hambuhani mo kamwe na batuivanua
 volcano 3SG destroy DET village
 ‘The volcano destroyed the village’ (Jauncey 2011:50)

(7.2b) Tina-ra mo **vari**-tuwa asena
 mother-3PL.POSS 3SG **AP**-smack INTEN
 ‘Their mother is inclined to smack a lot’ (Jauncey 2011:124)

In contrast, Fataluku (Timor-Alor-Pantar) has only two or three transitive verbs which have stem variants that are clearly reduplicated, yielding an intransitive with the same subject. This type of detransitivizing reduplication is relatively common in Oceanic languages. Although Fataluku is not an Oceanic language, it has a lot of structural influence from its Austronesian neighbors. So while the antipassive in Fataluku meets the structural requirements of having a mark (in this case reduplication) which creates an intransitive verb with an agentive subject from a basic transitive verb, it is certainly not prototypical. Reduplication in Fataluku typically serves to intensify or multiply the action of the verb.

(7.3a) Ana macen pohe
 1SG food cook
 ‘I cook food’

- (7.3b) Capur mucu hai **pohe~pohe**
 kitchen be.in PRF AP~cook
 ‘(She) cooked in the kitchen’ (Tyler Heston p.c. 2016)

Another way in which languages can have less prototypical antipassive constructions is by having an antipassive morpheme which serves a variety of functions in addition to antipassive. This is true even of languages such as Dyrirbal with well-established antipassives, where a single morpheme is used for the reflexive and the antipassive, for example. However, nominative-accusative languages tend not to have dedicated antipassive morphemes, i.e., antipassive morphemes have other functions as well. Probably the most common type of alternate function is the extension of a middle voice morpheme to include antipassive uses, such that it detransitivizes the predicate but retains the agent instead of the patient as its subject, as is more common for the middle voice. This is the case in Russian and some other Indo-European languages, where a single middle voice morpheme has reflexive, passive, anticausative, self-benefactive, and antipassive functions. The following example is from Latvian, where with some verbs the reciprocal morpheme can be interpreted as having an unexpressed, non-coreferential human patient.

- (7.4a) Zirg-s spārda via-us
 horse-NOM kicks everyone-ACC.PL
 ‘The horse kicks everyone’

- (7.4b) Zirg-s spārdā-s
 horse-NOM kicks-AP
 ‘The horse kicks’ (Geniušienė 1987:84)

However, there are also nominative-accusative languages with dedicated, single-purpose antipassive morphemes. In addition to Tamambo and Tundra Nenets, Soninke has a dedicated antipassive morpheme *ndi-*.

- (7.5a) Sòró-n dà yillê-n pátá
 people.PL-DEF TR millet-DEF cut
 ‘The people harvested the millet’

- (7.5b) Sórô-n pátá-**ndi**
 people.PL-DEF cut-AP
 ‘The people harvested (the crops) (Creissels 2012:7, 1991:10)

Of the 41 nominative-accusative languages with antipassives in the sample, 9 have a dedicated antipassive morpheme (22%).

Lastly, the most common characteristic shared among antipassives in nominative-accusative languages is the inability to express the patient overtly in an oblique phrase. As mentioned above, many ergative languages also have only patientless antipassive constructions. However, patientless antipassives are much more prevalent among nominative-accusative languages: of the 41 nominative-accusative languages in the sample with antipassives, 37 (90.2%) only have patientless antipassives. Only western dialects of Tundra Nenets and Itelmen allow the patient to be expressed in an oblique phrase, and Yine allows the patient to be expressed as an extension to the core (Hanson 2010). An example of an antipassive construction with an oblique patient in Itelmen is given in (7.6). Itelmen shares the Chukotko-Kamchatkan antipassive marker *in(e)-*, although these forms are quite rare.

- (7.6) T'salaj min'ɫ-eɫ in-ənk-qzu-z-en
fox rabbit-INST AP-hunt-IPFV-PRS-3SG
‘The fox hunts usually rabbits’ (Georg and Volodin 1999:166)

Contrast this with a patientless antipassive construction from Tenneset (Surmic):

- (7.7a) U-túny Lókúlí-i azí-t
PRF-wash Lokuli hand-PL
‘Lokuli washed his hands’

- (7.7b) U-túny-yé Lókúlí-i
PRF-wash-AP Lokuli-NOM
‘Lokuli washed’ [the patient may be anything except himself] (Randal 1998:245)

The overwhelming prevalence of patientless antipassive constructions in nominative-accusative languages suggests that in addition to whatever semantic correlates these structures might have, they are primarily being used to remove the patient. That is, the primary purpose of antipassives in nominative-accusative languages is closely tied to transitivity and information-structure, akin to the ‘backgrounding’ antipassives of Foley and Van Valin (1984), where the purpose is to remove the patient from the discussion or signal that it is unimportant. These types of functions are of course not exclusive to antipassives in nominative-accusative languages, but it is significant that this appears to be the primary function that antipassives serve in non-ergative languages.

7.2 ANTIPASSIVES IN ACTIVE SYSTEMS

Active systems (alternately called active-inactive, active-stative, agent-patient, Split-S, and fluid-S) are treated here as their own alignment category, even though some scholars have treated them as part of the ‘ergative’ spectrum (and there has been some overlap; see Woolford 2015). In terms of marking, active languages have a system of marking which contrasts agentive/volitional/controlling arguments (active/agentive marking) with patientive/stative/non-volitional/uncontrolling arguments (inactive/patientive/stative marking). This type of conceptualization of the organization of events and participants within the system is quite different from the patterns discussed in Chapter 6 and in section 7.1 above. Nominative-accusative and ergative-absolutive patterns are based on notions of transitivity and valence, or how many core arguments a clause has. Active systems, on the other hand, are more sensitive to the semantics of the predicate and the nature of the event (Aldai 2008:207). In the prototypical active system, one coding strategy is used for agents, regardless of the transitivity of the verb, and another for patients, regardless of the transitivity of the verb. As such, considerations of transitivity are not central to alignment in active languages. With respect to voice, Klimov (1979:330) argues that voice systems are based on a transitive event-type, where they exist to manipulate valency.

Consequently, one might infer that active languages should lack voice alternations, since transitivity relations are not the central organizing principle of their grammars. Based on this logic, we would not expect to find any antipassive derivations in active languages, since case marking (or verbal cross-reference) should reflect the semantic role of the arguments (more agent-like vs. more patient-like), regardless of the transitivity status of the verb. Indeed, these types of arguments have been made; Dixon (1994:31) makes the claim that languages with semantically based marking are less likely to have antipassive derivation since S, A, and O have less of a central role in their grammars. Jensen (1990) makes an argument along these same lines for Guaraní, that its sensitivity to agentivity vs. stativity and to person hierarchies does not provide conditions amenable to antipassivization.

However, it appears that some valency-changing operations are possible in active languages. Wichmann (2007) discusses several languages which have passive-like patientive resultatives with limited productivity, although he notes that valency changing processes in active languages are still quite rare. Mithun (2006, 2016) not only notes the presence of voice

alternations in active languages, but she also argues (contra Wichmann 2007) that voice is indeed a meaningful category in active languages. For example, the middle in Mohawk (Iroquoian, agent-patient) eliminates unimportant arguments from the discourse, and the remaining argument may be marked either as an agent or as a patient (Mithun 2006:221-222). Mohawk also has reflexive, reciprocal, and several causatives and applicatives which either increase or decrease the valency of verbs, all of which serve relatively common pragmatic functions associated with these constructions in other languages.

At this point it is important to say something about what ‘counts’ as an active language. Mithun (1991) outlines several different subtypes of active alignment systems, where the semantic traits which determine what counts as ‘active’ or ‘inactive’ can differ somewhat among languages. Some are based on an unergative vs. unaccusative distinction, while others are sensitive to control or volition or stativity. All of these subtypes are considered ‘active’ alignments here. The more pressing definitional problem involves languages which exhibit some apparent transitivity-based marking as well as semantic marking. Aldai (2008) calls these ‘loose ergative systems’, where some, but not all, agentive/volitional/etc. intransitive subjects receive ergative (active) marking. In this way, the alignment of the language appears split, where some proportion of intransitive subjects receive ‘active’ or ‘ergative’ marking, while others take ‘patientive’ or ‘absolutive’ marking. The greater the number of absolutive-marked agentive intransitive subjects a ‘loose ergative’ language allows, the more it approaches an ergative system as opposed to an active system, and vice-versa. Examples include languages such as Basque and Kashmiri, which are active in that they allow some agentive intransitive subjects to have ergative/active marking, but are more often characterized in the literature as ergative. Example (7.8) demonstrates active alignment in modern western varieties of Basque.

Transitive:

(7.8a) Peru-**k** sagarr-a-Ø jan du
 Peter-ERG apple-DET-ABS eaten has
 ‘Peter has eaten the apple’

Unergative intransitive:

(7.8b) Peru-**k** dantzatu du
 Peter-ERG danced has
 ‘Peter has danced’

Unaccusative intransitive:

- (7.8c) Peru erori da
Peter.ABS fallen is
'Peter has fallen' (Aldai 2009:785-786)

Also in this category are languages like Kurtöp, a Tibeto-Burman language which has an ergative marker with a pragmatically determined distribution. Hyslop (2010:258) notes that there is no strong evidence for any particular alignment in Kurtöp, although case marking can be roughly analyzed as active.

On the other end of the spectrum there are languages like Tunica, which are predominantly nominative-accusative in that the same marking is used from transitive subjects and the subjects of most intransitive verbs, regardless of whether they are unergative or unaccusative. However, there is a lexical class of about 30 stative verbs whose subjects are always marked like the objects of transitive verbs. So although both Tunica and Basque are active languages, Tunica is unlike Basque in that it is predominantly nominative-accusative rather than predominantly ergative.

Transitive:

- (7.9a) ?ihk-yola-wi
1SG-left-3SG.MASC.COMPL
'He left me'

Unergative intransitive, actively-marked subject:

- (7.9b) Lota-wi
run-3SG.MASC.COMPL
'He ran'

Unaccusative intransitive, actively-marked subject:

- (7.9c) Pata-wi
fall-3SG.MASC.COMPL
'He fell'

Stative intransitive, inactively-marked subject:

- (7.9d) ?ihk-sihu
1SG-be.thirsty
'I am dry; thirsty' (Heaton in press)

Some of the languages discussed above were categorized as 'ergative', in accordance with the majority of the literature on those languages. They could also have been considered active languages, since they have at least partially active systems. However, the categorization

does not greatly affect the goal of this section, since none of these languages with contested alignment were found to have antipassive derivations based on the criteria in this study.

Of the languages in the sample, about 50% were nominative-accusative and 36% were ergative, which leaves only about 14% (60 languages) with other types of alignment. Thirty-six languages were categorized as active, which constitutes 8.3% of the total sample, but more than half of non-ergative, non-accusative languages. These 36 languages are found in all regions except for Australia, although the vast majority belong to the Americas (26, or 72.2%). These 36 languages belong to 30 different genetic groups, 7 of which are language isolates. However, active alignment does not appear to be strongly correlated with genetic group, since of the 23 non-isolate genetic groups, almost all of them also include sampled members which do not have active alignment.

With respect to other typological features, the great majority of active languages in the sample are head-marking (27, or 75%), while only 3 languages are dependent-marking, 5 are both head-marking and dependent-marking, and one (Mende, Niger-Congo) is neither head-marking nor dependent-marking. This is at least in part a reflection of both the cross-linguistic abundance of head-marking languages (see section 5.2.2) and the fact that head-marking strategies are prevalent in the Americas.

In terms of word order, the active languages in this sample exhibit a wide variety of basic word orders. Most are AOV, which matches the overall distribution of languages by word order type (see section 5.2.1). There is no notable correlation between VO vs. OV order or between verb-medial vs. verb-peripheral orders for these languages.

Of these 36 active languages, 13 were considered here to have antipassive constructions (36.1%). This is surprisingly high considering the claims mentioned above about the expected lack of valency-changing processes in languages where grammatical categories are sensitive to verbal semantics and thematic roles. Eight of these thirteen languages belong to the Americas, three to Asia, one to Europe, and one to the Pacific (none to Africa). In the Pacific this includes only Nyalayu (also known as Belep), an Austronesian language of New Caledonia, and in Europe this includes only Georgian (Kartvelian). All three active languages sampled in Asia have antipassives, which include Ainu (isolate) and the Yukaghir languages (Kolyma and Tundra), spoken in northeastern Russia. In the Americas, active languages with antipassives are found in South America with Nivaclé (Matacoan), in Mexico with Otomí (Otomangean), as

well as in North America, including Tlingit (Eyak-Athabaskan-Tlingit), Haida (Isolate), Oklahoma Cherokee and Mohawk (Iroquoian), and Hocąk and Osage (Siouan).

With respect to other features, the 13 active languages with antipassives in the sample have AOV, VAO, VOA, or highly flexible basic word orders. None are AVO, despite the fact that there were 5 active languages in the sample with AVO basic order, so it is possible there is an inverse correlation. As such they are all verb-peripheral, which is a feature which has been reported in connection with ergativity, not active-inactivity (see section 6.2). Additionally, 12 of the 13 active languages are either head-marking or both head-marking and dependent-marking (only Haida is dependent-marking).

The predictions based on the findings of Wichmann (2007) were that valency alternations would be rare in active languages, and if they do occur, they would be non-prototypical. Although antipassives are found in more than a third of the active languages in the sample (36.1%), and are therefore not particularly rare, it is the case that these antipassive constructions are less prototypical in a number of ways. The most noticeable feature is that like antipassives in nominative-accusative languages, all (or almost all) of the antipassive constructions in active languages are patientless, i.e., the patient cannot be overtly expressed via an oblique phrase. All 13 active languages here only have patientless antipassive constructions. A patientless antipassive construction in an active language is exemplified in (7.10) by Nyalayu (Belep).

(7.10) La=yu-**u** yu-**u** yagi-n yu-**u** yagi-n
 3PL.SBJ=dig-**AP** dig-**AP** search.TR-DABS.NSG dig-**AP** search.TR-DABS.NSG

ka koni tu-n
 LK unable.TR find-DABS.NSG

‘They dug, dug, searched, dug, searched and never could find anything’ (McCracken 2013:319)

The other way in which some of the active languages here have less prototypical antipassives is that their antipassive constructions are either lexical or non-productive. This is the case for 5 of the 13 languages with antipassives, which include the Yukaghir languages, Hocąk, Haida, and Otomí.³³ The example in (7.11b) below comes from Kolyma Yukaghir, where the suffix *-de-* only applies with a restricted group of verbs.

³³ The construction here considered ‘antipassive’ in Otomí is the antipassive use of the middle morpheme, which Palancar (2009:139) considers to be a separate morpheme, although

(7.11a) Āj čül-e pad-u-m
 again meat-INST cook-EP-3SG.TR
 ‘She cooked some meat again’

(7.11b) Tāt pan-de-ŋi
 CONN cook-AP-3PL.INTR
 ‘So they were cooking...’ (Maslova 2003a:226)

Additionally, 5 languages have antipassive uses for middle voice morphemes: Georgian, Tlingit, Oklahoma Cherokee, Mohawk, and Otomí. These antipassive constructions are somewhat less prototypical in that the antipassive is not signaled by a dedicated morpheme; instead, the morpheme which signals the antipassive have a number of functions, and may or may not have ‘antipassive’ as its primary function. This is the case for the Mohawk ‘middle’ mentioned above, and also for Georgian, where there is a very productive middle/reflexive/‘medioactive’ morpheme which can yield unaccusative and unergative intransitive predicates. In (7.12b), the *i-* morpheme in Georgian yields an unergative predicate, while in (7.12c) demonstrates the more usual self-benefactive reflexive function.

(7.12a) Man še-Ø-a-gin-a mtavroba-s
 3SG.ERG PREV-3B_{DAT}.SG-PRV-curse-3A_{ERG}.SG.AOR.INDIC government-DAT
 ‘(S)he cursed the government’

(7.12b) Man še-i-gin-a (*mtavroba)
 3SG.ERG PREV-AP/REFL-curse-3A_{ERG}.SG.AOR.INDIC government.NOM
 ‘(S)he cursed (*the government)’ (Amiridze 2006:175-176)

(7.12c) Šen da-Ø-i-sx-i q’ava
 2SG.ERG PREV-2A.ERG.SG-REFL-pour-AOR.INDIC coffee.NOM
 ‘You poured yourself [some] coffee’ (Amiridze 2006:159)

Some active languages also have followed a path which created an antipassive derivation from an indefinite object (see section 2.2.1). As discussed in Chapter 1, indefinite object morphemes often have the same effect as antipassive morphemes, but are not necessarily detransitivizing, even if the patient cannot be expressed. Many head-marking languages use this strategy (e.g., Athabaskan and Uto-Aztecan languages), and the predicate remains transitive as

diachronically related to the middle. He lists 6 verbs which are antipassive in meaning with the *n-* prefix. The middle morpheme, however, is very productive and appears on a wide variety of verbs.

the indefinite object marker is simply taking the place of the personal object marker in the verbal cross-reference marking. However, some languages have what can synchronically be called antipassive markers which clearly evolved from indefinite object markers, but which have different distributional properties than indefinite object markers. For example, Siouan languages have a third person patient prefix which has, at least in some languages, become a detransitivizing prefix with a different position than that of the object prefix, and with an accentual difference. The examples below are from Osage, illustrating the difference between the third-person patient prefix and the antipassive.

Indefinite object:
 (7.13a) Šcéwáðe
 šce-wa-ðe
 PREV-3PL.P-doctor
 ‘Doctor them!’

Antipassive:
 (7.13b) Waščéðe
 wa-šce-ðe
 AP-PREV-doctor
 ‘Doctor [folks]!’ (Quintero 2004:147)

Ainu has a similar detransitivizing construction, where the antipassive marker is homophonous with the indefinite object marker, and has commonly been referred to as an indefinite or generalized object construction (Bugueva 2015:830). Unlike the indefinite object constructions in Athabaskan, for example, although the antipassive morpheme appears in the object position on the verb, the intransitivization of the predicate is visible in the morphology, where A markers are replaced with S markers in bivalent predicates. The indefinite A marker *a=* is exchanged for the indefinite S marker *=an* with the detransitivized predicate in (7.14b). However, the homophonous indefinite object marker is still productive in the language, and is not detransitivizing.

(7.14a) I=tura utar a=puma-kor-e sinep
 INDEF.O=accompany people INDEF.A=wage-have-CAUS one.thing.CLF

sinep ki ruwe ne hine a=se
 one.thing.CLF do.AUX INFR COP and INDEF.A=carry
 ‘We paid each person who came with us to carry the things down’

(7.14b) A=sa-ha suke hine **i-p-e=an** pa ruwe ne
 INDEF.A=older.sister-POSS cook.SG and AP-EP-eat=INDEF.S PL INFR COP
 ‘Older sister had prepared dinner, so we ate [dinner]’ (Bugueva 2013, ValPal database:
<http://valpal.info/languages/ainu/examples/>)

Although the examples of antipassives in active languages demonstrate that these constructions are less than prototypical, they are less prototypical in the same ways as some antipassives in many ergative languages (see Chapter 6), although in a greater concentration. The surprising fact remains that about a third of the active languages in the sample contain antipassives, which is less than the proportion of ergative languages with antipassives, but greater than the proportion of nominative-accusative languages with antipassives. The question is, given a semantic categorization of arguments, what is the function of antipassives in active languages?

The answer probably lies in the important distinction between transitivity and valency. Participant coding in active languages is centered around agents vs. patients, states vs. non-states, controllers vs. undergoers, etc., and not to transitivity. However, verbs in active languages still tend to have a natural semantic valency—monadic, dyadic, or triadic—which is grammatical insofar as it related to the number of participants the predicate encodes. Although the grammatical marking (primarily verbal agreement in the case of the active languages with antipassives in this sample) indeed encodes the agent/patient distinction rather than the transitive A vs. intransitive S or A vs. O distinction, the predicate still has a canonical number of arguments specified, i.e., valency. Theories of markedness predict that deviations from the basic or canonical form or value tend to receive overt marking. With this assumption, it makes sense that operations which alter the valency frame/argument structure for any given verb would be marked, which is then equivalent to voice.

This is similar to what Mithun (2006) claims about the function of the antipassive/middle in Mohawk, where the middle voice exists to remove an unwanted argument from a dyadic predicate for discourse/pragmatic reasons, which coincides with intransitive argument structure. It then follows that if the ‘antipassive’ marker is signaling the loss of an argument from the expected predicate structure, then the patient should not be able to be expressed in the antipassive construction. Indeed, this is true for all the antipassive constructions in the active languages in this sample: none allows the type of antipassive where the patient may be expressed in an oblique phase. This is unlike the antipassive in languages which are using the antipassive to

decrease transitivity in a scalar way, i.e., to decrease the transitivity of the predicate by marking the patient as an oblique argument.

This type of rationale seems to work well, particularly for active languages with relatively prototypical antipassive constructions such as Belep and Nivacle. Both languages have dedicated antipassive morphemes which can be applied to most transitive verbs (*u-* for Belep and *wank-* and *-jan* for Nivacle). In Belep, *u-* indicates that the patient is either obvious or irrelevant (McCracken 2013:323), and in Nivacle *jan-* indicates that the patient is unspecified, and *wank-* similarly deletes the object and indicates that the agent is more important than the patient (Lyle Campbell p.c. 2016; Fabre 2014:185). In both languages, verbs tend to have one or two arguments in their native form (but are not ambitransitive), which suggests that valency, semantic and grammatical, is important in these languages. The antipassive derivation exists to remove the patient from a dyadic predicate, where it is either implied or unspecified. Note that neither Nivacle nor Belep have a canonical passive derivation, which suggests that the motivation for the two voice-like phenomena may be different in active languages (for a discussion of the passive in active languages see Wichmann 2007).

7.3 ANTIPASSIVES IN SYMMETRICAL VOICE SYSTEMS

There are only 27 languages in the sample which have an alignment system that was something other than active, ergative, or nominative-accusative (or some combination of these), and very few have antipassives. These small numbers make it difficult to make any useful generalizations, other than that languages with these other alignment types are relatively rare, and they tend not to have antipassive derivations. The two major types of alignment systems (besides those mentioned above) are symmetrical systems and inverse systems, which are discussed in section 7.3 and section 7.4, respectively, in terms of distribution and the presence (or absence) of antipassives.

The term ‘symmetrical voice’ here is meant in a theory-neutral way (although of course it does have implications for the characterization of Philippine-type systems; its use here does not necessarily imply adherence to any particular symmetrical-type analysis of these systems, as in Foley 2008, Himmelmann 2005, Kroeger 1993, *inter alia*), simply to indicate that there is a symmetry in the verbal morphological marking, such that no pattern for marking the roles of arguments is morphologically more or less marked than another. Whether a voice-like

relationship is involved in these sorts of situations has been a matter of debate for many of the languages where it appears (cf. Gerds and Hukari 2006 on Salishan, Matasović 2010 on Abkhaz-Adyghean, Chen forthcoming and Starosta 2002 on Formosan), which is related to the idea of equipollent derivations (where roots are of neutral status and receive both transitivizing and intransitivizing morphology) and is discussed further with respect to antipassivization in Chapter 8. However, with respect to alignment, those languages which here were considered to be ‘symmetrical’ only included those where all or most transitive verbs must be marked as belonging to one pattern or the other, such that there exists no other dominant alignment type in the language. All of the languages in this category in the sample are Austronesian languages which either have some version of the ‘symmetrical voice’ or Philippine-type voice system, or are Eastern Polynesian languages which have competing ‘middle’ and ‘ergative’ patterns (Otsuka 2011).

Under a definition of voice like the one used here, a construction may only be considered ‘antipassive’ if it is intransitive and alternates with a more basic (less morphologically marked) transitive structure (see Chapter 3). If both the putative transitive construction and the putative antipassive construction have the same type of what could be considered either voice or transitivity marking, then a relationship where one pattern is clearly more basic than the other is difficult to establish. While it is not impossible for languages with equipollent-type derivational systems to have antipassives, the antipassive derivation must exist in addition to, or on top of, the equipollent marking. An example of such a language is Movima, which has a symmetrical-type of inverse alignment system, where predicates must either be marked as direct or inverse, based on a referential hierarchy and the discourse status of the participants (Haude 2012:260).³⁴ Movima has an antipassive derivation which applies to the already direct- or inverse-marked forms in this system, which appears with direct predicates to allow the relativization of proximate (discourse salient) arguments.

Direct construction:
 (7.15a) Jayna rey way-**na**=is kinos rey sonsa
 DISCONT MOD lift-**DR**=3PL.ASTAT ART.FEM.ABSENT MOD silly
 ‘Then they have already taken up that silly (woman)’

³⁴ In this paper Haude argues that the direct pattern is more basic, and the inverse pattern is a secondary derivation. The direct pattern may also be considered ergative and the inverse pattern nominative-accusative.

Inverse construction:

- (7.15b) Tinok-poj-**kay**-a=us os merek rulrul
scare-CAUS-INV-EP=3MASC.ABSENT ART.NEUT.PST big jaguar
'The big jaguar scared him'

Antipassive derived from the direct construction:

- (7.15c) Is juyeni [di' jayna **kwey** way-**na** n-i'ne]
ART.PL person REL DISCONT AP lift-DR OBL-3.IP.FEM
'The people who had taken her up' (Haude 2012:262-263)

However, in Austronesian languages with Philippine-type alignment systems, some have argued that the patient voice exhibits ergative alignment, and that the agent voice is an antipassive (not, like Movima, that the antipassive exists as a derivation applied to the agent voice). Example (7.16) shows such an analysis for Paiwan,³⁵ where (7.16a) can be analyzed as antipassive, and (7.16b) as ergative (with glossing modified to reflect this).

Agent voice:

- (7.16a) Q<**m**>alup a caucau tua vavuy i gadu tua vuluq
hunt.AP ABS man OBL pig LOC mountain OBL spear
'The man hunts wild pigs in the mountains with a spear'

Patient voice:

- (7.16b) Qalup-**en** nua caucau a vavuy i gadu tua vuluq
dig-TR ERG man ABS pig LOC mountain OBL spear
'The man hunts wild pigs in the mountains with a spear' (modified from Ferrell 1979:202)

Some have argued (e.g., Liao 2002 for Kavalan) that the patient voice pattern could be considered more basic, and that the non-pivot-marked patient in the agent voice pattern is an oblique, while others analyze agent voice as a transitive nominative/accusative pattern (e.g., Wu 2013 for Atayal). However, the fact remains that both patterns are morphologically identified: agent voice by *-m-* and patient voice by *-en* in the Paiwan examples above. Based on the morphology, one would have to claim that both forms correspond to a neutral root, and are therefore do not directly correspond to each other. If the verbal markers are simply indicating transitivity, then neither is additionally marked for voice and would not be included as an antipassive by the definition used here. While it is certainly not the case that all languages with

³⁵ Thank you to Victoria Chen for providing me with these examples and for providing comments on this section.

Philippine-type alignment systems have exactly the same marking pattern as the Paiwan examples presented here, the 18 Philippine-type languages in the dataset were similar enough that none were considered to have an antipassive construction based primarily on the reasoning given here. See the notes on these languages in Appendix A and Appendix B for more details.

7.4 ANTIPASSIVES IN INVERSE SYSTEMS

There are a number of languages which have been discussed as having inverse marking patterns in some portion of their grammars, e.g., Aissen (1999) on inverse with respect to agent focus in Tsotsil; Rgyalrongic languages which have inverse marking on verbs but ergative case marking (cf. Sun 2005), and some Mixe-Zoquean languages which have inverse person marking but likewise have ergative alignment (cf. Romero-Mendez 2009). However, there are only a handful which have a direct/inverse opposition as the primary organizing principle of their grammars. The best-known examples of inverse alignment systems are found in Algonquian languages, but inverse alignment is also described in several languages of South America, including Mapudungun (Araucanian/Isolate) and Sanapaná (Mascoyan). Movima (Isolate) could also be included here, although it was included in the split-ergative category of languages above, as the direct construction has been analyzed as ergative.³⁶ Of the six languages that primarily have inverse-type alignment systems, three were considered here to have antipassive constructions. If this is expanded to include Movima, Mixe-Zoquean, and the Rgyalrongic languages (all also considered some type of ergative), then 7 of 13 languages (53.8%) with inverse alignment have antipassive constructions. All but Movima have only patientless antipassive constructions.

Those languages that in the sample which were considered to have inverse alignment systems and also contain antipassives are all Algonquian languages. Although Algonquian languages have not typically been mentioned in cross-linguistic discussions of antipassive constructions, many Algonquian languages have a set of markers which can be considered

³⁶ Haude (2009) argues against the ergative analysis, claiming that Movima has a unique type of inverse alignment where arguments *lower* on the indexability hierarchy are syntactically privileged. However, Haude's (2012:259) description then discusses Movima as having direct (ergative) and inverse (accusative) alignment in main clauses. Note also that Déchaine and Reinholtz (1998) characterize Cree alignment as essentially split-ergative, where direct clauses have nominative-accusative syntax and inverse complexes have ergative-absolutive syntax.

antipassives. Algonquian languages are radically head-marking, such that transitive (animate) verbs encode features of subjects, primary objects, and sometimes secondary objects. In Ojibwe, *-iwe* detransitivizes a transitive verb with an animate primary object (7.17a-b), while *-ige* detransitivizes a transitive verb with an inanimate primary object (7.18a-b). In the detransitivized verb form in (7.17-7.18b), the verb only indexes S, unlike the forms in (7.17-7.18a) which index both A and O.

(7.17a) 'Bimdaabaanaan
o-bimidaabaaN-aa-an
3A-drive.around.TR.AN-3O-OBV
'He drives him around'

(7.17b) Bmidaabaazhwe
bimidaabaaN-**iwe**-w
drive.around.TR.AN-**AP**.AN-3S
'He drives a taxi, (literally, he drives people around)'

(7.18a) 'Zagkinaan iw mnoomin
o-zagakin-am-n(aa) iw manoomin
3A-store.up.TR-INAN.OBJ-N that.INAN rice
'He stores up wild rice'

(7.18b) Zgaknige
Zagakin-**ige**-w
store.up.TR-**AP**.INAN-3S
'He stores things up' (Rhodes and Valentine 2015:1233-1234)

These types of constructions are also found in Plains Cree, marked with cognate morphemes *-iwe* and *-ike* (Wolwengrey 2001; Dahlstrom 1991), in Penobscot by *-əwe* and *-ike* (Quinn p.c. 2016),³⁷ and in Blackfoot *-ak(-)i* and *-im(-)aa* (Armoskaite 2011).³⁸

³⁷ There are examples in Penobscot as well as in Passamaquoddy-Maliseet where *-əwe* antipassives can take a 3rd person theme or location patient as a secondary object (i.e. oblique-type argument) (p.c. Conor Quinn 2017). It might be possible to interpret the *-əwe* antipassive as a more prototypical antipassive which can take (a certain type of) an oblique argument.

³⁸ Although Rhodes and Valentine (2015) and Dahlstrom (1991) consider *-ike/-ige* and *-iwe* to be detransitivizing morphemes, this is not the only possible analysis. For example, the position occupied by these morphemes in the verbal structure is referred to as the 'theme sign', or light verbs, which also includes what is labeled in (7.17-7.18) as object marking. In some ways both of these complete the argument structure of the verb, since all verbs require this slot to be filled, and if one considers them the same type of dummy-object element, this is somewhat problematic in terms of markedness and asymmetry. Alternately, or perhaps relatedly, it is possible to view -

Apart from treatments of these suffixes, there have been a few proposals which invoke the antipassive to explain irregularities in the traditional model of Algonquian argument structure. The standard model of Algonquian verb classification following Bloomfield (1946) categorizes verbs based on animacy (gender) and transitivity, creating a four-way classification: transitive animate (TA), transitive inanimate (TI), intransitive animate (AI), and intransitive inanimate (II). However, there exist two common types of verbs which defy categorization in this model: transitive inanimate verbs which lack patients (OTI), and intransitive inanimate verbs which have expressed patients (AI+O), which can be found in all Algonquian languages. Both of these patterns have been explained as types of antipassives (e.g., Quinn (2006) for OTI in Penobscot, and Frantz (1978) for AI+O in Blackfoot).

The AI+O pattern combines a morphologically intransitive verb form with an overt patient, which contrasts with a TA pattern. Frantz (1978:196) argues for Blackfoot that the choice of pattern is dictated by the referential status of the direct object, where non-specific or non-referential patients are expressed using the AI+O pattern, while specific, definite, and/or referential patients appear in the TA pattern. Additionally, the patient may be omitted entirely, using the same verb form as the AI+O pattern. This alternation has many of the characteristics of an antipassive construction: the verb is morphologically intransitive, the patient may be omitted, and the construction is used to encode decreased transitivity features with respect to the patient. The following examples are from Blackfoot.

TA construction:
 (7.19a) Nít-ohpomm-**at**-oo'pa í'ksisako-yi
 1-buy-TA-3SG.INAN meat-PARTIC
 'I bought the meat'

AI+O construction:
 (7.19b) Nít-ohpomm-**aa** í'ksisako-i
 1-buy-AI meat-NPARTIC
 'I bought meat'

ike as *-ik* + *-e*, where *-e* is a verbalizer for nominal roots and *-ik* stands in for a generic noun root, such that the complex resembles noun incorporation, likewise completing the verbal template. Thank you to Conor Quinn for bringing these alternate analyses to my attention.

Patientless AI construction:

- (7.19c) Nít-ohpomm-aa
1-buy-AI
'I made a purchase' (Frantz 1978:195-196)

However, since both the TA and the AI pattern (and in fact all verbal patterns) require TA or AI marking, these are morphologically equipollent forms, where the verb in (19a) is the transitive instantiation and (19b/c) is the intransitive instantiation. Also, in most languages, the 'O' argument in the AI+O construction is a secondary object, not an oblique. Dahlstrom (2009) shows that in Fox oblique phrases appear to the left of the verb, while the O in AI+O constructions appear to the right. Additionally, obliques may sometimes appear with locative case, which is not available in AI+O constructions. Finally, obliques and this O receive different marking in relative clauses. Also, it is important to note that the AI+O construction in other Algonquian languages differs from the AI+O construction in Blackfoot in that O can be specific and referential.

With respect to the OTI construction, where transitive verbs with inanimate patients appear without a patient, an alternate analysis by Quinn (2006) proposes treating all TI verbs as an antipassive-type construction which has grammaticalized the antipassive function of backgrounding inanimate arguments. Although the verb in these constructions still receives transitive 'final' marking, there is evidence that the inanimate patients are secondary objects, not primary objects, like the O in the AI+O construction. Second, the patient in TI constructions is frequently (or perhaps always) omissible (Quinn 2006:131-134), unlike the patients of TA constructions. (7.20a) gives a TI construction and (7.20b) an OTI construction in Penobscot.

- (7.20a) nəčíksətamən
nə-čik-əsət.am-əne
1-silent-listen.LV^{AN}-N
'I listen to [inanimate noun]'

- (7.20b) číksətam
čik-əsət.am-[w]
silent-listen.LV^{AN}-w
'[Animate noun] listens; listens and obeys' (Quinn 2006:133)

However, the OTI antipassive does not actively alternate with another construction, at least in a way that would clearly be voice. In this view, TIs are already detransitivized, and

therefore do not have any relation to the AI intransitive constructions. The other possibility is that TIs would alternate with TA constructions, which is true in the sense that the distribution of the two forms are driven by gender features. The TA construction using the same verb as in (7.20a) is given in (7.20c) below.

(7.20c) *nəčiksətawα*
nə-čik-əsət-aw.α-[w]
1-silent-listen-RPRED.DLV-W
'I listen to [animate noun]' (Quinn 2006:77)

A TI construction cannot have an animate class patient, and a TA construction cannot have an inanimate class patient. For this reason, they would have to be considered a grammaticalized antipassive-type construction, only with inanimate class patients. Alternately, the TI/TA alternation could be considered a type of differential object marking as instantiated in a head-marking language.

Although the sample of languages with inverse alignment is small, the primary finding here is that antipassive constructions are attested in these languages. In Algonquian, *-iwe/-ige-* type antipassives interact less with the inverse system and more with gender and verb-type classification, where they remove the possibility of any specific patient from the verbal argument structure.

7.5 SUMMARY

This chapter has explored the association between antipassive constructions and various non-ergative alignment types. While most of the antipassive constructions in the sample are found in ergative languages, antipassives are also found in languages with a variety of other alignment types. There were 41 nominative-accusative languages, 13 active languages, and 3 inverse languages with antipassive constructions by the criteria used here. The proportion of languages with antipassives was smallest for nominative-accusative languages (18.2%), and their antipassive constructions were almost exclusively of the patientless type. The proportion of languages with antipassives was higher in active languages and inverse languages (36% and 50% respectively), and were likewise of the patientless type.

It was suggested in sections 7.1 and 7.2 that antipassives which do not permit the patient to be overtly expressed in an oblique phrase appear with greater frequency in non-ergative

languages than in ergative languages because they are serving different functions in these languages. While there are a number of proposals which have suggested different functions for antipassives in different types of languages (e.g., Dixon's (1994) syntactic vs. pragmatic antipassives and Foley and Van Valin's (1984) foregrounding vs. backgrounding antipassives), the hypothesis here was that the antipassive in these languages is primarily signaling a deviation from the expected argument structure of the predicate (elimination of the patient), which coincides with intransitive argument structure for dyadic verbs. This of course is not a situation exclusive to non-ergative languages, and we would predict that patientless antipassive constructions would be found in all types of languages. This is in fact the case: there are 38 ergative languages in this sample that have only patientless antipassive constructions, which are 55.1% of the antipassive constructions in ergative languages in this sample. The claim would then be that antipassive constructions which allow the the logical patient or object to be expressed obliquely (not as a core argument of the verb) are doing something else in addition to signaling a deviation from the expected argument structure of the predicate, which is more specific to ergative languages.

The other possibility is that the typological correlates of antipassives (in general) and of ergativity (in general) overlap, which creates a(n) (artificially) strong correlation between the combination of ergativity and antipassivization. The findings from the investigations throughout Chapters 6 and 7 indicate that most relevant parameter with respect to antipassivization and alignment was how rigidly verbs were assigned to transitivity categories in a given language. Languages with rigid transitivity categories also tended to have antipassives, and also tended to be ergative. In fact, there are no ergative languages with antipassives in the sample which lack rigid transitivity classes for verbs. The fact that both ergativity and antipassives correlate with this parameter means that antipassives may not be directly correlated with ergativity so much as both may arise in languages with rigid transitivity categories, or vice-versa. It was suggested in section 7.1.1 that in ergative languages attention is constantly drawn to the transitive/intransitive contrast by having different sets of markers for transitive vs. intransitive subjects, unlike in nominative-accusative languages where the identity in subject marking between transitive and intransitive clauses may encourage labiality. Additionally, valency-changing operations like antipassives are more likely to be necessary in languages with fixed valency/transitivity values for most verbs, as a means to alter valency/transitivity. These overlapping tendencies between

languages with antipassives and ergativity (and inverse relationship with nominative-accusativity) would help produce the relationships between antipassives and alignment observed here.

CHAPTER 8. FEATURES OF ANTIPASSIVES

In Chapters 4-7 I have discussed the distribution of antipassives and their relationship to other typological features such as word order, alignment, region, language family, and valence orientation in a binary fashion, i.e., whether a language has or lacks an antipassive construction per the minimal criteria developed in Chapter 3 (see also 8.1 below). However, there is no single, universally agreed-upon definition of what constitutes an antipassive, and all languages have some way of conveying antipassive-like notions, so how broadly or narrowly the term applies depends on the opinion of a given author (see also Chapter 3 for other definitions). The goal here was first to provide basic guidelines for a working definition of ‘antipassive’, and then to develop criteria that can be used to talk in a more detailed and precise way about exactly what types of detransitivizing structures are seen across unrelated languages. As such, I have tracked eleven features which characterize antipassive constructions in various languages, and how the presence or absence of these features differentiate constructions in different languages. Even if one were to hold some reservations about the somewhat artificial binary categorization that I have adopted so far to determine if a language has or lacks antipassives on a basic level, the feature data provided here describes other distributions by systematically including or excluding languages which others in the past have included or excluded. Modifications to the generalizations in the previous chapters are noted where relevant.

In section 8.1 I review the features tracked in this dissertation and look at the definition of ‘antipassive’ used here in terms of features. In section 8.2 I compare and contrast different constructions in different languages based on the features they have or lack. A summary of the discussion of individual features is given in section 8.3.

8.1 PRELIMINARIES

The eleven features which were tracked in this study mainly came from the literature on antipassives, but some features were also added as necessary to account for specific distinctions which are important to some languages. These features fall into four primary categories: those related to morphology, those related to transitivity, those related to productivity, and those related to the effects of the construction. These features are briefly described below; see also 4.2.2 for more complete descriptions. Each feature is arbitrarily assigned a letter designation for

the ease and conciseness of describing constructions as lists of features in Appendix A, but are discussed in this chapter primarily using the abbreviated labels in brackets (e.g., [MARK]) for maximal clarity.

Features related to morphology:

1. There is an overt marker for the construction which can be called an antipassive marker.

[MARK] ~ [C]

2. The patient is a non-core argument, and can be optionally expressed in an oblique phrase. [OBLIQUE] ~ [B]

3. The antipassive marker is dedicated to the antipassive construction, and has no other function. [DEDICATED] ~ [G]

Features related to transitivity:

4. The antipassive construction demonstrably corresponds to an unmarked or less-marked transitive construction with the same verb root. [ASYMM] ~ [A]

5. The antipassive construction is formally intransitive, both in terms of marking and in terms of the omissability of the patient. [INTRANS] ~ [D]

6. The application of the antipassive marker always decreases the valency of the predicate. [VALDEC] ~ [J]

Features related to productivity:

7. The antipassive is lexical in that it applies to only a relatively small set of verbs. [-LEXICAL] ~ [E]

8. The antipassive applies to all or almost all transitive verbs [PRODUCTIVE] ~ [I]. The presence of [-LEXICAL] but not [PRODUCTIVE] indicates that the antipassive is partially productive.

Features related to effect:

9. The construction has antipassive-type semantics, which are generally also the semantic effects of decreased transitivity (per Hopper and Thompson 1980). [SEMANTICS] ~ [F]

10. The antipassive creates a predicate where there is no implication of any specific patient. [-PATIENT] ~ [K]

11. The antipassive is used to circumvent various types of restrictions on the subjects of transitive verbs (A arguments), i.e., participates in syntactic ergativity. [SYNTAX] ~ [H]

All eleven of these features are found in antipassive constructions in languages around the world. Since there is no single feature to point to which uniquely defines the antipassive, the basic definition of ‘antipassive’ used in this dissertation involves several components (see Chapter 3 for a discussion of why these criteria were chosen):

1. There is an overt marker for the antipassive construction;
2. The antipassive clearly corresponds to an unmarked or less marked bivalent transitive construction;
3. The agent of the transitive construction is preserved, while the patient is either inexpressible or optionally expressed in an oblique phrase;
4. The antipassive construction is intransitive.

These four criteria compose the basic core of what was considered here to be an antipassive. The first criterion corresponds to [MARK], the second to feature [ASYMM], and the fourth to feature [INTRANS]. Constructions which did not have agentive subjects (the third criterion) were not given feature values, since passives, for example, would likewise fulfill all of the other criteria, but are not antipassives. As such, any language which has an agent-preserving construction with the features [ASYMM], [MARK], and [INTRANS] was considered to have antipassives based on the definition used here. This definition is purposefully minimal, in that it captures only what were considered to be the core aspects of antipassivity, which, as discussed in Chapters 5-7, have a broad distribution, occurring in ergative and non-ergative languages across all regions of the world.

8.2 FEATURES

In this section I look individually at each of the eleven features of antipassives tracked in this study, and discuss the distribution of the languages which have and which lack each feature. Where relevant, the distribution is compared to the distribution of antipassive structures with respect to the various typological parameters discussed in Chapters 6 and 7. This section begins with the features considered to be definitional, [MARK] (section 8.2.1), [ASYMM] (section 8.2.2), and [INTRANS] (section 8.2.3), then continues on to the other features related to verbal marking, [DEDICATED] (section 8.2.4) and [VALDEC] (section 8.2.5). I then move on to [OBLIQUE] (section 8.2.6) and [-PATIENT] (section 8.2.7), which is followed by a discussion of productivity, [-LEXICAL, PRODUCTIVE] (section 8.2.8), and finally [SEMANTICS] (section 8.2.9) and [SYNTAX]

(section 8.2.10). After the discussion of individual features, a summary of findings is given in section 8.3.

8.2.1 AN ANTIPASSIVE MARKER [MARK] ~ C

The most basic feature related to verbal marking of any voice construction is the presence of an overt marker signaling that construction. Recall that for the definition of ‘antipassive’ used here, all structures require an overt element separate from role marking (either case or agreement) which can be identified as a marker for the antipassive construction. There are 220 antipassive-like constructions in the languages in the sample which had some type of marker, which includes all of the 132 constructions which were here considered to be instances of antipassives, as well as 87 constructions which were not. Languages of both types can be found all over the world. Those which have antipassive markers but did not qualify as antipassives here are discussed with respect to equipollence in section 8.2.2 and intransitivity in section 8.2.3.

In those 132 constructions considered to be antipassives, the marker is generally obligatory. However, a few languages, including some of those commonly cited as primary examples of antipassives in the literature, have a ‘null’ antipassive marker, i.e., the antipassive construction is in some instances unmarked. This seems to be the case in several languages where there are multiple markers, namely the Eskimo-Aleut languages and Guatuso (Chibchan), both of which are ergative and have at least two antipassive markers/constructions, at least one of which has many of the typical antipassive features. For example, Western Greenlandic is generally described as having four different antipassive markers (including the ‘null’ marker, although see Spreng 2001 for a different analysis), and although there is some debate about what the differences are (see the references cited in Nagai 2006:129), they appear to have different aspectual effects (cf. Bittner 1987). Bittner (1987) claims, for example, that *-llir* is antipassive plus inceptive aspect, while *-Ø* indicates antipassive plus ‘imperfective activity’:

(8.1a) *Atuagaq-mik taa-ssuminnga atur-llir-pu-q*
 book-INST this-SG.INST use-AP.INCEPT-INTR.INDIC.3SG.ABS
 ‘He’s just now asking whether he can use this book’ (Bittner 1987:201)

(8.1b) *Jaaku illu-mik taa-ssuminnga sana-Ø-pu-q*
 Jacob.ABS house-INST this-SG.INST build-AP.IPFV.ACTIV-INTR.INDIC-3SG.ABS
 ‘Jacob was/is building this house (has not finished yet)’ (Bittner 1987:202)

In Greenlandic, the slot filled by the ‘null’ antipassive morpheme can very often be filled by any of the overt antipassive-marking morphemes, with no other structural change, which suggests that the structures in (8.1a) and (8.1b) are indeed equivalent, and the difference cannot be attributed to a lexical property. As such, examples where an antipassive marker may or may not be present, without any other structural or lexical change, were still considered here to be antipassives. Note that Johns (2006:304) claims that the presence of an overt antipassive morpheme is conditioned by the aspectual nature of the verb root, such that inherently atelic roots do not require an antipassive morpheme. When it is present, however, it serves a purely aspectual function.

Another issue which arises with antipassive markers has to do with their identification. There have been a number of recent proposals (e.g., Watters 1988; Chamoreau 2008, 2015; Flores Nájera 2009) which identify constructions as antipassives which are more typically considered indefinite object constructions. The principal differences between antipassive markers and indefinite object markers are first that an indefinite object morpheme occupies the structural position of object in cross-referencing morphology (if present), while the antipassive is a voice morpheme, independent of cross-reference. Second, while an indefinite object decreases transitivity, the clause it is in still remains grammatically a transitive construction, even if no overt object is permitted, while an antipassive creates a grammatically intransitive predicate. Indefinite object constructions are found in a number of languages, in some Mesoamerican languages such as Purépecha (Tarascan), Totonacan, Otomí, and Nahuatl, as well as in other Uto-Aztecan languages, and in Athabaskan and Siouan languages. The following example of an indefinite object construction is from Nahuatl,³⁹ where there are two indefinite object prefixes (human and non-human) which occupy the object spot and prevent the overt expression of the patient.

(8.2a) Ni-k-namaka
1SG.A-3SG.A-sell
‘I sell it’

³⁹ It has been suggested that in some dialects of Nahuatl there is the option with some verbs to express an inanimate patient via an adverb or a relational noun (cf. Peralta Ramírez 2003, Flores Nájera 2009). This may be an example of the indefinite object marker-to-antipassive pathway discussed below, but without more information it is difficult to confirm.

- (8.2b) Ni-**tl**a-namaka
 1SG.A-INDEF.OBJ-sell
 ‘I sell something’ (author’s notes)

This is not to say that there are not cases where an object marker has become a voice/valency marker. As discussed briefly in section 2.2.1 and section 7.2, there are intermediate cases where an object prefix has become or is in the process of becoming an antipassive affix. This is the case in Ainu (isolate) and Osage (Siouan), where an antipassive morpheme developed from a now co-existing object marker, but which has a different distribution. In the case of Osage, the indefinite object marker has a different structural position from the antipassive, as shown in (8.3).

- Indefinite object:
 (8.3a) Šcéwáðe
 šce-**wa**-ðe
 PREV-**3PL.P**-doctor
 ‘Doctor them!’

- Antipassive:
 (8.3b) **Wa**šcéðe
wa-šce-ðe
 AP-PREV-doctor
 ‘Doctor [folks]!’ (Quintero 2004:147)

Sansò (2015) compiled known cases of antipassive markers developing from different sources including agentive nominalizations, action nominalizations, reflexive/reciprocal markers, as well as indefinite nouns/pronouns. In terms of delineating which cases of indefinite pronouns can synchronically (also) be considered antipassive and those which currently are best treated as indefinite objects, if there was not any evidence to suggest antipassivization other than that the patient cannot be expressed (e.g., the positional difference in Osage or the visible change from A to S in Ainu), then the construction was not considered antipassive here.

Conversely, there are 113 constructions in the sample which are in some way agent-preserving and transitivity decreasing, but which lack an antipassive morpheme. These range from otherwise entirely prototypical antipassive-type constructions to non-antipassive constructions, such as various types of differential or non-canonical object marking and ambitransitivity. Many of these constructions have the same sorts of effects as antipassives in the languages which have them, but structurally are lacking some key components which would

equate them to antipassive constructions in other languages. Some examples are discussed here, from least antipassive-like to most antipassive-like.

As discussed in section 5.3.3, differential object marking (DOM) is any instance where patients are systematically marked in different ways based on factors such as animacy and definiteness, and there is no additional morphology to indicate a change in voice. In many languages DOM achieves an antipassive-like effect, and it was demonstrated in section 5.3.3 that when a language has both antipassives and DOM, they function with respect to different parameters. DOM is typically encoded as the addition of a marker to a more animate, individuated, or definite patient, or the loss of a marker for an inanimate, non-individuated, or indefinite patient. Alternately, different types of patients may receive different markers, e.g., accusative vs. dative. DOM therefore can be seen as in some ways as having an oblique-marked patient, in that the marking on the patient is non-canonical and often indicates a decrease in transitivity. However, DOM does not create an intransitive predicate and is not generally considered a voice operation, and therefore does not qualify as an antipassive. The examples of DOM below are from Hup (Nadahup).

(8.4a) Tǎh-ǎn=mah j'ám tih wɔn-máh-ǎh
 tapir-**OBJ**=REP DISTPST.CONTR 3SG follow-REP-DECL
 'He followed the tapir, long ago, they say' (Epps 2008:176)

(8.4b) Yíkán mǎy hid biʔ-píd-ih, póg!
 over.there house 3PL make-DISTR-DECL big
 'They built a house, (it was) big!' (Epps 2008:177)

The same critique applies just as readily to any other type of non-canonical patient marking, unaccompanied by other antipassive-like features. Often non-canonical patient marking is lexical (e.g., verbs which take dative experiencers in a number of Indo-European languages), but in some cases, a change in patient marking indicates a decrease in transitivity. In English, the patient of some verbs may appear in an oblique phrase, indicating that the patient is not affected or is less affected by the action of the verb, and also often iterative aspect. This is known as the conative alternation.

(8.5a) The boy hit the ball (definitely made contact)

(8.5b) The boy hit at the ball (but did not necessarily make contact, possibly after multiple attempts)

Although by some definitions the conative is an antipassive, it would seem to have more in common with DOM, where a change in patient marking produces the semantic effects of an antipassive (decreased transitivity), but without any other indication that this is a voice operation. In some languages what is essentially the conative or DOM is coded by an antipassive (e.g., Huastec, where indefinite patients trigger the use of the antipassive, see Kondic 2016), but without other structural correlates of antipassivization the conative is treated here as non-antipassive construction which achieves the same effect as an antipassive.

Another phenomenon which has antipassive-like features is ambitransitivity (also called ‘labiality’), allowing verb roots to appear in both intransitive and transitive frames, without any additional marking. Ambitransitives are of two types: S=A, where the intransitive subject is the same as the transitive subject, and S=O, where the intransitive subject corresponds to the patient of the transitive construction (typically with anticausative-type meaning). Here we are only concerned with the S=A type which preserve the agent in both the transitive and the intransitive construction. About 85 languages in the sample have at least a few ambitransitive verbs. In some languages like English, the difference is not indicated morphologically (i.e., zero morphological derivation, e.g., ‘I walk’ vs. ‘I walk the dog’). In other languages, the difference between transitive and intransitive use of a particular verb might be indicated by a change in morphology, e.g., shift from ergative agreement to absolutive agreement, or by any other morphemes which vary depending on the transitivity of the verb (see the *-pu-* morpheme in West Greenlandic in (8.1)). The following example is from Sierra Popoluca (Mixe-Zoquean), where the ergative marker changes to an absolutive marker in the intransitive, without any additional morphological marking.

Transitive use:

- (8.6a) ?an=?uk-ne?-W=m ?oojo
1ERG.EXCL=drink-PRF-COMPL=already alcohol
 ‘I had drunk alcohol’

Intransitive use:

- (8.6b) ?ich p#imi ?a=?uk-pa
 1 strength **1ABS.EXCL=drink-INCOMPL**
 ‘I drink a lot’ (de Jong Boundreault 2009:342)

While ambitransitive verbs serve the same purpose as an antipassive, creating transitive and intransitive patterns for the same verb, these types of alternations were not considered here to be voice; simply two patterns, neither of which is more basic than the other.

This type of ambitransitive alternation can appear more antipassive-like if the construction may be accompanied by a patient. In some languages which do mark the (in)transitivity of the verb morphologically, the patient may still frequently be present, even though the verb is intransitive and the patient does not receive the typical patientive nominal or verbal marking which it otherwise would. This is the case in many of the Kiranti languages, at least some Kuki-Chin languages, and also in Nez Perce (Sahatian), where a pseudo-noun incorporation-like construction is used approximately 30% percent of the time. The verb is intransitive, the agent lacks ergative case, and the patient lacks objective case (and is less specific/modifiable, which is also reminiscent of DOM). However, the patient is almost always present, and there is no verbal marker to indicate in what way the two constructions might be related.

Nez Perce:

(8.7a) 'ip-ním pée-qn'i-se qeqii-ne
 3SG-ERG 3/3-dig-IPFV edible.root-OBJ
 'He digs qeqiit roots'

(8.7b) 'ipí hi-qn'ii-se qeqiit
 3SG 3.SBJ-dig-IPFV edible.root
 'He digs qeqiit roots' (Crook 1999:238, cited in Deal 2010:74-75)

A very similar construction exists in Belhare (Tibeto-Burman), where the verb in the detransitivized pattern does not cross-reference the patient as in the transitive pattern and the agent lacks ergative marking.

(8.8a) (I-na-ŋa) wa Ø-khui?-t-u
 (DIST-DEM.SG-ERG) chicken.ABS 3SG.A/S-steal-NPST-3SG.O
 'This [guy] will steal a/the chicken'

(8.8b) (I-na) wa Ø-khu?-yu
 (DIST-DEM.SG.ABS) chicken.ABS 3SG.A/S-steal-NPST
 'This [guy] steals chicken' (Bickel 2003:557)

This process is taken a step further in other languages, where an intransitive verb can be optionally accompanied by an obliquely marked patient; all that they lack is a verbal valency marker. This type of construction is found in Yimas (Lower Sepik-Ramu), Warrgamay (Pama-Nyungan), the Algonquian AI+O and TI constructions, the Polynesian ‘middle’ construction, Basque (Isolate), Cavineña (Pano-Tacanan), Dargwa (Nahko-Daghestanian), and Sanumá (Yanomaman). Any definition of antipassive which does not require a morphological marker for the construction would likely consider these languages to have antipassive constructions. The example below is from Yimas, and shows an antipassive-like construction with an intransitive verb plus an optional oblique patient (in (8.9b)), which contrasts with a transitive structure where pronominal affixes for both the agent and the patient may appear on the verb (in (8.9a)). This is accompanied by a change from A to S in verbal marking, indicating detransitivization of the predicate.

- Yimas:
(8.9a) Irpm mu-n-wapal
coconut.palm.IV.SG IV.SG.O-3SG.A-climb
‘He climbed the coconut palm’
- (8.9b) Irpm-**un** na-wapal
coconut.palm.IV.SG-OBL 3SG.S-climb
‘He climbed up on the coconut palm’ (Foley 1991:234)

If the presence of a morphological marker for the antipassive construction was not a requirement, it would be difficult to determine where to draw the line between antipassive and non-antipassive, since many of the constructions discussed in this section have been called antipassives, but do not all always conform to every definition. If the basic criteria for antipassives were to exclude [MARK], an overt antipassive marker (i.e., simply [INTRANS], there is an intransitive counterpart to a transitive predicate), then 252 constructions would qualify as antipassives, nearly doubling the number of antipassives in the sample. These constructions are found in all regions, and lack any strong correlations with the typological features discussed in Chapter 5. Interestingly, the strong correlation between ergativity and antipassivization discussed in Chapter 6 still exists when the definition of an ‘antipassive’ is expanded to include those

languages with [INTRANS] but no antipassive marker (β : 1.02 ± 0.26 , $p < 0.001$).⁴⁰ However, this does include more nominative-accusative languages, with 97 languages that have antipassive-like constructions [+INTRANS, +/-MARK], up from 41 nominative-accusative languages that have [ASYMM, MARK, INTRANS] antipassives (see section 7.1).

8.2.2 VOICE AND MARKEDNESS [ASYMM] ~ A

The relationship between voice, transitivity, and derivation has been the topic of much discussion (cf. Shibatani 1988, Klaiman 1991, Kemmer 1993, Dixon and Aikhenvald 2000, Kulikov 2010, Authier and Haude 2012, Malchukov and Comrie 2015, *inter alia*). Definitions of voice alternations vary in their strictness, and may or may not require that the alternation be productive, that it be restricted to the verbal domain, that it result in an increase or decrease in valency, or that it be explicitly marked. As discussed in Chapter 3, I have adopted here a somewhat stricter view of voice in which voice requires an asymmetry between a basic transitive voice pattern and the morphologically identified antipassive voice pattern. As such, for a construction to be considered ‘antipassive’ here, it had to have a voice marker and alternate with a markerless transitive construction. This type of asymmetry is illustrated by the antipassive in Matses (Pano-Tacanan) below.

Transitive:
 (8.10a) Aid opa-n matses- \emptyset pe-e-k
 that.one dog-ERG people-ABS bite-NPST-INDIC
 ‘That dog bites people’

Antipassive:
 (8.10b) Aid opa- \emptyset pe-an-e-k
 that.one dog-ABS bite-AP-NPST-INDIC
 ‘That dog bites’ (Fleck 2006:559)

While in most cases of the antipassive are like Matses where the transitive verb lacks any overt marking to indicate its basic transitive status, it is of course possible to antipassivize a derived transitive construction, in which case the antipassive requires additional marking in

⁴⁰ Statistical significance was calculated throughout this chapter using generalized linear mixed effects regression models fit to the presence or absence of antipassives (as re-defined in a particular subsection), with alignment, region, word order, and locus as predictors. See Appendix D all statistical models.

addition to whatever marking exists on that transitive construction. The examples in (8.11a-b), also given in section 7.3, are from Movima, where transitive roots require direct or inverse marking, and antipassive marking exists in addition to that system.

Movima direct construction:

- (8.11a) Jayna rey way-**na**=is kinos rey sonsa
 DISCONT MOD lift-**DR**=3PL.ASTAT ART.FEM.ABSENT MOD silly
 ‘Then they have already taken up that silly (woman)’

Movima antipassive derived from the direct construction:

- (8.11b) Is juyeni [di’ jayna **kwey** way-**na** n-i’ne]
 ART.PL person REL DISCONT **AP** lift-**DR** OBL-3.IP.FEM
 ‘The people who had taken her up’ (Haude 2012:262-263)

While many languages have antipassives which fit this definition of voice, not all scholars would agree with limiting antipassive constructions to asymmetrical relationships (where the antipassive is more marked than the transitive construction), and would include symmetrical constructions, where both the transitive voice form and the antipassive voice form are not clearly in a direct relationship with each other. Whether a language has a symmetrical or asymmetrical antipassive-type construction often depends on how it treats verb roots. Many languages treat most verbs as either inherently transitive or inherently intransitive, in which case there needs to be mechanisms for turning one into the other, if a transitive root is ever to be used intransitively or if an intransitive root is to be used transitively. However, other languages view verb roots as neutral with respect to grammatical transitivity marking. This results either in ambitransitivity, as discussed in section 8.2.1, where roots may be used with either transitive or intransitive inflection, or it results in equipollent alternations, where verbs roots must be explicitly marked as either transitive or intransitive (or as belonging to one pattern vs. another, as in Philippine-type languages) in order to be grammatically complete. Sample equipollent alternations can be found in a subgroup of South Dravidian, where intransitives and transitives (also called strong vs. weak verb forms, which often have middle voice meanings) are both marked. The transitive is typically marked with a geminate (sometimes non-nasal) version of the intransitive marker (Krishnamurti 2003:182).

- Tamil:
- (8.12a) Aval en maṭiyil uṭkār-nt-āḷ
 she.NOM my lap.LOC sit-WEAK.PST-SG.FEM
 ‘She sat on my lap’
- (8.12b) Aval ennai uṭkār-tt-āḷ
 she.NOM me.ACC sit-STRONG.PST-SG.FEM
 ‘She seated me’ (Klaiman 1991:74)

In equipollent alternations, it is more correct to say that intransitives are derived than in the case of ambitransitives. However, it is not the case that the intransitive is alternating with or derived from a transitive verb; rather, both are formed from a root unspecified for transitivity, and are not in a direct relationship with each other. This is also the case for many Nilotic languages, where the intransitive form of the verb and the transitive form of the verb may differ in tone, stress, vowel quality, vowel length, and/or final consonant. In the following examples from Dinka Bor, the transitive and intransitive forms are distinguished by vowel quality, where dieresis marks a [+ATR] vowel.

- (8.13a) Petero a-thel weṇ
 Peter 3SG.INCOMPL-pull.TR cow
 ‘Peter is pulling the cow’
- (8.13b) Petero a-thël
 Peter 3SG.INCOMPL-pull.INTR
 ‘Peter is pulling’ (Schröder 2006:96)

Similar patterns can be found in Pāri, where Andersen (1988) calls the construction in (8.14b) ‘antipassive’.

- (8.14a) Rìṅó ṅḷ ùburr-ì ṅḷ-ò
 meat cut Ubur-ERG cut-SUF
 ‘Ubur will cut the meat’
- (8.14b) Ùbúr ṅút-ò kí riṅó
 Ubur cut-SUF OBL meat
 ‘Ubur will cut the meat’ (Andersen 1988:302)

While the intransitive constructions in examples (8.13b) and (8.14b) have an internal change that could be considered a marker of the antipassive, neither the transitive form nor the intransitive form appears to be more basic or less marked than the other and were therefore considered

equipollent forms in this study.

Like ambitransitives, equipollent alternations are even more likely to be called antipassives in those languages which allow a patient to be expressed. Such constructions appear in Abkhaz-Adyghean, Nilotic, Austronesian languages with the Philippine-type agent voice vs. patient voice system, and in Salishan. The constructions in these languages have been called antipassives (e.g., Schröder 2006, Letuchiy 2012, Aldridge 2004, Gerdtz and Hukari 2005), but, as pointed out for example by Matasovic (2010) for Kabardian, the relationship between the two constructions is not clear, since “the intransitive construction in the Abkhaz-Adyghean languages is just as unmarked (underived) as the transitive one” (2010:42).

- Adyghe:
- (8.15a) $\text{C}\text{əf}\text{ə-m}$ $\text{tx}\text{ə}\text{ł}\text{ə-xe-r}$ $\text{Ø-ə-}\check{\text{z}}\text{ə-}\text{v}$
 man-ERG book-PL-ABS⁴¹ 3SG.ABS-3SG.A-read.TR-PST
 ‘A man read the book through’
- (8.15b) Se $\text{tx}\text{ə}\text{ł}\text{ə-m}$ $\text{s-Ø-je-}\check{\text{z}}\text{ə-}\text{v}$
 1SG.ABS book-OBL 1SG.ABS-3SG.IO-OBL-read.INTR-PST
 ‘I read a book (for some time)’ (Letuchiy 2012:333)

This construction has the same fundamental problem as the ambitransitive +/- oblique patient constructions discussed in section 8.2.1, in that these two constructions are clearly related, but are symmetrically instead of asymmetrically marked, which does not reflect what is typically an asymmetrical transitive/antipassive relationship.⁴²

The Austronesian case is somewhat more complicated, because not only may both constructions be morphosyntactically marked, but also in many languages the status of both constructions with respect to transitivity is unclear, and both have consequences for syntax and

⁴¹ It is unclear why the free translation does not reflect the fact that the books are marked as plural in the gloss. However, this is how the example appears in Letuchiy (2012). Additionally, ergative and oblique marking in these languages is homophonous, but the glossing here represents their respective uses.

⁴² There are some arguments that suggest that the transitive pattern is more basic in Circassian, most notably that while bivalent verbs which have corresponding depatientive forms may have stems ending in /ə/ or /e/, the depatientive may only ever appear with /e/ (Peter Arkadiev, p.c. 2016). Synchronically, one could consider the bivalent forms ending in /e/ and therefore showing no alternation as ambitransitive, limiting ‘antipassive’ to those that show the alternation on the verb. However, the semantic effect is the same for all participating verbs.

information structure. The glossing of the Seediq examples below reflects an ergative analysis, under which it is easiest to see the antipassive interpretation of (8.16b). However, it should be noted that Chen (forthcoming) argues against this analysis. But regardless, the equal marking status of both constructions disqualifies this alternation as voice per the asymmetrical requirement of feature [ASYMM]. See also the discussion of symmetrical alignments in section 7.3.

Seediq patient voice as transitive:

- (8.16a) Sebet-**un** na pawan ka ricah
 hit-**PV** ERG Pawan ABS plum
 ‘Pawan will hit the plum’

Seediq agent voice as intransitive:

- (8.16b) S<**em**>ebuc Ø ricah ka pawan
 <**AV**>hit OBL plum ABS Pawan
 ‘Pawan is hitting at [the] plums’ (Chen forthcoming)

Finally, there is ongoing debate about the nature of word classes (lexical categories) in Salish, in particular whether there are any basic transitive roots, since all syntactically transitive constructions take transitive marking (Davis 1997, Wiltschko 2006, Gerdts and Hukari 2006, *inter alia*). Consider the following example of what has been called an antipassive construction in Halkomelem:

- (8.17a) Niʔ q̣ʷəl-ət-əs tθə sce:ltən
 AUX bake-**TR-3.ERG** DET salmon
 ‘He cooked/barbecued the salmon’

- (8.17b) Niʔ q̣ʷəl-ə**m** ʔə tθə sce:ltən
 AUX bake-**MID/AP** OBL DET salmon
 ‘He cooked/barbecued the salmon’ (Gerdts and Hukari 2005:52)

Notice that the middle/antipassive marker *-əm* does not appear in addition to the transitive marker, but instead of it. Wiltschko (2006:205) suggests that the so-called antipassive markers *-əm* and *-els* derive unergative intransitive verbs from underlyingly unaccusative intransitive roots, and the the transitive marker similarly derives transitive predicates from unaccusative roots. Under this analysis, (8.17b) is not directly related to (8.17a), rather they are in a type of symmetrical/equipollent relationship. Thompson and Thompson (1992:102) note something similar for Thompson, that “neither of the Thompson middle formations [-ə**m**e ‘control middle’

or *-nwéln* ‘non-control middle’] could be considered to be morphologically derived from transitive bases.” However, Gerdts and Hukari (2006) demonstrate that there are underlyingly unergative intransitive roots in Halkomelem, and that there are some *-t*-marked transitive verbs which lack an unmarked intransitive counterpart, and rather have a middle/antipassive-derived intransitive form (see note 4). However, in terms of antipassive being a voice, the putative antipassive(s) in Salishan differ from other voices like the passive, where the passive (or middle voice marker) are added to a transitive stem, which retains its transitive marking. The following example is from Okanagan.

(8.18a) Cu- \emptyset ⁴³-s- \emptyset -lx iʔ t=λax̣x̣λx̣ap-s
 tell-TR-3A-3O-3PL the OBL=parents-3.POSS
 ‘His parents told him’

(8.18b) Cu-**nt-əm**- \emptyset iʔ ta=yłmíx^wəm
 tell-TR-MID-3SG.S the OBL=king
 ‘He was told by the king’ (Dilts 2006:80, citing A. Mattina 1987, 2004)

This suggests that the ‘antipassive’ morphemes do not have the same relationship to the transitive as other voices, and reinforces the equipollent nature of *-əm/-els*-marked intransitives and *-t*-marked transitives in Halkomelem.

Finally, Movima has a syntactic antipassive marked by *kwey* (see example (8.11) above). However, there is another antipassive-type construction in Movima which is similar to the equipollent derivations above. Like the constructions above, this antipassive-type construction has not been considered an antipassive here due to issues of directionality and root type, despite the fact that it has many of the other features of an antipassive: it has a dedicated marker, it is productive, it is an intransitive construction with an optional, obliquely marked patient (or other element), and it performs the pragmatic functions of antipassives in other languages. However, Haude (2012:270) argues that this antipassive-type construction does not alternate with a less-marked transitive verb; rather, it is derived from bivalent, undergoer-oriented stative bases to produce an agentive intransitive, which sounds very similar to the Salish case above. Haude discusses this as an ‘agentive construction’, exemplified in (8.19).

⁴³ Dilts (2006:79) notes that *-nt* is phonologically deleted for morphophonemic reasons in some person/number combinations, which is what has happened in (8.18a).

Transitive construction:
 (8.19a) Tikoy-na=us os rulrul
 kill-DR=3M.ABSENT ART.NEUT.PST jaguar
 ‘He killed the jaguar’ (Haude 2012:260)

‘Agentive’ construction:
 (8.19b) Jayna jot-e:le n-is chekwesla
 DISCONT gather-AGT OBL-ART.PL tarumá
 ‘Then I gathered tarumá fruits’ (Haude 2012:270)

Bivalent stative base:
 (8.19c) Ba:ra rimle
 all sell
 ‘It is all sold’ (Haude 2012:279)

If those languages which have equipollent derivations were to be considered antipassives, the number of languages with antipassives in the sample would increase from 126 to 145. However, in terms of typological features, these languages largely fit the profile for languages with antipassives outlined in Chapter 5. Many of them are ergative (or possibly ergative in the case of the Philippine-type Austronesian languages) and they tend not to have verb-medial basic word orders.

8.2.3 INTRANSITIVIZATION [INTRANS] ~ D

It is necessary here to make a distinction between intransitivization and transitivity reduction. Intransitivization invariably results in an intransitive predicate, while a reduction in transitivity results in any of the effects of lessened transitivity per Hopper and Thompson (1980), and as such a predicate may or may not be stripped of its standing as a fully transitive verb. Antipassives by definition are intransitive constructions which correspond to transitive constructions. One of the primary ways in which antipassivization differs from other strategies languages have for reducing transitivity is that the predicate in an antipassive is formally intransitive.

There are 252 constructions in the sample with [INTRANS], most of which were not considered to be antipassive constructions (although see see 8.2.1 for what that distribution would be). This includes all of the languages with ambitransitive and equipollent derivations, as well as those languages which simply allow the omission of the patient of a transitive construction to be the grammatical equivalent of an intransitive construction. However, 131 of

these constructions were considered to be antipassives and therefore are intransitive. This includes languages from every region, with a variety of different kinds of marking and different basic word orders. The following example is from Paluai, a nominative-accusative Oceanic language (Austronesian family) where the antipassive marker is partial reduplication of the verb root.

- (8.20) Ip=ka=lomêek s uei le mwayen. Ka-lo-lomêek nễm...
 3PL=IRR.NSG-plant mami or yam IRR.NSG-AP~plant be.finished
 ‘They will plant mami or yam. When they finish planting...’ (Schokkin 2014:308-309)

As in the discussions of [MARK] in section 8.2.1 and [ASYMM] in section 8.2.2, this section discusses those constructions which have the other two features that minimally delineate antipassive ([MARK] and [ASYMM]), but are not intransitive and were therefore not considered ‘antipassive’ here. The most notable type of construction which belongs to this category is the Mayan agent focus (AF) construction. Although the specifics of AF differ among Mayan languages (see section 11.3.3 and section 12.2), AF has the same basic profile with respect to the features of interest here. For example, the verb in AF constructions is morphologically intransitive in that it only cross-references one of the two participants of a dyadic verb (rules for which participant is cross-referenced vary by language), and it has a marker (also in some languages shared with the true antipassive) which appears on the AF verb and has no corresponding transitive counterpart (not equipollent) [ASYMM, MARK]. Also, like some antipassives, AF is used to circumvent syntactic restrictions on ergative arguments [SYNTAX].

However, linguists working on Mayan languages have by and large come to agree that AF is not a true antipassive (Ayres 1983, Aissen 1999, Stiebels 2006, Coon et al. 2014, *inter alia*), contrary to labels like ‘agentive antipassive’ or ‘focus antipassive’ which appear in the earlier literature (although these terms often conflate the oblique antipassive and AF, also contrary to current views). The most generalizable reason that AF is not considered an antipassive is that it is still syntactically transitive, despite the verb only cross-referencing one argument when typical transitives cross-reference two. The patient does not appear in an oblique phrase, and is very often definite, specific, and overtly expressed. While the patient may be omitted if it is understood from context, semantically it is always present. The following AF construction is from Sakapulteko, where the verb is marked with *-Vw* and may agree with either

the agent or the patient based on a salience hierarchy (in (8.21b) the verb agrees with the patient).

(8.21a) K-in-a:-č'ay-aŋ
INCOMPL-1SG.ABS-2SG.ERG-hit-TR
'You hit me' (Du Bois 1981:172)

(8.21b) Ne: wa? š-in-č'i-y-iw-ek
who DEM COMPL-1SG.ABS-hit-AF-INTR
'Who was it that hit me?' (Du Bois 1981:248)

Another Mayan construction, which at least in some languages is distinct from AF (although see Aissen 2011 for the relationship between them in K'ichee') and belongs to this category is the so-called 'incorporative antipassive' (see also section 11.3.2 and 12.3). Like noun incorporation, the patient is mandatorily present, unmodified, and inanimate. The construction may have a dedicated marker, or may bear the same marker as either true antipassives or AF. The verb only agrees with the agent, and the construction most commonly appears outside of focus contexts. Because the construction would become ungrammatical without an overt patient (in those languages where the marker of the absolutive antipassive differs from that used for the incorporative construction), this construction is not entirely intransitive. While it may indeed be best described as a type of noun incorporation, it does not qualify here as an antipassive. (8.22b) shows the incorporative construction in Kaqchikel, where the verb only cross-references the agent and the verb is marked with the AF morpheme, even though this is not an example of focus (VOA, not AVO word order).

(8.22a) N-Ø-ki-tik ri ixim ri achi-a'
INCOMPL-3SG.ABS-3SG.ERG-plant DET corn DET man-PL
'The men plant the corn' (author's notes)

(8.22b) Y-e-tik-ø ixim ri achi-a'
INCOMPL-3PL.ABS-plant-INC corn DET man-PL
'The men plant corn' (García Matzar and Rodríguez Guaján 1997:381)

Similar types of constructions which are morphologically intransitive and have some sort of potential voice marker, but have non-oblique-marked patients are fairly common, and include some pseudo-noun incorporation-type structures. Some of these are quite antipassive-like and merit acknowledgement. Yine (Arawakan) has a morpheme *-lewa* which is described as

If these languages with constructions resembling pseudo-noun incorporation and those Mayan languages with AF were included here as cases of languages which have antipassives, the distribution discussed in Chapters 5-7 would not be significantly altered. Most of the languages in this category are Mayan languages, and since most of the Mayan languages with AF and/or incorporative constructions also have a construction which is more appropriately considered a more prototypical antipassive, they were already included in any event.

8.2.4 A DEDICATED MARKER [DEDICATED] ~ G

At this point in the discussion attention is shifted from discussing features which others might not include in other definitions of the antipassive to features which others might require for a construction to be considered an antipassive, but were not required here. One such feature which pertains to marking is [DEDICATED], that the antipassive marker be used only to indicate the antipassive construction (or, if the language does not have an antipassive, the marker for any other agent-preserving, valency-decreasing construction). This is a contentious parameter for the definition of any voice marker, since it is common for markers of all types to develop from markers of other things and in some cases maintain that original function concomitantly with the newer function (see for example Sansò 2015 on diachronic sources of the antipassive). However, for a construction to be an antipassive synchronically, it is necessary that ‘antipassive’ be at least one of the primary functions of the morpheme, if not its only function.

There are 67 constructions in this study which are agent-preserving and valency-decreasing with dedicated markers; 40 of these were considered to be antipassives. Those 40 antipassive constructions belong to 39 languages of which 21 are ergative, 9 are nominative-accusative, 6 are active, and 3 have inverse marking. These 39 languages have a mix of marking types and word orders, and contain representatives from every region. Most of the antipassive constructions are patientless, although six⁴⁴ also allow the patient to be expressed in an oblique phrase (see section 8.2.6 on [OBLIQUE]). This suggests that most languages with antipassives do not have a dedicated antipassive marker (86 of 126, or 68.3%). An example of an antipassive construction with a dedicated antipassive marker is given in (8.25b) from Tamambo (Austronesian).

⁴⁴ These six languages include Tundra Nenets, Katukina, Movima, Guatuso, Chuj, and Chamorro.

Tamambo:
 (8.25a) Hambuhani mo kamwe na batuivanua
 volcano 3SG destroy ART village
 ‘The volcano destroyed the village’ (Jauncey 2011:50)

(8.25b) Tina-ra mo **vari**-tuwa asena
 mother-3PL.POSS 3SG **AP-smack** INTEN
 ‘Their mother is inclined to smack a lot’ (Jauncey 2011:124)

Although the feature [DEDICATED] suggests that this parameter is binary, i.e., the marker is either dedicated or non-dedicated, the reality is that non-dedicated antipassive morphemes can vary according to the degree to which they are dedicated (lacking other functions) within the languages that have them. In some languages, the marker may only serve one or two minor functions in addition to the antipassive, while in others the marker is better named something else, although it has an antipassive function with some number of verbs or in some specific context. The languages and language families which contain languages with antipassives marked by morphemes with only one or two functions besides antipassive include Mayan, Pama-Nyungan, Cherokee, Surmic, and Rgyalrongic. Dyirbal is well-known for having a morpheme that is both antipassive and reflexive (Dixon 1972:90). The same is true in Oklahoma Cherokee, where the morpheme *-ataat-* functions both as the antipassive (as in 8.26a) and as the reflexive (as in 8.26b).

Antipassive use:
 (8.26a) A-anehltia uu-**ataat**-stehlt-i
 3A-try.PRS.CONT 3A-REFL/AP-help.DVN-NMLZ
 ‘He’s trying to help (so and so)’ (Montgomery-Anderson 2008:366)

Reflexive use:
 (8.26b) Aki-**ataat**-akahthoósthán-vvʔi aki-vvsa
 1B-REFL/AP-look.at.COMPL-EXP.PST 1B-self
 ‘I looked at myself’ (Montgomery-Anderson 2008:345)

Although multifunctional markers are not often discussed with respect to antipassive constructions in Mayan languages, some, like K’ichee’, may use the antipassive marker in a very limited way in other functions, namely as an anticausative, as in (8.27b).

Antipassive use:

- (8.27a) Utz k-iš-b'iša-**n-ik**
well INCOMPL-2PL.ABS-sing-**AP**-INTR
'You sing well' (Mondloch 1981:196)

Anticausative use:

- (8.27b) Š-Ø-wuli-**n** le: xah
COMPL-3SG.ABS-take.down-**AP** DET house
'The house fell down' (Mondloch 1981:185)

Also, as a general fact, in Mayan there are different sets of markers for transitive verb roots vs. derived transitive verbs. In K'ichean languages (as well as other Mayan languages), the morphological distinction between patientless antipassives and AF is neutralized in derived transitives, such that they are both marked by *-(V)n*. This can be interpreted as a form of plurifunctionality, since the same marker appears in two different constructions. The following examples from Tz'utujil show the morphological difference between antipassives and agent focus with root transitives in (8.28a-b), and how this difference does not exist with derived transitives, even though the syntactic constructions remain distinct (8.29a-b).

Patientless antipassive of a root transitive:

- (8.28a) X-Ø-ch'ey-**oon-i**
COMPL-3SG.ABS-hit-**AP**-INTR
'He was hitting' (Dayley 1985:116)

AF form of a root transitive:

- (8.28b) La Aa Teeko x-Ø-ch'ey-**ow-i**
INTERROG CLF Diego COMPL-3SG.ABS-hit-**AF**-INTR
'Was it Diego who hit him?' (Dayley 1985:331)

Patientless antipassive of a derived transitive:

- (8.29a) N-Ø-b'e Chi.Maq'an.Ya' b'aar n-Ø-b'e-k'ayi-**n** wi'
INCOMPL-3SG.ABS-go Totonacapan here INCOMPL-3SG.ABS-go-sell-**AP** LOC
'He goes to Totonacapan [lit. at hot water] where he goes to sell' (Dayley 1985:377)

AF form of a derived transitive:

- (8.29b) Aj-kata'l jar iixoq ja n-Ø-k'ayii-**n-i** ja kaa'
AGT-Nahualá DET woman FOC INCOMPL-3SG.ABS-sell-**AF**-INTR DET metate
'The woman who sells metates is of Nahualá' (Dayley 1985:352) [glossing mine]

The final way in which Mayan antipassive markers can be considered non-dedicated is their use in other detransitivizing constructions. In many Mayan languages, the marker for the

antipassive is shared with either incorporative construction or AF, both of which have non-antipassive-like structural characteristics (see the discussion of these constructions in Chapter 11 and Chapter 12). In Ixil, for example, the marker *-on* appears on the verb in both the antipassive and AF, which are morphologically distinguished in other Mayan languages (cf. (8.28a) vs. (8.28b) in Tz’utujil above).

Antipassive:
 (8.30a) Kat q’os-**on** axh (s wi’)
 ASP hit-**AP** 2SG.ABS OBL 1SG
 ‘You hit (me)’

Agent focus (AF):
 (8.30b) In kat q’os-**on** axh
 1SG ASP hit-**AF** 2SG.ABS
 ‘I hit you’ (Ayres 1983:27)

While the languages above have morphemes which are used in one or two other similar constructions, one of which is the antipassive, there is a significant number of constructions which here have been considered antipassives here but whose markers have a wide array of functions. Many of these are perhaps best called middle voice markers which have gained antipassive uses with at least some verbs (e.g., as in some Indo-European languages), or are markers which have a large number of functions, not all related to voice, e.g., Oceanic reduplication. Some languages in this sample which have been identified as having antipassive morphemes with a wide variety of other functions include the Bantu reciprocal *-an-*, Slavonic middle voice *-sja*, Athabaskan D-element (only in Eyak, Tlingit, and possibly Tolowa), Oceanic detransitivizing reduplication, Je *a(j)-* middle voice, Cariban middle voice (mediopassive), Georgian *i-*, and Mocho’ *-o:n*. While some of these languages are ergative, many of them are not, and they come from a variety of regions. In fact, middle voice-to-antipassive appears to be the most common path for the development of antipassives in non-ergative languages. Also, while some of these markers are productive with an antipassive meaning, some are not (see section 8.2.8 on productivity). The following set of examples is from Gikuyu (Bantu), where *-an-* is most prototypically reciprocal (as seen in (8.31a)), but can also indicate antipassive (as in (8.31b)), or may indicate that the action is conducted frivolously or recklessly (as in (8.31c)).

Reciprocal use:

- (8.31a) Aa Kamaú nĩ-má-rá-ingat-**an**-a
associates Kamau FOC-IISBJ-PRS-chase-**RECP**-FV
'Kamau and his associates are chasing each other' (Mugane 1999:163)

Antipassive use:

- (8.31b) Thindiu ni-a-ré-ét-**an**-a
Thindiu FOC-IISBJ-PRS-call-**RECP**-FV
'Thindiu is calling another(/others)' (Mugane 1999:161)

'Recklessly' use:

- (8.31c) Múndú nĩ-a-rá-ihur-**an**-i-a irio
Iperson FOC-I-PRS-serve-**RECP**-CAUS-FV food
'A person is serving food recklessly' (Mugane 1999:165)

Similarly disparate uses can be attributed to reduplication in some Oceanic languages. In Neverver, for example, reduplication serves a number of functions relating to detransitivization, e.g., reflexive/reciprocal, but it may also signal nominalization, derive stative verbs, create imperfective aspect and the diminutive, signal multiple participants, and it also appears in several irrealis constructions (Barbour 2012:228-261). The following examples illustrate the antipassive, iterative, and stative uses of reduplication in Neverver.

Antipassive:

- (8.32a) Nimt-uv nibit-**vul**-vul
1PL.INCL.IRR-go 1PL.INCL.IRR-**REDUP/AP**~buy
'...we'll go shopping' (Barbour 2012:441)

Iterative:

- (8.32b) Na ni-tokh ni-**sev**-sev nani ang
1SG 1SG.REAL-PROG 1SG.REAL-**REDUP/ITR**~separate coconut ANA
'I was splitting open coconuts [repeatedly]' (Barbour 2012:249)

Stative:

- (8.32c) I-vlem i-**vor**-vor...
3SG.REAL-come 3SG.REAL-**REDUP/STAT**~sit
'...he came and sat down...' (Barbour 2012:443)

8.2.5 THE MARKER IS ALWAYS VALENCY-DECREASING [VALDEC] ~ J

In section 8.2.4, antipassive constructions were grouped based on how many other functions the antipassive morpheme encodes. However, there is another way to look at the functions of antipassive morphemes, not by number of functions but rather by type of function,

and how similar the functions are to an antipassive function. In other words, does the morpheme which marks the antipassive always decrease valency in all of its functions, or does it have some functions which do not decrease the valency of the predicate? This is [VALDEC].

The 40 constructions discussed in section 8.2.4 as having antipassive constructions with dedicated markers *de facto* also have [VALDEC], since the antipassive by definition results in a decrease in valency. There are some cases where a construction not considered here to be an antipassive has a dedicated marker, but it is not necessarily valency decreasing. This was considered to be the case for symmetrical voice system languages (Philippine-type languages) like Malagasy, which has a symmetrical or equipollent system of marking, but the patient in the agent voice construction lacks oblique marking (see also 8.2.2 and 8.2.3) and may be definite (shown in (8.33a)). Also, the agent voice morpheme may also attach also to intransitive roots (8.33b). As such, *m-* is a dedicated marker in that it always marks agent voice, but it is not necessarily always valency decreasing.

AV of a transitive:

- (8.33a) **M**-aN-feno ny tavoahangy ny vehivavy
 AV-LV-full DET bottle DET woman
 ‘The woman is filling the bottle’ (Pearson 2005:233)

AV of an intransitive:

- (8.33b) **M**-i-tomani ny zazavavy
 AV-LV-cry DET girl
 ‘The girl is crying’ (Pearson 2005:235)

In addition to the 40 antipassive constructions with dedicated antipassive markers which are *de-facto* always valency-decreasing, there are 43 additional constructions in the dataset which lack dedicated antipassive markers, but the various functions of that morpheme are always valency-decreasing. This includes (among others) those Mayan languages which have a morpheme which makes the antipassive as well as either agent focus or the incorporative construction (see (8.30a-8.30b) from Ixil, and section 11.3.2), the Cariban middle morpheme, the Iroquoian middle/reflexive, the middle/antipassive in Warrungu and Kuku Yalanji, the *i-* middle in some Mande languages, and the middle/unspecified object marker in some Songhay languages. All of these languages have a voice marker which is shared across some number of functions on the antipassive to passive spectrum, and in some languages may be better termed ‘valency-decreaser’ or ‘detransitivizer’ because it functions to eliminate an argument, be it the

agent or the patient. The following examples illustrate agent-deleting and patient-deleting functions of the detransitivizer in Kari’ña (Cariban).

Agent-deleting:
(8.34a) I-**wot**-apoi-seng
3-**DETR**-take-DISTPST.PL
‘She was taken’ (i.e., kidnapped)

Patient-deleting (aka antipassive):
(8.34b) Kawete ashitjo n-**wot**-apoi-i
good a.little 3.S-**DETR**-hold-REC
‘It’s good that she held (for) a little’ (lit. ‘she held [unspec. P] briefly’) (Gildea et al. 2016)

In contrast, there is a surprisingly large number of languages, both with otherwise prototypical and with less prototypical antipassive constructions, which have antipassive markers that in their other functions are not always valency-decreasing. In this sample there are 50 constructions which lack [VALDEC] but were considered to have antipassives. They are found in all regions, and can have ergative, nominative-accusative, or active verb alignment. There are two primary ways in which antipassive markers are not exclusively valency-decreasing: first, they may attach to transitive verbs without causing a decrease in valency, in which case they generally serve a purely aspectual function, or second, they may attach to intransitive verb roots, where they can be participant-rearranging or aspectual.

Those languages which belong to the first category where the morpheme that marks the antipassive may also be attached to a transitive verb with aspectual but not voice effects include the examples given in section 8.2.4 above from Gikuyu (Bantu) and Neverver (Oceanic) (examples (8.31) and (8.32), respectively). This situation is true generally of Bantu languages with antipassives and several other Oceanic languages with intransitivizing reduplication; it is also found in Diyari (Pama-Nyungan) and Georgian (Kartvelian). Diyari has a morpheme which may be used as an antipassive marker, a durative marker, or a passive marker, and as such is not always valency-decreasing. Example (8.35a) demonstrates the antipassive use of *-tharri*, and (8.35b) demonstrates the purely durative use of the same morpheme in a transitive construction, where the agent is ergative and the patient is accusative.

Antipassive use:

- (8.35a) Nganhi karlka-**tharri**-yi nhangkangu wilha-nhi
1SG.NOM wait.for-**AP**-PRS 3SG.FEM.LOC woman-LOC
'I wait for the woman' (Austin 1981:159)

Durative use:

- (8.35b) Thanali mitha daka-rdaka-**tharri**-rna wanti-yi
3PL-ERG ground.ACC REDUP~pierce-**AP/DUR**-PTCP AUX-PRS
'They were boring the ground' (Austin 1981:162)

The opposite phenomenon, where the marker for the antipassive may also appear with intransitive roots, is found in a large number of languages, many of which otherwise have relatively prototypical antipassives. Some of these include Yidjñ (Pama-Nyungan), Bezhta (Nakh-Daghestanian), Inuit (Eskimo-Aleut), and Washo (Isolate). Basilico (2012:76-77) describes the antipassive morpheme *-si* in Inuit as also having an inchoative/inchoative function with a variety of root types, including an inchoative use with adjectives as in (8.36b):

Antipassive use:

- (8.36a) Anguti quqir-**si**-juq nanu-mik
man-ABS shoot-**AP**-PTCP.3SG polar.bear-OBL
'The man is shooting/shot at a polar bear'

Inchoative use:

- (8.36b) Taar-**si**-voq
dark-**AP**- 3SG.INDIC
'It became dark' (Basilico 2012:76-77)

In Yidjñ, the antipassive morpheme, in addition to producing intransitive verbs in its antipassive function, can be applied to both transitive and intransitive roots without altering the valency. With transitive predicates the 'antipassive' signals non-volitionality, and with intransitives it signals continuous/incomplete aspect (cf. Dixon 1977:217). The antipassive function of the *-:di* morpheme is given in (8.37a), where the patient is in an oblique phrase; (8.37b) shows the same morpheme with the same transitive verb, where it instead has a non-volitional meaning and the patient is core (absolute), not oblique, and (8.37c) shows the same morpheme attached to the intransitive verb 'fall', where it has an incomplete interpretation.

- Antipassive construction:
- (37a) Dayu wawa-:**ɗi**-ɲu gudaga-nda
 1SG.NOM see-**AP**-PST dog-DAT
 ‘I looked at the dog’
- Non-volitional transitive:
- (37b) Dayu guda:ga wawa-:**ɗi**-ɲu
 1SG.NOM dog.ABS see-**AP**-PST
 ‘I saw the dog (when I wasn’t looking for it)’ (Dixon 1977:288, glossing reconstructed)
- Continuous/incompletive intransitive:
- (37c) Mayi wanda-:**ɗi**-ɲu
 nonflesh.food fall-**AP**-PST
 ‘The fruit is falling [off the tree] now’ (Dixon 1977:291, glossing reconstructed)

As such, there are a number of languages with relatively prototypical antipassive constructions where these morphemes have alternate uses that are not valency-decreasing. If, however, the languages containing these 50 constructions which lack [VALDEC] were to be excluded from the sample, there would be 76 languages with antipassives (17.1%). There would be no significant effect for region or locus of grammatical marking, but there would still be a correlation between ergativity and antipassives (β : 1.28 ± 0.39 , $p < 0.01$). There is also a positive correlation between [VALDEC] antipassives and OVA and VOA basic word order (β : 1.78 ± 0.69 , $p < 0.01$ and β : 1.55 ± 0.55 , $p < 0.01$, respectively), which is due almost entirely to the presence of [VALDEC] antipassives in (VOA) Mayan and (OVA) Cariban languages.

8.2.6 AN OPTIONAL OBLIQUE-MARKED PATIENT [OBLIQUE] ~ B

One of the other features which pertains to physical marking that is frequently invoked in definitions of the antipassive (see Chapter 3) is the option to express the patient of a dyadic verb in an oblique phrase. This is an interesting feature, since it to some extent relies on dependent marking. While some head-marking languages which lack case have other ways of marking non-core arguments (e.g., relational nouns or adpositions), oblique marking cannot necessarily be maintained (at least in its canonical form) for radically head-marking languages, e.g., Algonquian. However, in the interest of looking at the distribution of antipassive constructions which can be said to allow patients to be expressed as an oblique argument (defined loosely), this section outlines different types of constructions which have and lack an obliquely marked patient [OBLIQUE].

An obliquely marked patient, or at least a non-canonical marker for the patient, can exist with any other combination of features, and is not exclusive to constructions commonly considered antipassives. Many of the constructions discussed in sections 8.2.1, 8.2.2, and 8.2.3 have non-canonical marking for the patient (including lack of marking, e.g., Nez Perce) but lack other key features of antipassives. This includes constructions from the English conative to Philippine-type agent voice to the Mayan incorporative construction to Yimas and Abkhaz-Adyghean (see the previous sections for examples). In this section I look at those languages which lack an obliquely marked patient but possess the other necessary antipassive characteristics, and then discuss languages which have different types of variation with respect to patient marking.

Of the 133 antipassive constructions in this sample, only 34 allow the patient to appear in an oblique phrase (25.6%). Most of these languages have some degree of ergativity. Sixteen constructions are found in highly ergative languages, and 14 in split-ergative languages. Twenty-one are also syntactically ergative (see section 8.2.10 for more on this point). As such, if antipassive constructions were limited to languages which have an obliquely marked patient in addition to the other factors here, (a) they would be quite rare cross-linguistically, and (b) the generalization that they appear in ergative languages would be much more accurate. However, there are four languages in the sample which are non-ergative and have antipassive constructions which allow the patient to be expressed in an oblique phrase: Tundra Nenets, Mocoví, Itelmen, and Soninke. These languages prove that although the oblique expression of the patient in the antipassive correlates with ergativity, it is not the case that the same antipassive structures do not exist in non-ergative languages. The vast majority of antipassives with [OBLIQUE] are found in the Americas (21/34), with 6 in Australia, 2 in each of Europe, Asia, and the Pacific, and Soninke in Africa. The Australian languages plus Bezhta are the only dependent-marking languages, as Mayan, Salishan and Movima are head-marking, and the remaining languages are both. Most of these languages have verb-peripheral basic word orders, 5 have verb-medial orders and 3 are very flexible.

The following example from Guatuso/Maleku (Chibchan) demonstrates an antipassive with an oblique-marked patient in an ergative language. There is an antipassive marker *-f* which is not present in the transitive construction, and the patient is omissible, but when present it

appears in an oblique phrase marked by one of three postpositions (*yu* ‘with’, *lha* ‘on’ or *co* ‘in’) (Quesada 2007:175).

(8.38a) Ujúti Ø-rra-err-é
 pig 3.ABS-1.ERG-shoot-NFUT
 ‘I shot the pig’

(8.38b) Ujúti **lhá** na-f-err-é
 pig **on** 1.ABS-AP-shoot-NFUT
 ‘I shot on the pig; I did some shooting at the pig’ (Quesada 2007:175-176)

An antipassive construction which allows an obliquely marked patient in a non-ergative language is illustrated in examples (8.39a) and (8.39b) from Mocoví (Guaicuruan). Mocoví has a mixed alignment system, where 1st and 2nd persons follow a nominative-accusative pattern, while 3rd persons have tripartite marking. While the patient is not always expressed, nor does it always appear with an oblique marker (see below), the patient may appear in an oblique phrase, here marked by *ke-*.

(8.39a) So yale Ø-lapon-tak na lete
 DET man 3-pile-PROG DET trash
 ‘The man is piling up trash’

(8.39b) So yale Ø-lapon-**agan**-tak **ke-na** lete
 DET man 3-pile-AP-PROG **OBL-DET** trash
 ‘The man is piling up the trash’ (Juárez and Álvarez-González 2016)

While in many cases there is only one oblique marker which is used regularly in an antipassive construction, there are a number of languages which can use different oblique markers, sometimes to indicate slightly different meanings. In Warrungu (Pama-Nyungan), although the antipassive marker itself is the same, there are four different case markers which can appear on the patient NP: ergative, dative, genitive, and accusative (Tsunoda 2011:427). While there are many hundreds of attestations of ergative and dative marking, there are only five examples of genitive marking (pronouns only), and only 15 of accusative marking (i.e., the marking on the patient is unchanged). Example (8.40a) gives an antipassive with an ergative-marked patient, (8.40b) shows the same morpheme with a dative-marked patient, (8.40c) with a genitive-marked patient, and (8.40d) with a null (accusative)-marked patient.

Ergative-marked patient:
 (8.40a) Bama-Ø gamo-**nggo** bija-**gali-n**
 man-NOM water-**ERG** drink-**AP-NFUT**
 ‘The man drank/drinks water’

Dative-marked patient:
 (8.40b) Bama-Ø gamo-**wo** yangga-**gali-n**
 man-NOM water-**DAT** search.for-**AP-NFUT**
 ‘The man looked/looks for water’ (Tsunoda 2011:428)

Genitive-marked patient:
 (8.40c) Ngona-ngomay jana-Ø yani-Ø mayga-**gali-yal** ngali-**ngo**
 that-after 3PL-NOM come-NFUT tell-**AP-PURP** 1DU-**GEN**
 ‘Then, they came to tell us’ (Tsunoda 2011:483)

Accusative-marked patient:
 (8.40d) Ngani-Ø nyaga-**gali-yal** yinda?
 what-**ACC** see-**AP-PURP** 2SG.NOM
 ‘What are you going to look at?’ (Tsunoda 2011:484)

The semantic difference between the different patient markers in the antipassive construction is unknown (if any exists). The alternations do not appear to be lexically conditioned, at least in the case of the accusative vs. the dative option, since those examples with accusative marking can also take a dative-marked patient (Tsunoda 2011:485).

This occasional lack of change in how the patient is marked between the antipassive construction and the transitive construction often appears as the omission of an oblique marker, when none is likewise present in the transitive construction (as in Warrungu, since the accusative marker is null). Just as the presence of a null antipassive marker (which also can be thought of as an optional antipassive marker) was discussed as problematic for the definition of antipassive in section 8.2.1, the optionality of an oblique marker is problematic in the same way. First, if the oblique is optional, it is not possible to require it in any absolute way in a definition of ‘antipassive’. Second, it brings into question the actual function of the oblique marker, if it is not always necessary to mark the patient as a non-core argument (which is presumably also indicated by the verb).

There are four languages in the sample (in addition to Warrungu) which were identified as having optional oblique markers for patients in the antipassive construction, or at least instances when the oblique does not appear. This includes Katukina (Harákmbut-Katukinan),

Embaloh (Austronesian), Mocoví (Guaicuruan), and Chamorro (Austronesian).⁴⁵ Importantly, all of these languages except Warrungu (where it is quite rare) have at least some head-marking. A reasonable working hypothesis would be that languages with head-marking are not as reliant on argument marking strategies such as case because they have already indexed the roles of the arguments on the verb, which is why the presence or absence of an oblique marker is not critical to ascertaining the role of the patient with respect to the verb. This would of course be no more than an infrequent option, since the majority of head-marking languages with antipassives that allow patients to be expressed have mandatory oblique marking.

In other cases, the presence or absence of an oblique marker for patients depends on the dialect. In Tundra Nenets, the oblique marker for plural patients is only found in Western dialects, while the Eastern dialects do not allow the patient to be overtly expressed. Compare the following examples of antipassive-type constructions in Eastern Tundra Nenets dialects (8.41b) with that from the Western dialects (8.41a).

- Antipassive with the patient in the prolativ (non-core) case (Western dialects only):
- (8.41a) Kniga-**qm^ona** tola-**nc^orka**
 book-**PL.PROL** read-**AP-COMP**
 ‘He reads books [from time to time]’ (Nikolaeva 2014:226)

- Antipassive without an overt patient (Eastern and Western dialects):
- (8.41b) N’enaq səwa-w^ona tola-**ŋku**
 very good-**PROL** read-**AP**
 ‘He reads very well’ (Nikolaeva 2014:270)

The presence or absence of the oblique marker in the antipassive also seems to depend at least partly on dialect in Katukina (Harákmbut-Katukinan). The oblique marker for the patient phrase appears to only be an option in the Bia dialect, while in other dialects, the patient does not take an oblique marker in the same construction. However, even in the Bia dialect, the oblique marker is optional, as shown in (8.42c).

- Itaquai dialect:
- (8.42a) Piya **wa-pu-nin** barahai
 men **AP-eat-DUR** meat
 ‘Men are eating meat’

⁴⁵ Depending on the analysis, Huastec and Q’eqchi’ (Mayan) could also be considered to have antipassives which lack an oblique marker for the patient in some contexts; see section 11.3.2.

Bia dialect:
 (8.42b) **Wa**-toman adu wiri **katu** wa
 AP-shoot 1SG peccary **SOC.INST** PROSP
 ‘I am going to shoot peccaries’

Bia dialect:
 (8.42c) Hanian tan **wa**-dyuman tahi yu?
 who here **AP**-spread water INTERROG
 ‘Who spread the water here?’ (Queixalós 2010:257-258)

Of the five languages which have antipassive constructions where the oblique marker for the patient may be absent, Katukina is one of the least head-marked, and, as example (8.42) suggests, it is relatively isolating. It also has a higher incidence of oblique-less constructions, which look like the Mayan agent focus construction, and likewise serve a primarily syntactic purpose. Queixalós (2010:259) suggests the possibility that this construction might be transitioning into something less antipassive-like, and more like agent focus.

There are several other languages or dialects of languages which often have an obliquely marked patient, but sometimes do not require it. In Chamorro, the presence of the oblique marker is conditioned by the definiteness of the patient. If the patient is definite, then it receives an oblique marker; if it is indefinite, the marker is omitted.

(8.43a) **Man**-mantieni yo’ **ni** banku
 AP-grasp 1SG.ABS **OBL** chair
 ‘I held onto the chair’ (Cooreman 1988b:583)

(8.43b) **Man**-konne’ guihan i peskadot
 AP-catch fish the fisherman
 ‘The fisherman caught a fish/fish’ (Cooreman 1988b:571)

The pattern in (8.43b) which lacks an oblique marker is very similar to the Mayan so-called incorporative construction, exemplified in (8.22) in section 8.2.3. However, at least in those Mayan languages where there is a different marker for the traditional antipassive and the incorporative construction and incorporation does not necessarily involve focus, the patient cannot be omitted or the result will be ungrammatical. In contrast, in Chamorro the omission of the patient is equally grammatical, and quite common, as shown in (8.43c).

(8.43c) Para baihu-**mam**-bisita gi espitat
 IRR 1SG.IRR-**AP**-visit LOC hospital
 ‘I’m going to visit (somebody) in the hospital’ (Cooreman 1988b:587, parenthesis added)

Since all three constructions in (8.43a-c) bear the same verbal affix, one interpretation is that they are the same, but the presence of the oblique is conditioned by definiteness.⁴⁶ This use of patient marking only when the argument is definite is reminiscent of differential object marking (DOM) (see section 5.3.3 for a discussion of the relationship between antipassives and DOM).

Some languages have other types of restrictions on what types of NPs may appear in an oblique phrase. The Cariban languages only allow locative arguments to appear in an oblique phrase in the antipassive function of the detransitivized construction. This is illustrated in Kuikuró below. The form of the oblique used for the locative argument is lexically specified, related to the type of action denoted by the verb (Gildea et al. 2016).

(8.44a) Papé ahehi-carâ u-héke
 paper.ABS write.on-CONT 1-ERG
 ‘I’m writing on the paper’

(8.44b) U-t-ahehi-cârâ papé-ki
 1-**AP**-write.on-CONT paper-INST
 ‘I’m writing (on a paper)’ (Franchetto 1990:412)

Finally, there are numerous antipassive constructions which do not allow the patient to be expressed at all, either in an oblique phrase (‘patientless’) or otherwise. Note that patientless antipassives are technically found in all languages with antipassive constructions, since one of the common requirements for antipassives is that the patient NP be omissible (cf. Dixon 1994:146). However, of the 133 antipassive constructions in this sample, 96 (72.2%) are exclusively patientless. The following example of a patientless antipassive construction in Belep is given in (8.45b) below.

⁴⁶ Note that Cooreman (1988b) analyzes (8.43a) and (8.43b-c) as different types of antipassives, where (8.43a) is the ‘demoting antipassive’ while (8.43b-c) are the ‘indefinite antipassive’. The motivation for this separation is unclear, since as the names suggest the distinction is linked to definiteness, as presented here.

- (8.45a) Na=xa kewe-e
 1SG.SBJ=ADD chase-3SG.ABS
 ‘And I chased him’ (McCracken 2013:311)
- (8.45b) La=yu-**u** yu-**u** yagi-n yu-**u** yagi-n
 3PL.SBJ=dig-**AP** dig-**AP** search.TR-DABS.NSG dig-**AP** search.TR-DA.NSG
- ka koni tu-n
 LK unable.TR find-DABS.NSG
 ‘They dug, dug, searched, dug, searched and never could find anything’ (McCracken 2013:319)

Although many patientless antipassive constructions exist in ergative languages (see (8.42)), the majority are found in non-ergative languages. In fact, almost all non-ergative languages with antipassives in the sample are patientless (see Chapter 7). Patientless antipassives are found in every region, although they are not equally distributed throughout. Only one language in Australia has a patientless antipassive (Ngarla), while all but two languages with antipassives in each Asia, Europe, and the Pacific only have patientless constructions. All of the antipassive constructions found in Africa are patientless except for Soninke, where oblique expression of the patient is sometimes possible, but rare (Creissels 2016). As such, almost all of the antipassives which allow the expression of their patients in oblique phrases are concentrated in Australia and the Americas.

8.2.7 NO IMPLIED PATIENT [-PATIENT] ~ K

As mentioned in section 8.2.6 above, antipassives differ cross-linguistically in terms of whether they allow the patient to appear in an oblique phrase (patientless vs. oblique antipassives). However, over the course of this study it became apparent that there are two subtypes of antipassives within the category of patientless antipassives: First, there are patientless antipassive constructions which completely remove any identifiable patient from the conceptual structure of the verb, and refer to an action without any particular patient in mind. In contrast, other patientless antipassive constructions may continue to imply a particular patient or particular set of patients, even when that patient cannot be overtly expressed.

In many languages this difference between absence or implication of a patient is not entirely consistent, as the antipassive form of some verbs may imply a certain type of patient while others do not. The specified patient interpretation is often lexicalized with some verbs

when the patient is deleted, e.g., the phrase ‘Do you drink?’ or ‘he drinks’, which in both English and its equivalent in Kaqchikel implies the consumption of alcohol, and not to any other potable substance. While the conceptual implication of a specific or non-specific patient in a given antipassive-type construction was not a parameter which was noted in many grammars, and as such may not be important to them, it is nonetheless an important distinction in at least a few languages, and may be a relevant difference between antipassive constructions on a larger scale if it were to be systematically reported.

There are a variety of antipassive constructions for which authors reported that a specific patient was implied. This is most obviously the case when a specific subtype of patient is implied, e.g., the antipassive in Slavic languages and Puma (Kiranti), which have an implied animate patient, and some Rgyalrongic languages, which have separate antipassive verbal markers to indicate that the implied patient is animate or inanimate (see also Chapter 10 on languages with multiple antipassives). The following examples illustrate the implied animate patient construction in Czech (one of the many uses of the *se* marker), where the absent patient cannot be interpreted as an inanimate object.

(8.46a) Jan rozbil sklenici
 Jan.NOM break.3SG.MASC glass.ACC
 ‘Jan broke the glass’ (Medová 2009:12)

(8.46b) Paní učitelko, Valenta se strká!
 madam teacher.FEM.VOC Valenta.FEM.SG.NOM AP push.3SG.PRS
 ‘Teacher, Valenta is pushing (other people)!’ (Medová 2009:24)

An even more pronounced case of the specification of implied but non-present patients in antipassive constructions comes from Mayoruna languages (a branch of Pano-Tacanan). In these languages (represented below by Matsés), the implied patient can either be a third person generic argument, or it can be interpreted as a first person argument.

(8.47a) Aid opa-n matses pe-e-k
 that.one dog-ERG people.ABS bite-NPST-INDIC
 ‘That dog bites people’

- (8.47b) Aid opa pe-an-e-k
 that.one dog.ABS bite-AP-NPST-INDIC
 ‘That dog bites (people)’
 ‘That dog always bites me/us’
 ‘That dog is biting me/us’ (Fleck 2006:559)

A similar situation exists in Ixcatec (Otomanguean) where an antipassive marker transparently related to the word for ‘person’ (Adamou 2014:9) is used primarily to imply first or second person participants, and it cannot be used to remove inanimate patients. This is certainly a very different function than the antipassive serves in most languages, but structurally they are comparable, since the predicate is intransitivized and there is a verbal marker which patterns morphologically with other valency suffixes.

- Transitive:
 (8.48a) Sa¹=k^wa² ki¹=ʔu²te²ka¹-k^wa² sa¹=mi²-nda²wa²
 DEF-woman PROG.3SG-push-COREF.3SG.FEM DEF-CLF.HUM-man
 ‘The woman is pushing the man’ (Adamou 2014:7, my translation)

- Antipassive, implied 1st person patient:
 (8.48b) Me² k^w-a¹he¹ʔe²-ke²-mi²-ma²
 so PFV-invite-ITR-AP-3PL
 ‘So they invited (me) again’ (Adamou 2014:11, my translation)

However, it is probably more common in languages with some sort of understood patient that the implied patient of an antipassive is not restricted as it is in Matsés, Ixcatec, or Czech, but rather that the patient remains in some way part of the underlying argument structure of the verb, recoverable from context. This was noted for Gikuyu and Tima (Niger-Congo), Car Nicobarese (Nicobaric), Wasco-Wishram (Chinookan), Hidatsa (Siouan), and Takelma (Isolate). While the degree of referentiality and semantic recoverability of the patients in these constructions may differ, it was suggested that they all regularly have some implication of a recoverable patient in the antipassive construction.

On the other hand, there are a number of languages for which it has been claimed that the antipassive removes any implication of what the patient might be. In these languages the patient is not particularly recoverable from context, and it is typically only as specific as the set of possible patients of a given verb. This type of construction is found with various types of intransitive predicates outside the narrow confines of the antipassive. It is particularly common in languages which have equipollent marking or large numbers of ambitransitive verbs. In such

cases, when a dyadic verb is used intransitively, there is generally no implication of a specific patient. This is the case with many English action verbs: take for example ‘I eat spinach’ vs. ‘I eat’, or ‘He juggled bowling pins’ vs. ‘He juggled’. In both sentences where the patient is not expressed, there is no implication that the interlocutor knows what was eaten or juggled, and the set of possible items which were eaten or juggled are limited only by one’s knowledge of what could possibly be eaten or juggled.

Although these English sentences are not considered to be instances of antipassives here, there are a number of languages with antipassive constructions that similarly do not imply a specific patient, including Belep (Austronesian), Ainu (Isolate), Gaahmg (Eastern Jebel), Nivacle (Matacoan), Eyak (Eyak-Athabaskan-Tlingit), at least some K’ichean languages, and it has been noted as a ‘minor subtype’ of the detransitivizer in Cariban (Gildea et al. 2016). In Gaahmg, for example, the antipassive primarily serves to omit unknown or intentionally unmentioned patients, as in (8.49b) below, where the interlocutor is presumably not expected to know or have a specific idea of what was broken.

(8.49a) Kāsán nām gùlqūn
 boy.DEF break.INCOMPL branch.DEF
 ‘The boy breaks the branch’

(8.49b) Kāsán nāām-án
 boy.DEF break.INCOMPL-AP
 ‘The boy breaks (something)’ (Stirtz 2014:261)

However, the distinction between a mandatorily absent but implied patient and no specific implied patient is only relevant in a few languages in the sample, where the presence or lack of a specific implied patient appears to be the relevant contrast between the distribution of two different markers/structures. In Eyak, for example, the so-called ‘D-element’ has an antipassive function where the patient may not be expressed, and is non-referential (8.50a). This contrasts with the transitive (8.50b) as well as with the referential object prefix *k’u-* which likewise does not allow an overtly expressed patient, but refers to someone or something specific (8.50c) (Thompson 1996:363; Kraus 2015/forthcoming).⁴⁷

⁴⁷ Interestingly, de Reuse (2006:201) notes the opposite for San Carlos Apache, where the indefinite object prefix suggests that the speaker does not have a specific object in mind.

Antipassive:
(8.50a) Xa-da-kéis'
1SG-D/AP-sew
'I'm sewing'

(8.50b) Transitive:
Naa.át xa-kéis'
clothes 1sg-sew
'I'm sewing clothes'

Transitive with an indefinite object:
(8.50c) **K'u**-x-kus
REF.OBJ-1SG-wash
'I'm washing something (specific)' (Thompson 1996:363)

In the case of Eyak, the distinction between [+PATIENT] and [-PATIENT] describes the distribution of two different structures, one of which can be called an antipassive. However, in Nivaclé, it is possible that the parameter [+/-PATIENT] describes the distribution of two different morphemes, both of which mark antipassives which cannot have overtly expressed patients. The suffix *-jan* indicates that the patient is perhaps known but unspecified, while *wank(a)-* removes the patient from the discourse entirely. *Wank(a)-* is also more productive than *-jan*, although both are quite common.

(8.51a) Xa-φuyu
1SG/3.ACT-cure/blow
'I cure him/her/it'

(8.51b) Xa-y-φuyu-**jun**
1SG/3.ACT-VBLZ⁴⁸-cure/blow-AP1
'I blow, I cure' (note: shamans blow on things for curing)

(8.52a) Xa-klôn
1SG/3.ACT-kill
'I kill it/him/her'

(8.52b) Xa-**wanka**-klôn
1SG/3.ACT-AP2-kill
'I slaughter' (I'm in the process of slaughtering unspecified meat things) (Campbell p.c. 2016)

⁴⁸ *-Jan* is somewhat problematic as a verb-type affix since always co-occurs with a verbalizer, which is an additional difference between the two markers (Lyle Campbell p.c. 2016).

Some K'ichean languages have a similar morphological distinction, where one antipassive marker is used for the 'absolutive' or patientless antipassive which lack any ability to overtly express or imply a specific patient argument, while another marker is used for antipassive and antipassive-type structures where a specific patient can be overtly expressed and implied. In Kaqchikel, for example, when a specific patient cannot be expressed overtly or implied in the antipassive construction, the verbal marker is *-on* (*-un* when the preceding vowel is [u]) with transitive roots (as in (8.53a)). However, if the patient is expressed in an oblique phrase, the antipassive marker is *-o* ((8.53b), cognate with *-ow* in other K'ichean languages). This same *-o* marker likewise appears if the patient is not overtly expressed but the speaker wants to imply a specific, 3rd person patient, whose identity is presumably already known from context (8.53c).

(8.53a) Ri ala' n-Ø-naq' **-on**
 DET boy INCOMPL-3SG.ABS-bother-AP
 'The boy is annoying/bothersome'

(8.53b) Ri ala' n-Ø-naq-**o** w-ichin
 DET boy INCOMPL-3SG.ABS-bother-AP 1SG-OBL
 'The boy is annoying/bothering me'

(8.53c) Ri ala' n-Ø-naq'-**o**
 DET boy INCOMPL-3SG.ABS-bother-AP/AF
 'The boy is annoying/bothering her/him/it' [elicited]

This analysis of the antipassive-type marking in K'ichean languages is more fully articulated in section 13.1. While the difference in Kaqchikel is not strictly between two types of patientless antipassives (rather between a patientless and an oblique patient antipassive), the morphology, like in the other examples in this section, does appear to be marking the difference between the implication (or expression) of a specific patient and the lack of any such implication.

8.2.8 PRODUCTIVITY [-LEXICAL], [PRODUCTIVE] ~ E, I

As part of the definition of 'voice', voice alternations ideally form a productive system (Authier and Haude 2012:5). As such, it is worth considering that any construction which has all of the other features commonly associated with antipassives but is not particularly productive is perhaps not fulfilling the function of voice. Productivity is scalar, where at one extreme an alternation may exist in only a few lexical items, while at the other extreme an alternation may

be possible with all transitive verbs. In an effort to capture the range of options for the productivity of antipassive constructions broadly using a binary feature system, there are two features here relating to productivity: [-LEXICAL] and [PRODUCTIVE]. [-LEXICAL] identifies an antipassive-type construction as lexical or non-lexical, i.e., whether it applies only to some small number of verbs, while [PRODUCTIVE] identifies a construction as highly productive or not highly productive, i.e., whether it is used with almost all relevant verbs or just some subset of verbs. These two features work together delineate three broad categories: unproductive [LEXICAL, -PRODUCTIVE], partially productive [-LEXICAL, -PRODUCTIVE], and entirely or almost entirely productive [-LEXICAL, PRODUCTIVE]. The combination [LEXICAL, PRODUCTIVE] is logically impossible, as a construction cannot be both lexically restricted and highly productive.

A very similar system for categorizing antipassive constructions by their productivity is used in the *World Atlas of Linguistic Structures* (WALS) database. WALS feature 108B: ‘Productivity of the antipassive construction’ has four values: productive, partially productive, not productive, and no antipassive (Polinsky 2013). These values map well onto the categories used here, although all agent-preserving valency-decreasing constructions were assigned features which describe their productivity, regardless of whether they were considered antipassives.

Unfortunately, assigning [-LEXICAL] and [PRODUCTIVE] was not always straightforward; as discussed in Chapter 4, it was not uncommon that authors did not provide detailed information about the productivity of a particular alternation. In such situations, inferences were made from the given examples and explanation about how common or uncommon the alternation might be, and uncertainty in these cases was marked in the dataset with a question mark (?). Any data which was questionable was left out of the following discussion,⁴⁹ so with the availability of more information some of the following generalizations may be subject to change.

⁴⁹ Those languages for which there was no productivity information given or inferred about the structure described by features (which includes antipassives and non-antipassives) [-LEXICAL?, PRODUCTIVE?] include Car Nicobarese, Tillamook, Matis, Kulina, Dēmushbo, Korubo, Kuikuró, Ch’orti’, Kwegu, and Tira.

Those languages for which it was unclear if the structure described by features (which includes antipassives and non-antipassives) was lexical or not [-LEXICAL?] include Sanumá, Desano, Timbira, Washo, and Suri.

Those languages for which it was unclear if the structure described by features (which includes antipassives and non-antipassives) was fully productive or not [PRODUCTIVE?] include Sierra Popoluca, Thompson, Okanagan, Wasco-Wishram, Yine, Krahô, Nivaklé, Embaloh, Paluai,

Of the 133 antipassive constructions in the sample, 46 are considered highly productive, where the alternation can appear with all or almost all transitive verbs [-LEXICAL, PRODUCTIVE]. These constructions are found in languages belonging to all regions except Europe (although there are only two in Asia⁵⁰), and 35 of those languages (76.1%) exhibit some amount of ergativity. This includes languages of a variety of basic word orders and valence orientations. Also, about half of these highly productive antipassive constructions (24/46) may be accompanied by the patient expressed in an oblique phrase, which is a notably higher percentage than exists in the overall sample (52.2% vs. 25.6%, see section 8.2.6). Relatedly, about half of these highly productive antipassives (24/46) may participate in syntactic ergativity (see section 8.2.10). There are only four languages (Kuku Yalanji, Chamorro, Mocho', and Guatuso, all from different families) which have a highly productive antipassive construction where the patient may be expressed which does not participate in syntactic ergativity. Example (8.54) from Kuku Yalanji illustrates one such highly productive antipassive construction in an ergative language which has an oblique-marked patient and uses the construction for pragmatic, not syntactic, purposes.

(8.54a) Nyulu dingkar-angka minya nuka-ny
 3SG.NOM man-ERG.POT meat.ABS eat-PST
 'The man ate meat'

(8.54b) Nyulu dingkar minya-nga nuka-**ji**-ny
 3SG.NOM man.ABS meat-LOC eat-**AP**-PST
 'The man had a good feed of meat (he wasted nothing)' (Patz 2002:152)

There are an additional 57 antipassive constructions in the sample which have partially productive antipassive constructions, lacking [PRODUCTIVE] but having [-LEXICAL]. These alternations may exist with a particular class of transitive verbs, or may simply fall within the nebulous range of having too many examples to be lexical, but not appearing with enough transitive verbs to be completely productive. Partially productive antipassive constructions are found in all regions. About half of the languages with partially productive antipassives are ergative (29/57), and they exhibit a mix of basic word orders and valence orientations. In

Yimas, Shilluk, Burun, Dinka Bor, Dholuo, Tennes, Cilubà, Gikuyu, Tima, Kalaw Lagaw Ya, Yukulta, Tamil, Limbu, Falam Chin, and Haka Lai.

⁵⁰ Ainu and Chukchi.

contrast to the highly productive antipassive constructions above, most of these partially productive antipassives are patientless (49/57), and there are no examples of a partially productive antipassive which participates in syntactic ergativity. Example (8.55) illustrates the antipassive construction in Bezhta (Nakh-Daghestanian) which regularly occurs with many but not all transitive verbs (cf. the ValPal database for Bezhta:

<http://valpal.info/languages/bezhta/alternations/2907338426>, Comrie and Khalilova 2013).

(8.55a) Kibba ħic'o nizaa-yo
 girl.ERG clothes.ABS wash-PST
 'The girl washes the clothes'

(8.55b) Kid ħic'o-li-d niza-laa-s
 girl.ABS clothes-OBL-INST wash-AP-PRS
 'The girl is busy washing the clothes' (Comrie et al. 2015:554)

A number of languages have antipassives which only appear with certain types of verbs, which often have a native transitivity value somewhere in the middle of the transitivity spectrum (i.e., they are not prototypical high-transitive verbs). This is the case in Ainu, for example, where the antipassive typically appears with verbs of perception, cognition, ingestion, interaction, communication, grooming, or traditional activities, but is generally incompatible with action verbs (Bugueva 2016). See the examples in the ValPal database for Ainu:

<http://valpal.info/languages/ainu> (Bugueva 2013).

(8.56) Asinuma anak i-sitoma=an pe ne kusu
 INDEF TOP AP-be.afraid.of=S NMLZ COP because
 'I was scared, so (I stayed far away)' (Bugueva 2013)

Note also that since many of the constructions of unknown productivity will likely belong to this category, the distribution may change if more information on productivity becomes available.

Finally, there are alternations which are entirely unproductive and therefore potentially do not qualify as voice alternations [LEXICAL]. There are 31 antipassive constructions in the dataset which appear to fit this description. They are found in all regions (but with only Diyari in Australia), although fewer than half of them occur in ergative languages (11/31). Languages with lexicalized antipassives are primarily AOV and AVO languages (26/31), and may have any of the four possible valence orientations. Unlike both the highly and partially productive antipassives, all but five unproductive constructions (Diyari, Q'anjob'al, Itelmen, Soninke,

Tunda Nenets) are patientless (83.9%, vs. 74.4% for the general sample), and only Q'anjob'al has an unproductive antipassive which can participate in syntactic ergativity (this function is usually preformed by AF).

Additionally, most of the markers of unproductive antipassive constructions are not dedicated to the antipassive construction (and may in fact be productive in their other functions). The Yukaghir languages, Tundra Nenets, and Tseltal are the only languages with unproductive antipassives recorded here with dedicated antipassive markers. The following pair of examples is from Kolyma Yukaghir.

(8.57a) Āj čül-e pad-u-m
again meat-INST cook-EP-3SG.TR
'She cooked some meat again'

(8.57b) Tāt pan-**de**-ŋi
CONN cook-AP-3PL.INTR
'So they were cooking...' (Maslova 2003a:226)

The characteristics of unproductive antipassives suggests that these alternations are by and large non-prototypical in other ways as well, such as prohibiting the oblique expression of the patient and lacking dedicated markers for the antipassive construction. However, if the 31 unproductive antipassive constructions were to be excluded from the sample, the general correlations between antipassives and other features described in Chapters 5-7 remain largely unchanged; the only difference would be the loss of a significant correlation with OVA basic word order.

8.2.9 SEMANTIC AND FUNCTIONAL CHARACTERISTICS [SEMANTICS] ~ F

While others have identified some of the primary semantic characteristics of antipassives constructions (most notably Cooreman 1994), all other definitions of antipassive do not align precisely with the definition used here, meaning the results could be slightly different. Additionally, investigating the semantic characteristics of antipassives is difficult because the semantic effects which antipassives produce can be manifested in a wide variety of ways. Almost all of the constructions recorded with features in this study were chosen precisely because they had functional characteristics of antipassives, which are not unique, as they include many of the general correlates of detransitivization, as Cooreman (1994:64) points out. All languages have a

way of creating an antipassive-type semantic effect, many of which do not share structural characteristics with antipassives.

A nice example of how languages can deal differently with issues relating to valency exists in Abui, a Timor-Alor-Pantar language. Instead of having more traditional-type voice markers, Abui encodes valency-type relations using different sets of bound pronouns which indicate different levels of volitionality, definiteness, control, and affectedness. Most verbs can appear with multiple marking patterns, making them a type of ambitransitive/labile. Several relatively straight-forward examples illustrating a change in meaning with respect to the second argument are given in (8.58a-c).

(8.58a) Kaai ya oro nala nuku **he-loi** do
 dog be.DIST DIST what one **3II.LOC-put.far** PROX
 ‘The dog over there just barked for something’

(8.58b) Kaai ya oro nala nuku **ho-loi** do
 dog be.DIST DIST what one **3II.RECIP-put.far** PROX
 ‘The dog over there just barked at somebody/something’

(8.58c) Simon di kaai **ha-loi**
 Simon 3A dog **3II.P-put.far**
 ‘Simon chased the dog’ (Kratochvil 2007:197)

Just as a dependent-marking language might use case markers to indicate the differences in the three scenarios above, Abui, as a head-marking language, uses verbal morphology to describe the nature of the event and the relationship of the second argument to that event. While (8.58b) in other languages might be encoded as an antipassive structure, that is not an analysis that would appear to hold for Abui.

Another interesting case of the function of antipassive alternations being expressed in a different way structurally appears in Midob (Nubian). Midob has a ‘total affectedness’ morpheme, which could be considered the functional opposite of the antipassive as the antipassive often expresses a lowered degree of affectedness (cf. Cooreman 1994:58-59). This morpheme indicates that the patient has undergone the action of the verb completely, unlike the antipassive which can mean that the patient was not entirely affected. Contrast the generic verb forms in (8.59a) with the totally affected verb forms in (8.59b).

- (8.59a) Tòorhèm ‘to enter’
 Péeshàm ‘they went out’
- (8.59b) Tòorúurhùm ‘he has totally entered’
 Péésínùuríyùm ‘they went out totally’ (Werner 1993:55)

The goal in this section is not to do an in-depth analysis of all of the possible functions antipassives have in the dataset. The aim is rather to look at common functions of the antipassive as various authors have outlined them, and see how this fits cross-linguistically. There has already been some discussion of the semantics of antipassive constructions with respect to the presence or absence of the patient as part of the semantic structure of the predicate ([-PATIENT], section 8.2.7). This subdivision is part of a larger motif in languages with patientless antipassives which use their antipassives primarily to background or otherwise remove the patient from the discourse, or at least from unnecessary mention. In many cases, removing an unimportant, understood, or generic patient results in a concomitant focus on the activity expressed by the verb. For example, in Cavineña (Pano-Tacanan) a reduplicated transitive root not only removes mention or specification of the patient, it also denotes a culturally identified activity which is regularly done in the same way (Guillaume 2008:278-279).

- (8.60a) Roberto=ra e-na taru-ya
 Roberto=ERG NPF-water stir-IPFV
 ‘Roberto is stirring the water’
- (8.60b) I-ke taru-**taru**-aje-kware kwaba=eke
 1SG-FM stir~AP-go.DISTR-REM canoe=PERL
 ‘I was rowing (lit. stirring) in (lit. through) my canoe’ (Guillaume 2008:279)

It is not hard to imagine how a construction like that in (8.60b) that denotes a regular activity might easily develop the additional sense of habitual or durative aspect. Many antipassive constructions, both those which do and those which do not allow the patient to be expressed have a habitual, durative, or imperfective aspectual association. The following example of an antipassive which indicates habitual actions is from Tirmaga (Surmic).

- (8.61a) Kó-kóh-i gu-Ø
 1.SBJ-weed.IPFV-SBJ.SG garden-SG
 ‘I weed a garden’

- (8.61b) Kó-kóh-**inén**-Ø-tə
 1.SBJ-weed.IPFV-1/2.AP-SBJ.SG-PF.IPFV
 ‘I am weeding’ (Bryant 1999:93)

The feature [SEMANTICS] ‘presence of antipassive semantics/functions’ can appear with any type agent-preserving detransitivizing alternation. However, there is a notable semantic difference between patientless antipassives and those that allow mention of the patient with respect to the variety of meanings which are possible. With patientless antipassives, effects are limited to aspect/mode and possibilities related to the loss of the patient. However, antipassives with an overt (oblique) patient have the ability to express a wider range of transitivity gradations. First, they may express all of the functions of the patientless constructions, including those related to aspect. Aspectual functions of the antipassive when there is an oblique patient is illustrated by the antipassive construction in Bezhta, which primarily indicates durative aspect, indicated in the translation by ‘busy doing X’.

- (8.62a) Kibba xo hele-yo
 girl.ERG meat.ABS boil-PST
 ‘The girl cooked (boiled) the meat’ (Comrie and Khalilova 2013:ex. no 41, ValPal database)

- (8.62b) Kid k'atu-la-d hele-**la**-s
 girl potato-OBL-INST cook-AP-PRS
 ‘The girl is busy cooking potato’ (Comrie and Khalilova 2013:ex. no 290, ValPal database)

The wider range of meanings related to decreased transitivity which can be expressed by antipassives with oblique patients come in two varieties: those which are principally related to features of the patient, and those principally related to features of the agent. This type of semantic distinction is reminiscent of the distinction made in Foley and Van Valin (1984, 1985) ‘backgrounding’ vs. ‘foregrounding’ antipassives. However, the discussion of agent- vs. patient-related functions here differs from Foley and Van Valin’s account in that (a) the languages they characterized as having these properties are not necessarily categorized in the same way here, nor were they even necessarily considered to have antipassives, and (b) the agent vs. patient distinction does not necessarily invoke a syntactic vs. morphological distinction in antipassive types.

Those antipassives which have functions which affect the status of the patient primarily involve a decrease in definiteness/specificity/individuation or affectedness. The use of antipassive constructions with indefinite or generic patients is common in Chamorro (see the examples in (8.43) in section 8.2.6) and Eskimo-Aleut. Note that in Eskimo-Aleut the oblique patient need not be indefinite/nonspecific, but it can be interpreted that way in many instances. The following example of an antipassive with an indefinite, oblique-marked patient comes from Yup'ik. With respect to definiteness, Mithun (2000:94) claims that in Yup'ik there is a requirement that unidentifiable/indefinite patients be encoded as obliques, since absolutive arguments of transitive clauses must be identifiable. Although this construction is not considered here to be a true antipassive construction (there is no marker; it is an intransitively conjugated ambitransitive root plus an oblique argument), it fulfills the indefinite antipassive-type function.

(8.63a) Ayag-inaner-ani=am una nasaur-lur-yagar kitur-ke-ii
 leave-PST.CONTEMP-3SG=EMPH this girl-little pass-PTCP.TR-3SG/3SG
 'As he was going, he passed a little girl'

(8.63b) Niite-aqe-lu-teng cali yug-**nek**
 hear-repeatedly-SBJ-3PL and person-**PL.ABL**
 'And they (ABS) would hear people (ABL)' (Mithun 2000:94)

In addition to a decrease in definiteness/individuation, antipassives have also been claimed in several languages to indicate that the patient is not entirely affected by the action of the verb. This is the case in Chamorro, which has an antipassive, which, when it is accompanied by a definite patient in an oblique phrase, can indicate that the patient is only partially affected (Cooreman 1988b:576-580).

(8.64a) Ha-panek si Juan este i lalahi
 3SG.ERG-beat UNM Juan this the men
 'John beat these men'

(8.64b) **Mam**-anek si Juan **nu** este i lalahi
 AP-beat UNM John **OBL** this the men
 'John pounded on these men' (Cooreman 1988b:582)

Although the use of the antipassive with indefinite, nonspecific, unindividuated, or less affected patients are some of the more commonly discussed patient-related functions of antipassives, these functions are certainly not universal. It is a rarity that the antipassive is absolutely

mandatory in any pragmatic context. Rather, it is a choice available to a speaker when they are choosing how to express a particular idea. In fact, it is uncommon in Mayan languages for the patient in an antipassive construction (when expressed) to be indefinite or nonspecific, so detransitivization with respect to the patient is not a given for all antipassive constructions.

In contrast to patient-related functions of the antipassive, some antipassive constructions primarily affect the status of the agent. Although ‘foregrounding’ antipassives are often those that also can be used syntactically in some ergative languages, not all antipassives whose primary function is to alter the status of the agent participate in syntactic ergativity. For example, Diyari is a Pama-Nyungan language which lacks syntactic ergativity, but has an antipassive which, among other functions, implies less volitionality on the part of the agent. This is demonstrated in the difference between (8.65a) and (8.65b), where (8.65a) implies the agent was searching for a long time before the patient was found, while (8.65b) suggests that the agent finding the patient was accidental (Austin 1981:159).

(8.65a) Ngathu yinanha darnka-rna wara-yi
 1SG.ERG 2SG.ACC find-PTCP AUX-PRS
 ‘I found you (after searching)’

(8.65b) Nganhi darnka-**tharri**-rna wara-yi **yingkangu**
 1SG.NOM find-**AP**-PTCP AUX-PRS **2SG.LOC**
 ‘I found you (accidentally)’ (Austin 1981:159) [parentheses added]

Other examples of agent-manipulating antipassive derivations can be found in Mayan languages. Many Mayan languages are known for having an elaborate system of morphosyntactic means for highlighting agents, which often involve the agent appearing in the preverbal position (extraction). However, these operations are often optional, and can generally serve to highlight the agent argument in a pragmatic way, irrespective of extraction. For example, Edmonson (1988:557) describes the Huastec antipassive construction as serving “to focus attention upon the agent performing the action to the partial or total exclusion of the object of the action.” This is illustrated in (8.66), where the agent appears preverbally in both the transitive and the antipassive, but the antipassive further highlights the agent and backgrounds the patient.

(8.66a) ?a Sa:ntos ?in tzah-a?-Ø ?an mo:m
 the Santos 3.ERG dig-TS-COMPL the well
 ‘Santos dug the well’

(8.66b) ?a Sa:ntos ha?itz Ø tzah-l-a:tz k'al ?an mo:m
 the Santos he.who 3.ABS dig-AP-COMPL with the well
 ‘It was Santos who was well-digging’ (Edmonson 1988:165)

Those languages which use antipassives to circumvent restrictions on ergative arguments, particularly with respect to A' extraction, are a subtype of antipassives with agent-promoting functions. In some cases, the pragmatic function of an antipassive which primarily serves syntactic functions is difficult to determine, since it may be used in limited contexts (e.g., Kaqchikel, see Chapter 12) or since its meaning appears largely indistinguishable from the semantics of transitive construction (cf. Warrungu (Tsunoda 2011:502)). An argument could be made that so-called syntactic antipassives are used in A' extraction environments precisely because they are agent-promoting. In other words, A' extraction contexts include subject relative clauses, subject wh-questions, and subject focus, all of which are de facto agent highlighting constructions. Thus the shift in the use of these antipassives to be primarily used in A' extraction contexts is a continuation of their regular agent-promoting functions. For a discussion of the relationship between antipassives and syntactic ergativity see section 8.2.10 and section 6.4.

It is also important to note that most antipassive constructions have multiple semantic/pragmatic functions, which cross the somewhat artificial divisions discussed here between patientless antipassives vs. those with oblique patients, and agent manipulation vs. patient manipulation. For example, the antipassive in Huastec clearly serves patient-demoting and agent-promoting simultaneously. In Diyari, the antipassive indicates a non-volitional agent as well as durative aspect (Austin 1981:162). Similarly, in Katukina, when the antipassive is not serving a syntactic function, it describes an activity, and it is also used when the patient's identity is insignificant, irrelevant, or obvious (Queixalós 2012:254-255). In Chamorro, in addition to indicating a less affected or indefinite patient, the antipassive can indicate repetitive aspect, or imply that the agent was not alone in executing the action (Cooreman 1988b:580, 583). Although these are all separate functions encoded in what is often a single morpheme, the antipassive markers in these constructions were not considered non-dedicated if each use still had all of the necessary structural components of antipassives (see section 8.2.4 for a discussion of dedicated vs. non-dedicated antipassive morphemes).

8.2.10 SYNTACTIC ERGATIVITY [SYNTAX] ~ H

The feature [Syntax] was assigned to those languages with syntactic ergativity which have an antipassive-type construction that can be applied in those contexts where syntactic ergativity arises. As discussed in section 6.4, many languages which have syntactic processes which treat the subject of a transitive verb differently than objects of transitive verbs and subjects of intransitive verbs either do not have antipassives or do not primarily use the antipassive in those contexts. This section looks at those languages which have antipassives which participate in syntactic ergativity, and then narrows in on the characteristics and distribution of those languages where that construction is a true antipassive.

There are 51 antipassive-like constructions in the dataset which can be applied in those contexts where syntactic ergativity arises [+SYNTAX]. Not all of these constructions are the primary means by which a language circumvents a syntactic restriction on ergative arguments, but all may be used in that way, even if it is not particularly common. These constructions are found in languages of the Americas, the Pacific, Australia, and Chukchi in Asia, but not in languages of Africa or Europe. More than half of these constructions (30/51) belong to Mayan languages (probably in part a result of sample bias), with the rest belonging to Austronesian, Pama-Nyungan, Salishan, Eskimo-Aleut, Chukotko-Kamchatkan, Katukina (Harákmbut-Katukinan), and the Movima (Isolate). These languages exhibit a variety of valency orientations (head, dependent, or both head-marking and dependent-marking), and all have verb-peripheral basic word orders except for 4 languages with highly flexible order, and Katukina, which has AVO word order (although note that several other Mayan languages frequently allow unmarked AVO order). All of these languages are ergative, except for the Austronesian languages, which may or may not be considered ergative, depending on the analysis.

Of these 51 constructions, more than half (27/51) were not considered antipassive constructions by the criteria used here, for reasons already discussed above with respect to other features. This includes all of the Salishan and Austronesian languages, which were considered to have symmetrical/equipollent alternations (see section 8.2.2, [ASYMM]), Warrgamay, as it lost its antipassive marker (see sections 8.2.1, [MARK]), and all the Mayan agent focus (AF) and incorporative constructions, which are not intransitive (see section 8.2.3, [INTRANS]). The remaining 24 antipassive constructions which can function syntactically belong to the following families: Mayan (16), Pama-Nyungan (3), Eskimo-Aleut (2), Chukotko-Kamchatkan (Chukchi),

Movima (Isolate), Katukina (Harákmbut-Katukinan). For those Mayan languages which have AF, AF is the primary construction used in syntactically ergative contexts (Steibels 2006:513), statistically favored over the use of the true antipassive (see section 11.3.3). Of the 16 constructions in Mayan languages identified here, only Mam, Huastec, and Q'eqchi' lack AF and therefore exclusively use the antipassive in focus contexts (although it is not always mandatory, cf. England (1983:213-217) on Mam). The following example from Mam shows an antipassive construction being used to question the subject of a transitive verb.

(8.67a) Ma Ø-tzaj t-tzuyu-'n Cheep ch'it
 REC 3SG.ABS-DIR ERG-grab-DIR.SUF José bird
 'José grabbed the bird' (England 1983:212)

(8.67b) Alkyee Ø-Ø-tzyuu-n ky-e xiinaq?
 who DEP.PST-3SG.ABS-grab-AP 3PL-OBL man
 'Who grabbed the men?' (England 1983:214)

There are some correlations between [SYNTAX] and other features which merit discussion. As mentioned in section 8.2.8, the use of lexicalized and other minimally productive antipassive constructions is rare in ergative syntax. The only example which exists in the sample is the antipassive in Q'anjob'al, which is restricted to a subset of verbs, and syntactic functions are most commonly covered by AF. An example of the antipassive in a syntactic context (8.68a) vs. an AF construction (8.68b) in Q'anjob'al is given below.

Antipassive:
 (8.68a) Maktxel max il-waj[-i] (h-in)
 who ASP see-AP-INTR 2SG.POSS-OBL
 'Who saw you?'

Agent focus:
 (8.68b) Maktxel max-ach il-on-i
 who ASP-2SG.ABS see-AF-INTR
 'Who saw you?' (Coon et al. 2014:215)

All of the other antipassive and antipassive-like constructions which can be used in syntactic contexts are highly productive [-LEXICAL, PRODUCTIVE].

Second, the use of an antipassive-type structure in syntactic contexts is also rare when there is no antipassive marker (see also section 8.2.1). All of the antipassive-type structures which participate in syntactic ergativity have something that can be called an antipassive

marker,⁵¹ except Warrgamay, which historically had an antipassive maker but modernly does not (Dixon 1981b). Modernly, Warrgamay has an ambitransitive-type construction, where the verb is conjugated intransitively and the patient appears in an oblique phrase.

Transitive construction:

- (8.69a) Ngaja muyma ngunda-**lgani**
 1SG.A boy look.at-CONT.TR
 ‘I am looking at the boy’

Intransitive (formerly antipassive) construction:

- (8.69b) Ngayba ngunda-**bali** (muyma-ngu)
 1SG.S look.at-CONT.INTR boy-INST
 ‘I am having a look (at the boy)’ (Dixon 1981b:101)

Unlike with features related to verbal marking and productivity, most of the constructions in question do not have dedicated markers. The rarity of [DEDICATED], particularly in combination with [SYNTAX], will be discussed further as a difficulty for determining an antipassive prototype in section 9.3. This lack of a dedicated marker in antipassive constructions in general is perhaps not surprising, given some of the common diachronic origins of these markers as middle voice markers, reflexives, or object markers. Those languages with a dedicated antipassive marker which appears in syntactic contexts include only Katukina, Movima, a few Mayan languages, and Austronesian languages with Philippine-type voice systems (but for agent voice as opposed to antipassive). However, if this set of languages is examined not in terms of dedicated marker vs. non-dedicated marker but instead in terms of voice, then a slightly larger number of languages have antipassive-type markers which always preform voice functions [VALDEC]. This includes all of the Mayan antipassive and AF constructions, Warrungu, and Katukina.

Lastly, there is a clear relationship between the use of a construction in syntactic contexts and the expression of the patient. Almost all of the 51 constructions with [SYNTAX] allow or even require the patient to be expressed [OBLIQUE].⁵² This is not a surprising correlation, since the

⁵¹ Note that this marker may not be dedicated, and may not mark antipassive as its primary function. For example, all of the languages with Philippine-type voice have what could be considered an antipassive which is marked by the agent voice verb marker, which also has other agent voice-type, but not necessarily antipassive-type uses.

⁵² This is not the view I have taken with respect to Kaqchikel antipassives, since there are enough significant differences between the absolutive or patientless antipassive construction and the

construction which must stand in for a transitive construction in specific environments would need to convey the same basic information as a transitive predicate, and therefore requires that the same number of arguments can be expressed.

However, if we assume (as suggested in section 6.4) that syntactic antipassives are antipassives which have been co-opted to serve syntactic functions, then what happens in syntactically ergative languages which do not have a pre-existing, oblique-type antipassive which can serve this function? The answer to this depends in part on the type of syntactic ergativity a language exhibits. If a language is syntactically ergative in that it has a different pattern, unrelated to voice or extraction, for ergative arguments, then these languages are unaffected by the presence or absence of antipassive-type constructions. However, in those languages which do have some type of extraction-related restriction on ergative arguments, there are other mechanisms which get called upon to address the need, none of which in this sample appears to use voice. Tongan was mentioned in section 6.4 with reference to ergativity in coordination, but in addition, Tongan has restrictions on the relativizing of ergative arguments. Tongan does not have an antipassive, and instead leverages another common marking pattern in relative clauses to circumvent its restriction on relativizing ergative arguments via a gap. Tongan uses a resumptive pronoun to relativize ergative arguments (8.70b), while absolutive arguments may use a gap strategy (Otsuka forthcoming:116).

Ungrammatical SRC with the gap strategy:

- (8.70a) *E fefine [na'e fili 'a Sione]
 DEF woman PST choose ABS Sione
 Target: 'The woman (who) chose Sione'

Grammatical SRC with a resumptive pronoun:

- (8.70b) E fefine [na'a ne fili 'a Sione]
 DEF woman PST 3SG choose ABS Sione
 'The woman (who) chose Sione' (Otsuka, forthcoming)

Roviana, another Austronesian language which lacks an antipassive construction, uses a type of nominalization strategy in order to relativize ergative arguments. While S and O may be

oblique antipassive construction that I have considered them different antipassives (see Chapter 8). As such, the patientless antipassive may appear in a focus context, which is not equivalent to an oblique antipassive without an expressed patient (which is instead equivalent to AF).

relativized using normal verbal morphology, the relativization of ergative subjects require that the verb have nominal marking which indexes the object.

Relativized O:

- (8.71a) Hierana sa koreo sapu [tupa -i -a e Zone]
 this DEF boy REL punch-TR-3SG.O DEF.HUM John
 ‘This is the boy that John punched’

Relativized A:

- (8.71b) Hierana sa tie [sapu tupa-**qu** rau]
 this DEF man REL punch-1SG.GEN 1SG
 ‘This is the man that punched me’ (Peter Schuelke p.c. 2015, adapted from Corston-Oliver 2002:480)

Finally, Belhare (Kiranti) is a particularly interesting case of a language which exhibits syntactic ergativity but lacks antipassives. Belhare has an incorporation-type construction which detransitivizes the verb and allows the patient to be expressed. Compare the transitive construction in (8.72a) to the detransitive construction in (8.72b), where there is no patient agreement and the agent loses ergative case.

- (8.72a) (I-na-**ŋa**) wa Ø-khui?-t-**u**
 DIST-DEM.SG-ERG chicken.ABS 3SG.A/S-steal-NPST-3SG.O
 ‘This [guy] will steal a/the chicken’

- (8.72b) (I-na) wa Ø-khu?-yu
 DIST-DEM.SG.ABS chicken.ABS 3SG.A/S-steal-NPST
 ‘This [guy] steals chicken’ (Bickel 2003:557)

This detransitive construction is not an antipassive, as it lacks a marker and is not intransitive [-MARK, -INTRANS]. Belhare exhibits syntactic ergativity in the same way as Shipibo-Konibo, where S and O may be the heads of internally-headed relative clauses, but A may not.

Interestingly, while the patient in the detransitive construction is not sufficiently non-core as to prevent it from being internally relativized, the agent *is* treated as S for syntactic purposes and as such the detransitive construction may be used in an internally headed relative clause. The result is that the internal relative clause in (8.73c) with a detransitive construction may be read as either a subject or an object relative clause.

(8.73c) Tombhira wa Ø-seiʔ-sa-ha chitt-he-m
lynx.SG.ABS chicken.ABS 3SG.A/S-kill-TR.PRF-NMLZ find-PST-3SG.O-1PL.A
‘We found chicken killed by a/the lynx’
‘We found the lynx that had killed chicken’ (Bickel 2003:557)

Similar detransitive constructions are found in several other Kiranti languages, although not all report this same pattern for internally headed relative clauses. This lends credence to the idea that antipassive use in syntactic contexts is the result of such a construction already existing in the language, where languages are likely to use whatever structures they already possess to fulfill their syntactic needs.

What can be concluded from this discussion thus far is that while it is necessary for antipassive-like constructions with primarily syntactic functions to have the option of an overt patient, it is not necessary that they be true antipassives, nor is it necessary for syntactic ergativity to involve antipassive-type structures. In addition, it is also not the case that languages which have antipassives with obliquely marked patients are syntactically ergative. This suggests that the type of antipassives which are found in syntactically ergative languages do not develop because of syntactic ergativity. There are 14 antipassive constructions in the dataset which can express their patients in an oblique phrase but which do not participate in syntactic ergativity, which is a relatively comparable number to the 20 antipassive constructions which do. This includes languages from all regions, and have ergative, nominative-accusative, or mixed alignment systems. They may be head-marking, dependent-marking, or both, and most have AOV basic word order. The primary purpose of antipassives in these languages is pragmatic, and many of them were discussed in section 8.2.9 as having functions related to aspect, decreased transitivity with respect to the patient, or highlighting effects associated with the agent. This explains the function of antipassives with oblique-marked patients outside of syntactic ergativity. However, as mentioned in section 8.2.6, almost all of those languages with antipassives which allow oblique patients are at least morphologically ergative. Why antipassives with oblique-marked patients with pragmatic uses are not more common in non-ergative languages remains a question for further investigation.

8.3 SUMMARY

In this chapter I investigated the various combinations of features considered to be associated with antipassives that can be found in the languages of the world. A set of eleven

possible features were recorded for all languages in the dataset that have anything similar to an antipassive construction, and were used to discuss the relationships and differences between constructions in vary different languages in a quantitative manner.

In section 8.2 I looked at each feature individually, and at the type of variation which is found cross-linguistically with respect to that feature. I also attempted to re-evaluate the distribution of antipassives to take into account definitions of antipassive which may include or exclude certain types of languages. In section 8.2.1 I discussed the antipassive marker, the relationship of antipassive marking to indefinite object marking, and cases where the antipassive marker is optional. In section 8.2.2 I evaluated antipassives as a type of voice, and how voice in transitivity are marked in different languages. This included a discussion of symmetrical voice systems and equipollent derivations as problematic in terms of conventional definitions of antipassive. Next, in section 8.2.3 I described the requirement that antipassives be intransitive, and how Mayan agent focus and some types of pseudo-noun incorporation lack this feature.

It was shown in section 8.2.4 that 40 constructions in the sample have a dedicated antipassive marker. I also discussed how the functions of morphemes may be scalar, with some non-dedicated morphemes indicating only antipassive and one other function, while others may have many functions, only one of which is antipassive. Relatedly, in section 8.2.5 I looked at languages where the antipassive marker is non-dedicated but which is always valency-decreasing (typically reflexive/reciprocal and/or middle markers with antipassive function), as opposed to those which use the antipassive marker in ways that do not alter valency and have an aspectual function.

In section 8.2.6 I discussed oblique marking on the patient in an antipassive construction, as well as those languages which lack the expression of the patient as an oblique. Only 34 antipassive constructions in the dataset allow the patient to be expressed in an oblique phrase, and in some cases the oblique marker is optional, and may be conditioned by dialect, definiteness, or other features of the patient. In contrast, section 8.2.7 dealt only with patientless antipassives, in terms of whether the antipassive implies any type of patient. This feature was present primarily in ambitransitive languages, but it also seems to be a relevant parameter in the distribution of antipassive markers in at least one or two languages.

In section 8.2.8 I categorized antipassive constructions based on their productivity. There are 46 antipassive constructions in the dataset which are highly productive, 57 which are

partially productive, and 31 which are unproductive. Since voice alternations are ideally productive, the sample was evaluated with lexicalized alternations excluded. Section 8.2.9 dealt with the semantics and functions of antipassive constructions, and made distinctions based on the following characteristics:

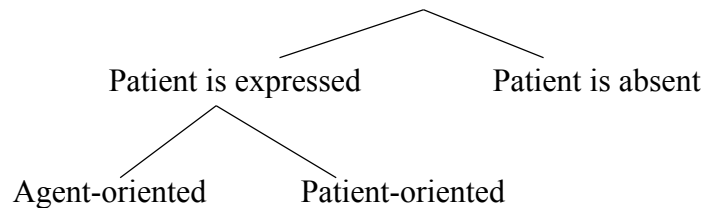


FIGURE 8.1. Categorization of the functions of antipassive constructions

When the patient is absent, the antipassive has mainly aspectual functions and information-structural consequences for omitting the patient. If the patient is expressed, the antipassive may have functions relating to the status of the patient, e.g., that it is less definite, less affected, or less individuated. It may also (or alternately) modify the status of the agent in terms of focus, prominence, volitionality, etc., which often leads to the use of these constructions in a syntactic capacity. A single antipassive construction will often serve multiple functions.

Finally, various antipassive-type constructions were discussed in section 8.2.10 which may be used in situations which exhibit syntactic ergativity. The feature [SYNTAX] relates to several other features in that constructions which may be used in syntactically ergative contexts tend to have an overt marker for the construction, are highly productive, and allow (or require) the patient to be overtly expressed. I also discussed some differences between antipassives versus other kinds of constructions which have [SYNTAX], and concluded that even antipassives with oblique patients are not a mutually exclusive set with languages with extraction-based syntactic ergativity; there are some languages with antipassives that allow oblique patients that are not syntactically ergative, and there are likewise syntactically ergative languages which do not rely on antipassives to circumvent restrictions on ergative arguments.

CHAPTER 9. FEATURE PATTERNS AND PROTOTYPES

The profile and distribution of eleven individual features commonly associated with antipassive constructions was discussed in detail in Chapter 8. These eleven features are listed again here for ease of reference, and see also 4.2.2 for more complete descriptions. Each feature has been arbitrarily assigned a letter designation for the ease and conciseness of describing constructions as lists of features in Appendix A, but are discussed in this chapter primarily using the abbreviated labels in brackets (e.g., [MARK]) for maximal clarity.

Features related to morphology:

1. There is an overt marker for the construction which can be called an antipassive marker. [MARK] ~ [C]
2. The patient is a non-core argument, and can be optionally expressed in an oblique phrase. [OBLIQUE] ~ [B]
3. The antipassive marker is dedicated to the antipassive construction, and has no other function. [DEDICATED] ~ [G]

Features related to transitivity:

4. The antipassive construction demonstrably corresponds to an unmarked or less-marked transitive construction with the same verb root. [ASYMM] ~ [A]
5. The antipassive construction is formally intransitive, both in terms of marking and in terms of the omissability of the patient. [INTRANS] ~ [D]
6. The application of the antipassive marker always decreases the valency of the predicate. [VALDEC] ~ [J]

Features related to productivity:

7. The antipassive is lexical in that it applies to only a relatively small set of verbs. [-LEXICAL] ~ [E]
8. The antipassive applies to all or almost all transitive verbs [PRODUCTIVE] ~ [I]. The presence of [-LEXICAL] but not [PRODUCTIVE] indicates that the antipassive is partially productive.

Features related to effect:

9. The construction has antipassive-type semantics, which are generally also the semantic

effects of decreased transitivity (per Hopper and Thompson 1980). [SEMANTICS] ~ [F]

10. The antipassive creates a predicate where there is no implication of any specific patient.

[-PATIENT] ~ [K]

11. The antipassive is used to circumvent various types of restrictions on the subjects of transitive verbs (A arguments), i.e., participates in syntactic ergativity. [SYNTAX] ~ [H]

In this chapter I expand beyond examining individual features in order to look at the relationship between them, as well as the sorts of patterns which exist in the data. This gives us a better idea of how frequent actual antipassive-type patterns are in the world's languages, and also the sorts of features which tend to pattern together. In section 9.1 I discuss the ways in which different features are interrelated (or are independent). In section 9.2 I discuss the most common combinations of these eleven features found in the sample, and briefly discuss how they compare to antipassives as understood in this dissertation (see Chapter 3). Then in section 9.3 I take this information and examine different ways of looking at an antipassive 'prototype', and the languages which are considered prototypical by different criteria. The findings of this chapter are summarized in section 9.4.

9.1 RELATIONSHIPS BETWEEN FEATURES

The eleven features associated with antipassives which were tracked in this study can be used to describe the basic elements of a wide variety of structures in the world's languages. Indeed, there are 81 different combinations of these 11 features represented in the languages in this study. Of course, some patterns are more common than others, which is the subject of the following section. Additionally, there are sets of features which cluster together, or instances where the presence or absence of a particular feature signifies the difference between classes of structures. This section attempts to specify the relationships between different antipassive-related features, which can be used as a tool for discussing antipassive-type phenomena in typologically disparate languages.

Although features were described above with respect to transitivity, morphological marking, productivity, and effect, the following categorization indicates to what degree a feature is reliant on the other features. This gives us an idea of how different aspects of antipassivization are manifested with respect to each other in the languages of the world. There are five features related to marking of verbal valency which are dependent on each other [ASYMM, MARK,

INTRANS, DEDICATED, VALDEC]. There are likewise two features related to productivity [-LEXICAL, PRODUCTIVE] and two features related to the status of the patient argument [OBLIQUE, -PATIENT] which are related to each other, and two features, [SEMANTICS] and [SYNTAX], which are not related to any other single feature. This framework developed out of the process of looking at the characteristics of many different detransitivizing structures across the world's languages, and does not reflect any particular theoretical approach. However, I do believe it is a useful schema which accurately describes the relationship between different types of features which has not previously been addressed in this way in the literature.

First, those five features which relate to marking of verbal valency include [MARK], the presence of a verbal antipassive marker, [ASYMM], the relationship of the construction to its corresponding transitive predicate, [INTRANS], whether the resulting construction is intransitive, [DEDICATED], if the marker is a dedicated antipassive marker, and [VALDEC], if the marker has other functions which do not decrease valency. The relationships between these five features are represented in Figure 9.1 below in the form of a decision tree. Those lines in red indicate the presence or absence of features which led the resultant constructions not to be considered antipassives in this study, although they may have been included in some definitions of the antipassive which others have given (cf. Chapter 3). Recall that for this study, features [ASYMM, MARK, INTRANS] were basic requirements of antipassives. Features [DEDICATED, VALDEC] subcategorize antipassive types, although it should be noted that some might consider a morpheme that has multiple functions whose primary function may not be antipassive [-DEDICATED, -VALDEC] not to indicate a true antipassive. For a discussion of the distribution of these features individually see Chapter 8.

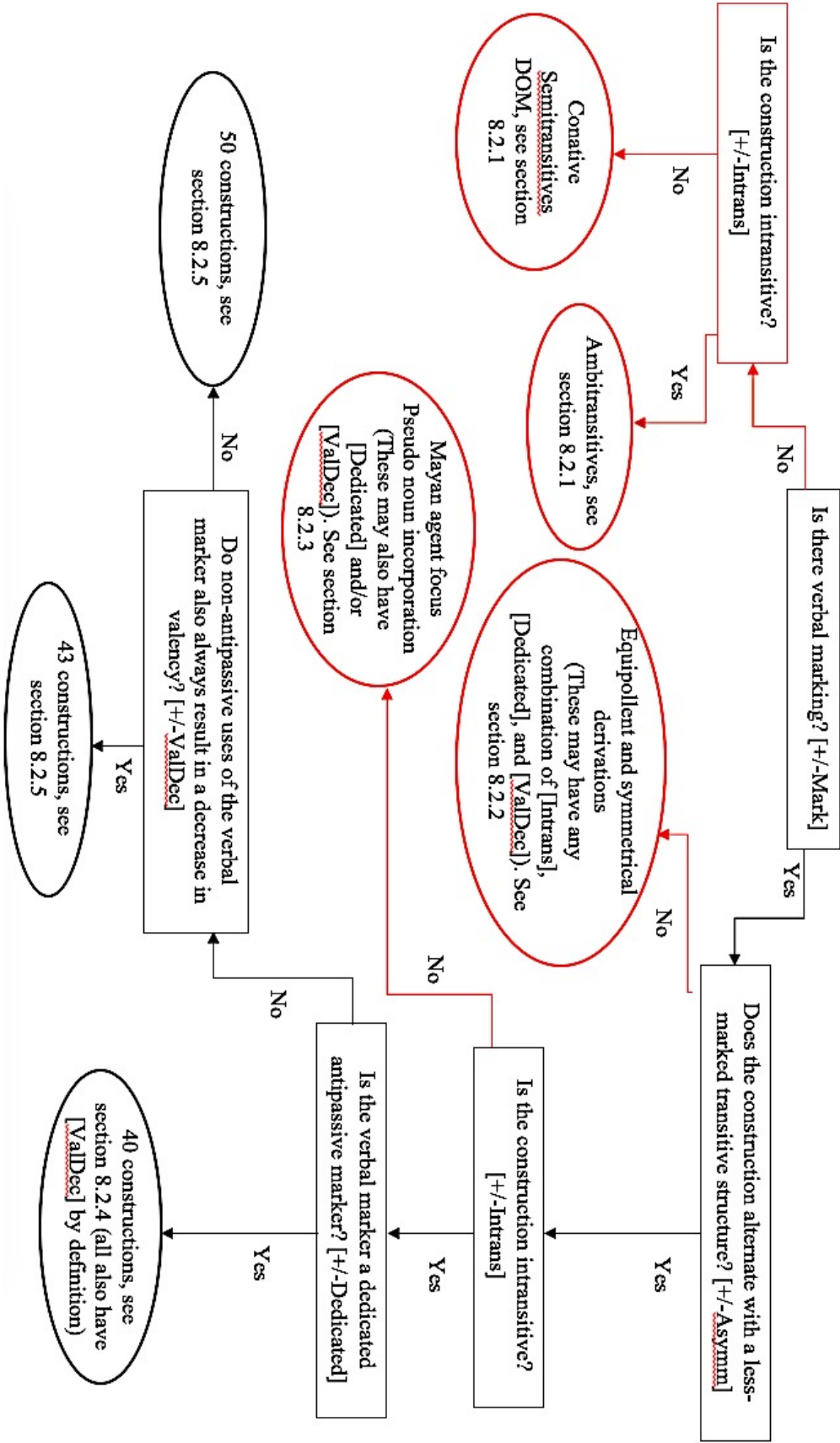


FIGURE 9.1. The relationship between the five antipassive features related to verbal valency

In Figure 9.1, examples of the types of languages and/or constructions which result from following the various lines through the flow chart to the various alternative outcomes are given in the rounded bubbles. This does not represent an exhaustive list, but rather some of the common construction types which fit those criteria.

In addition to the five interdependent features above, there are two clusters of two features each, and two independent features which can apply to all terminal nodes (the oval bubbles) in any of the diagrams. First, there are those features related to productivity. These are features [-LEXICAL] and [PRODUCTIVE], which together form a three-way distinction in productivity in line with the type of categorization used in WALS (Polinsky 2013). The relationship between these two features is presented in Figure 9.2. The chart in Figure 9.2 could appear after any of the nodes in the charts in Figures 9.1 and 9.3, since there is evidence of all types of antipassive-like constructions with varying degrees of productivity.

The other two features which are related to each other but not restricted by any other single feature or complex of features are (1) the presence of an omissible oblique-marked patient argument [OBLIQUE], and (2) whether any specific patient is implied in the resultant construction or not [-PATIENT]. With respect to the feature categorization outlined in Chapter 3 and in 9.1 above, [-PATIENT] describes the effects of the construction and [OBLIQUE] relates to the physical marking of the construction. However, the lack of a connection between [OBLIQUE] and any sort of hierarchical structure with respect to the other features pertaining to marking is interesting given that it has been grouped as part of essential antipassive structure (cf. Dixon 1994:146). The fact that [OBLIQUE] can appear at any node reinforces the position adopted here, which is that oblique or otherwise non-canonical marking of the patient argument is not central to the definition of antipassive. The relationship between [-PATIENT] and [OBLIQUE] is given in Figure 9.3. [-PATIENT] necessarily can only be a possibility when the patient is not expressed in an oblique phrase, since its expression or the possibility for its expression requires the patient to be recoverable. In theory [-PATIENT] can likewise appear at any node, although in reality it was less frequent, possibly because whether a specific patient is implied when one is not overtly expressed was not always described. It should be borne in mind also that the status of the patient, while possibly conveyed by case marking or other oblique marking, could also be indicated by affixes or other changes to the verb, by lack of agreement or some other type of head-marking strategy.

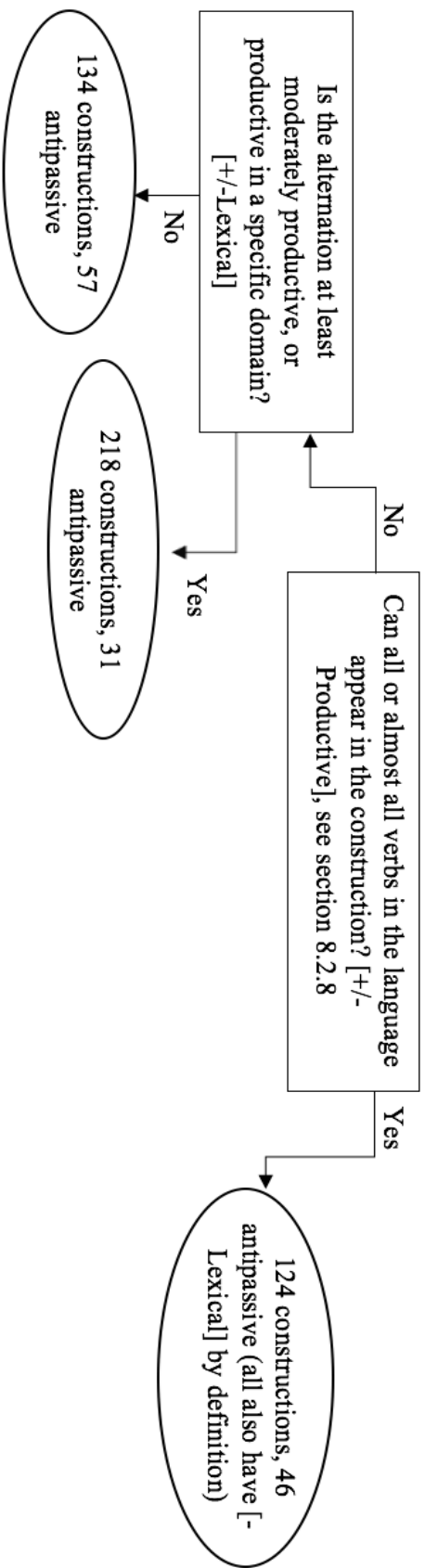


FIGURE 9.2. The relationship between antipassive features related to productivity

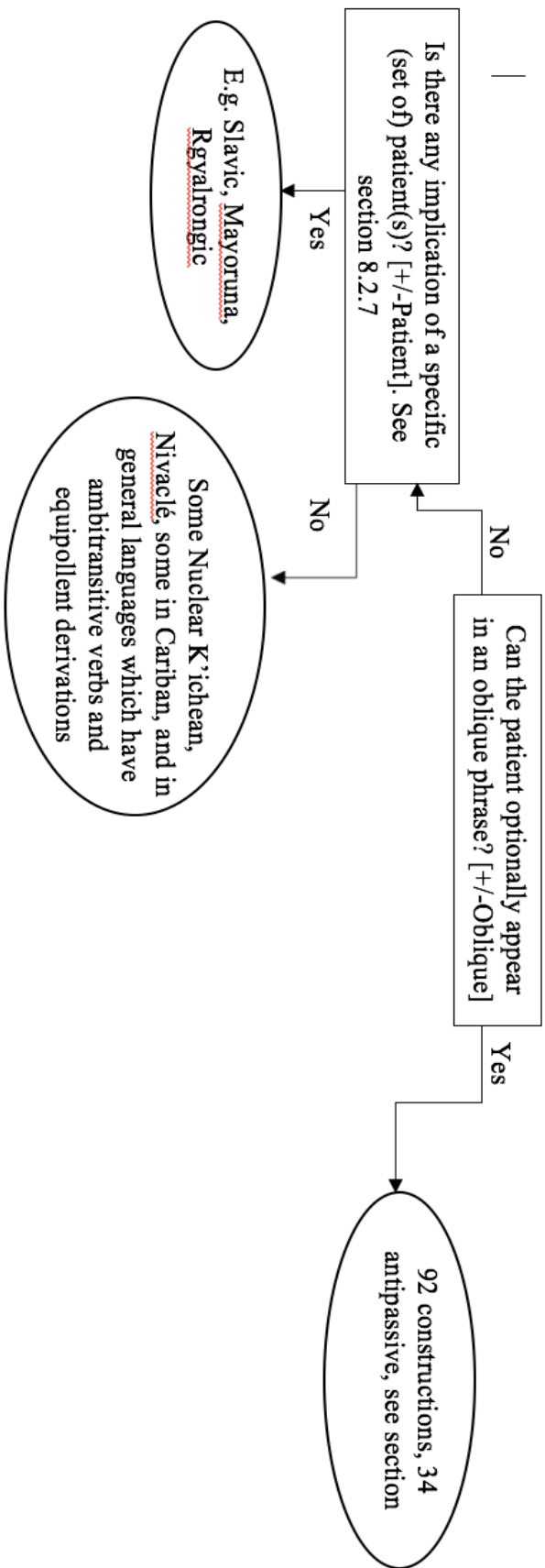


FIGURE 9.3. The relationship between antipassive features related to the patient argument

The last two features which apply at all nodes in Figures 9.1, 9.2, and 9.3 are [SEMANTICS], the presence of the semantic and/or functional correlates of antipassives, and [SYNTAX], the use of the antipassive-type construction in those environments which exhibit syntactic ergativity. Neither of these features is particularly related to the other, despite the distinction which is sometimes made between pragmatic antipassives and syntactic antipassives (cf. Dixon 1994). The difficulty lies in the fact that any agent-preserving detransitivizing construction can be said to have antipassive semantics. Whether it is a better known effect such as indicating that the patient is indefinite, or highlighting the agent, or simply intransitivizing the verb, all of these can be said to have the semantic effects of antipassivization. See section 8.2.9 for a complete discussion of the range of antipassive functions as well as structurally unrelated ways to convey antipassive-type meaning.

As discussed in section 6.4, syntactic ergativity is heterogeneous, and does not necessarily involve antipassives; languages with syntactic ergativity may have or may lack antipassive constructions, and even if they do have antipassive constructions, the antipassive may or may not play a role in ergative patterns in the syntax. As such, [SYNTAX] here refers more specifically to those languages which both have an antipassive-type construction and use it in syntactic environments which exhibit ergativity. However, this does not necessarily mean that the antipassive is the primary means by which a language circumvents restrictions on ergative arguments; it indicates only that the antipassive is one possible construction which may be used in that way.

As both [SEMANTICS] and [SYNTAX] may apply at all nodes, it is common that they are found in the same construction. [SEMANTICS] applies equally to syntactic and non-syntactic uses of antipassives, since focusing, relativizing, questioning, etc. are ways of organizing information such that a certain participant is pragmatically more prominent. Also, the use of the antipassive in syntactically ergative contexts can be seen as a grammaticalization of the natural effect antipassives have of creating conceptual distance between the agent and the patient, such that one can be cast as more prominent.

Although antipassive-type constructions which can be used to circumvent syntactic restrictions on ergative arguments are found at all nodes in Figures 9.1-9.3, they are very rare in several predictable places. First, the use of lexicalized and other minimally productive antipassive constructions is rare in ergative syntax. This makes sense if syntactic ergativity is a

restriction on ergative arguments in certain contexts, since circumventing that ban in a systematic fashion would require a construction which could apply with all or almost all verbs in the language. However, it is not impossible for an unproductive antipassive construction to be used in such a context, particularly if there is another productive (non-antipassive) construction available which achieves the same effect. This is the case for Q'anjob'al, which has an (uncharacteristically, for Mayan) unproductive antipassive construction which only applies to a handful of verbs (Mateo Toledo 2008:73).

Additionally, the use of an antipassive-type structure in contexts exhibiting syntactic ergativity is also rare when there is no antipassive marker (i.e., with all of the types of structures in the [-MARK] section of Figure 9.1). The only example which has surfaced in the data collected here comes from Warrgamay, which historically had an antipassive construction which was used to circumvent restrictions on ergative arguments, but lost the marker for the construction over time. Warrgamay has the other features of antipassives, including the ability to express the patient in an oblique phrase [OBLIQUE], the resulting construction is intransitive [INTRANS], and it is highly productive [PRODUCTIVE]. However, the Warrgamay system as Dixon recorded it is essentially ambitransitive/equipollent, where verb roots can be conjugated either transitively or intransitively, and in the intransitive construction the patient may be expressed obliquely or omitted entirely. See section 8.2.10 for examples.

9.2 COMMON FEATURE PATTERNS

The previous chapters and sections have focused on defining antipassives, investigating their global distribution, and looking at the structural features they share. However, unexplored thus far are the common patterns cross-linguistically with respect to different types of agent-preserving valency-decreasing constructions. This section attempts to address this area by looking at the most common combinations of features found in the dataset.

There is a huge amount of variety in the data, with 81 different combinations of the 11 features tracked in this study. Of the 445 languages in the sample, 143 did not have an antipassive-like construction (listed as "N/A" in Appendix A). Of the 81 patterns of features exhibited by the 302 languages in the dataset with some sort of antipassive-like construction, less than half (34/81) had three or more languages with constructions which exhibited the same set of features. Given the large number of attested patterns, in order to make useful generalizations

about the most common structures with the same basic characteristics across all languages, it was necessary to allow productivity ([-LEXICAL] and [PRODUCTIVE]) to vary freely, since productivity is independent of most other features (see section 8.2.8 for specifics on the distribution). It was also necessary to exclude [-PATIENT] ‘lacks an implied patient’ since this was often difficult to accurately determine based on the available documentation. Allowing these three features to vary freely reduces the total number of feature patterns to 48. This section looks at the eight most common combinations out of these 48 patterns, which include all feature combinations with more than 10 attestations in the dataset, ordered from most antipassive-like to least antipassive-like. I review the feature profile and the languages/constructions which fit that profile for each of these eight combinations in the following subsections.

9.2.1 [ASYMM, OBLIQUE, MARK, INTRANS, SEMANTICS, SYNAX, VALDEC] ~ ABCDFHJ

There are 13 languages in the sample that have the feature profile [ASYMM, OBLIQUE, MARK, INTRANS, (-LEXICAL), SEMANTICS, SYNAX, (PRODUCTIVE), VALDEC], or [ABCD(E)FH(I)J]. This describes antipassive constructions which have verbal voice markers which are always valency-decreasing (although are not dedicated to the antipassive function), may optionally express the patient in an oblique phrase, and which can be used to circumvent syntactic restrictions on ergative arguments. These constructions exhibit the greatest number of antipassive features which recur in the data. These 13 constructions are found in a number of Mayan languages, Warrungu, and Western Greenlandic. The languages with these constructions are not unified with respect to basic word order or valency orientation. However, all of them are necessarily morphologically and syntactically ergative (since they share [SYNTAX], antipassives used in syntactic ergativity), and all of these constructions were considered to be antipassives in this study. The following example of an antipassive with these features is from Warrungu, where the case marking in the transitive construction (9.1a) shows an ergative-absolutive pattern, while the antipassive in (9.1b) shows a nominative-oblique pattern (oblique is also the ergative), and the verb has an antipassive marker *-gali*.

- (9.1a) Bama-nggo gamo bija-n
 man-ERG water.ABS drink-NFUT
 ‘The man drank/drinks water’

- (9.1b) Bama gamo-nggo bija-gali-n
 man.ABS water-OBL drink-AP-NFUT
 ‘The man drank/drinks water’ (Tsunoda 2011:428)

9.2.2 [ASYMM, MARK, INTRANS, SEMANTICS, DEDICATED, VALDEC] ~ ACDFGJ

There are 31 constructions in the sample with the feature profile [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, DEDICATED, (PRODUCTIVE), VALDEC, (-PATIENT)], or [ACD(E)FG(I)J(K)]. This set of features describes what might be called a prototypical patientless antipassive, for languages with antipassive constructions which do not allow the patient to be expressed in an oblique phrase. These constructions have dedicated antipassive markers [DEDICATED], meaning that it would be difficult to analyze the voice marker as anything other than ‘antipassive’ or ‘agentive intransitivizer’. These constructions are found mainly in languages in Africa, the Americas, Asia, and the Pacific, and include languages from Algonquian, Pano-Tacanan, Mayan, Niger-Congo, Yukaghir, Rgyalrongic, and Austronesian, among others. Half of these constructions belong to ergative languages. The following example comes from Sierra Popoluca (Mixe-Zoquean), where *-ʔoʔy* in (9.2b) marks the antipassive construction and the patient cannot be expressed. The verb is visibly detransitivized via the exchange of an ergative clitic in (9.2a) for an absolutive one in (9.2b).

- (9.2a) Nɪkk-pa ʔi=wɪit-W jeʔm yoomo=tam
 go.aux-INCOMPL 3.ERG=message-DEP.TR that woman=PL.HUM
 ‘She (the midwife) goes to massage these (pregnant) women’

- (9.2b) ʔagi=Ø=wɪit-ʔoʔy-pa
 INTENS=3.ABS=message-AP-INCOMPL
 ‘She massaged a lot’ (de Jong Boundreault 2009:509)

9.2.3 [ASYMM, MARK, INTRANS, SEMANTICS, VALDEC] ~ ACDFJ

There are 24 constructions in the dataset which have the feature profile [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), VALDEC, (-PATIENT)], or [ACD(E)F(I)J(K)]. This configuration of features differs from the constructions discussed in 9.2.2 in that the markers for these constructions are not dedicated to the antipassive construction, but they are voice markers in that they are always valency-decreasing. Antipassives with this set of features are found primarily in Africa and the Americas, but also includes Udmurt in Europe. Prominent language families with members with this feature profile include Cariban, Iroquoian, Mande,

Songhay, and Mayan. About half of these languages ergative (11/24), and they exhibit a variety of basic word orders. No languages with this pattern in the sample appear to be exclusively dependent-marking. The following example is from Cherokee (Iroquoian), where the marker *-ataat-* signals both ‘antipassive’ and ‘reflexive’.

Antipassive use:

- (9.3a) A-anehtia uu-**ataat**-stehlt-i
 3A-try.PRS.CONT 3A-REFL/AP-help.DVN-NMLZ
 ‘He’s trying to help (so and so)’ (Montgomery-Anderson 2008:366)

Reflexive use:

- (9.3b) Aki-**ataat**-akahthoósthán-vʔi aki-vʔsa
 1B-REFL/AP-look.at.COMPL-EXP.PST 1B-self
 ‘I looked at myself’ (Montgomery-Anderson 2008:345)

9.2.4 [ASYMM, MARK, INTRANS, SEMANTICS] ~ ACDF

Next, there are 40 constructions which have the feature profile [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), (-PATIENT)], or [ACD(E)F(I)(K)]. As with the constructions discussed in sections 9.2.2 and 9.2.3, these constructions were all considered antipassives in the dataset. However, this particular set of features constitutes the minimum structural and semantic requirements for a construction to be considered an antipassive here. These languages differ from those in 9.2.2 and 9.2.3 in that the antipassive marker is not dedicated, nor is it always valency-decreasing (i.e., it has uses other than canonical voice alternations). In these languages, the marker for the antipassive may apply to transitive and/or other types of roots without altering the valency of the predicate.

This type of antipassive is found in every region except Australia, most notably in Slavic, Oceanic, Nakh-Daghestanian, Niger-Congo, and Jêan languages. The following example is from Paluai (Oceanic), where the antipassive marker is reduplication, which has a number of other functions, including to indicate randomness of the action, repetition, plurality, and nominalization. An example of the antipassive function of reduplication (which contrasts with the transitive verb in the first clause) is given in (9.4a), while (9.4b) illustrates an aspectual use of reduplication, which does not alter the valency of the predicate.

Transitive/antipassive:

- (9.4a) Ip=ka=lomêek s uei le mwayen. Ka-lo-lomêek nêem...
3PL=IRR.NSG-plant mami or yam IRR.NSG-AP~plant be.finished
'They will plant mami or yam. When they finish planting...' (Schokkin 2014:308-309)

Iterative/durative with an intransitive stem:

- (9.4b) Tama-n no to al-aluk
father-PERT IPFV CONT ITR~paddle
'His father was paddling' (Schokkin 2014:115)

This concludes the common types of constructions found cross-linguistically which were here assigned the label 'antipassive'. The structures in the following subsections constitute commonly occurring patterns which have some antipassive-type structural features and some antipassive functions.

9.2.5 [ASYMM, MARK, SEMANTICS, SYNTAX, VALDEC] ~ ACFHJ

There are 12 constructions in the sample with the feature profile [ASYMM, MARK, -LEXICAL, SEMANTICS, SYNTAX, PRODUCTIVE, VALDEC], or [ACEFHJ], which were all highly productive. All of the constructions in the sample with this profile are found in Mayan languages, where this feature profile primarily describes the agent focus (AF) construction. While the 'absolutive antipassive', as it is often called in the Mayan literature, is considered here to be an antipassive, AF is not (see Chapter 11 for details). This construction lacks [INTRANS] because it is not intransitive, and it lacks [OBLIQUE] since, even though the patient is most often present in these constructions, it does not appear in an oblique phrase. An example of an AF construction in Akateko is given in (9.5b) below, contrasted with a transitive in (9.5a). In AF in Akateko, the agent is focused with *ja'*-, the verb takes an AF morpheme, and only the patient is cross-referenced on the verb. This construction is also atypical for an antipassive as it may only appear in environments which exhibit syntactic ergativity.

- (9.5a) Max Ø-y-ii toj naj unin no' wakax
COMPL 3ABS-3ERG-carry DIR.thither CLF boy CLF cow
'The bull took the boy away' (Zavala 1997:458)

- (9.5b) Ja'-in Ø-ij-on-toj naj unin
FOC-1SG.ABS 3.ABS-back.carry-AF-DIR.thither CLF boy
'It is I who carried the boy' (Zavala 1997:452)

9.2.6 [OBLIQUE, INTRANS, SEMANTICS] ~ BDF

There are 15 constructions in the sample which have antipassive-type functions and involve forming an intransitive predicate with some sort of oblique marking on the patient, but which lack an antipassive marker and are not clearly voice operations ([OBLIQUE, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE)], or [BD(E)F(I)]). This includes the Algonquian AI+O construction, the Basque auxiliary alternation, the North Caucasian absolutive-dative labile construction, the Polynesian ‘middle voice’, and other ambitransitive +/- oblique argument patterns such as those in Yimas, Sanumá, and Maung. The primary difference between these constructions and the [OBLIQUE, SEMANTICS] ~ [BF] constructions below in section 9.2.7 is that these show detransitivization (i.e., a change from A to S) in either agreement or case marking. The following example is from Yimas (Lower Sepik-Ramu). This alternation has many of the characteristics of an antipassive construction: the verb is morphologically intransitive, the patient may be either overly expressed in an oblique phrase or omitted, and the construction is used to encode decreased transitivity features with respect to the patient. However, in terms of features it is roughly equivalent to ambitransitive +/- an oblique patient construction, since there is no voice marker.

(9.6a) Irpm mu-n-wapal
 coconut.palm.IV.SG IV.SG.O-**3SG.A**-climb
 ‘He climbed the coconut palm’

(9.6b) Irpm-**un** na-wapal
 coconut.palm.IV.SG-**OBL** **3SG.S**-climb
 ‘He climbed up on the coconut palm’ (Foley 1991:234)

Also in this category are cases of lexical substitution, where the same basic meaning is conveyed by two different verb roots, one transitive, one intransitive. This is a minority strategy in several languages, but it is found more extensively in Trumai (Isolate, see (10a-b) below), as well as in Makalero (Timor-Alor-Pantar). It achieves the same effect as voice, but does not constitute a voice operation, and is generally not productive. In Makalero, the verb *dur* in (9.7a) is intransitive, with an anticausative sense, while a separate verb *tane* (9.7b) is the semantically causative transitive counterpart.

(9.7a) Uai=ni=ni uai=te'e=si ani muni **dur**
 CLS=LK1=LK1 CLS=after=LK2 1SG return **awake**
 'After that I awoke again'

(9.7b) ...ka'=te'e filem ue'=afta ani **tane...**
 small=after movie DEIC.SPK=COND 1SG **waken**
 '...in awhile when the movie is on, wake me up...' (Huber 2011:150)

9.2.7 [OBLIQUE, SEMANTICS] ~ BF

There are at least 15 languages in the sample whose primary antipassive-type construction is defined by some type of non-canonical patient marking, which does not yield an intransitive predicate and is not accompanied by a verbal marker. Unlike the [OBLIQUE, INTRANS, SEMANTICS] constructions in 9.2.6, while the verb in [OBLIQUE, SEMANTICS] constructions may also have undergone some detransitivization, morphologically the verb does not appear to be intransitive. These constructions are characterized by the feature profile [OBLIQUE, (-LEXICAL), SEMANTICS, (PRODUCTIVE)], or [B(E)F(I)]. This type of construction can be found in the region called 'Europe', e.g., Finnish, Hindi, and the English conative, where some oblique case is used to indicate a decrease in transitivity. An example of the English conative is given in (9.8), where the patient appears as the object of the preposition 'at', which indicates that the action was not necessarily carried over the patient.

(9.8a) The boy hit the ball (definitely made contact)

(9.8b) The boy hit at the ball (but did not necessarily make contact, possibly after multiple attempts)

This feature combination also applies to languages with differential object marking, where the patient receives a marker (as opposed to the absence of a marker). The use of oblique marking for non-human patients is shown in the pair of examples (9.9a) and (9.9b) in Kolyma Yukaghir. Although the patient in (9.9b) receives instrumental marking as opposed to accusative marking, the verb in both (9.9a) and (9.9b) continues to bear transitive marking.

(9.9a) DOM, definite:
 Tudel met kɔnme-gele juø-m
 he.NOM my friend-ACC see- 3SG.TR
 'He saw my friend'

- (9.9b) DOM, indefinite:
 Tudel tolow-**le** kudde-m
 he.NOM deer-INST kill- 3SG.TR
 ‘He killed a deer’ (Maslova 2003a:10)

The features [OBLIQUE, SEMANTICS] also characterize case frames, where some verbs take a nominative-accusative or ergative-absolutive case frame, while others take a nominative-dative or absolutive-dative case frame. This is the case in Trumai, as shown in the pair of examples in (9.10a) and (9.10b) below. However, both constructions are syntactically transitive and cannot occur without their absolutive- or dative-marked patients. They are also not directly related, as there is no corresponding non-dative marked transitive structure. Additionally, this case marking pattern is lexically determined, and is associated with one class of verbs which have the following semantic characteristics: verbs of perception (e.g., see, listen), mental activity (e.g., think, believe, like), contact (e.g., grab, step on), or habitual events with semi-predictable patients (e.g., cook, drink, hunt, fish) (Guirardello-Damian 2010:211). These verbs can only take an absolutive-dative case marking pattern, which has resulted in some interesting pairs of verbs and structures like the following:

- (9.10a) Kasoro-**k** ha- \emptyset tako
 dog-ERG 1-ABS bite
 ‘The dog bit me’

- (9.10b) Kasoro- \emptyset make hai-**tl**
 dog-ABS bite 1-DAT
 ‘The dog bit me’ (Guirardello-Damian 2010:215)

9.2.8 [INTRANS, SEMANTICS] ~ DF

There are 57 constructions in the sample which have the features [INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), (-PATIENT)], or [D(E)F(I)(K)], which describes any intransitive predicate with antipassive-type meaning. This set of features covers a large number of constructions, including various types of noun incorporation and ambitransitivity. Languages with these constructions are found in all regions, and may be ergative or non-ergative. Languages which can create an intransitive verb from a transitive one by simply omitting the object are represented here by Ute. In (9.11b) the patient from the transitive clause in (9.11a) is simply omitted (as in English), and there is no voice marking on the verb, or change in person marking.

(9.11a) Takuavi 'urut uka-pugay-'u
 meat.O the.O eat-REM-3SG
 'S/he ate the meat'

(9.11b) 'ava'a tuka-na-pugay-'u
 much eat-HABIT-REM-3SG
 'S/he used to eat a lot' (Givón 2011:260)

The feature profile [INTRANS, SEMANTICS] also includes those languages which have intransitively conjugated dyadic verb roots which can or often do appear with a juxtaposed, **non-oblique** patient. This includes the 'semitransitive' construction in Tiwi, and what has been called an antipassive in Nez Perce as well as several of the Kiranti languages. These constructions differ from the ambitransitive +/- oblique patient constructions in 9.2.6 in that the patient in these constructions lacks an oblique marker. These constructions also lack voice marking, and are not in a clearly asymmetrical relationship with their transitively conjugated counterparts. This type of construction is illustrated in Yakkha in the pair of examples (9.12a) and (9.12b).

(9.12a) Uŋ=ŋa na paŋ cog-uks-u=na
 3SG=ERG this house do-PRF-3.P[PST]=NMLZ.SG
 'He has made this house'

(9.12b) Chemha uŋ-me?n=em ŋ-uŋ-me?n=em?
 Liquor drink[3SG]-NPST=NMLZ.SG=ALT NEG-drink[3SG]-NPST=NMLZ.SG=ALT
 'Does she drink raski or not?' (Schackow 2014:355-356)

These eight sets of features represent the most common patterns for construction types found in the dataset. However, this list is far from comprehensive; not discussed here are the feature specifications of 95 languages, 22 of which have antipassives. Those constructions with antipassives here exhibit seven⁵³ patterns in addition to those discussed in this section.

9.3 ANTIPASSIVE PROTOTYPES

While it is certainly useful to look broadly at the common patterns of antipassive-like features, the idea still exists that some collections of features are more 'prototypical' examples of antipassives than others. However, what 'prototypical' means exactly depends on how are we

⁵³ These seven patterns are as follows: [ABCDF], [ABCDFGHJ], [ABCDFGJ], [ABCDFH], [ABCDFJ], [ACDFGHJ], [ACDFHJ].

defining prototype, and what avenue was taken to arrive at that definition. There have been several suggestions for what constitutes a prototypical antipassive, most notably Tsunoda (1988b:629) who claims that prototypical antipassives have the following characteristics:

1. “the A is realized as the d-S [derived S];
2. the O is realized as the OBL, or is not realized at all;
3. the patient is backgrounded, and;
4. the clause shows a lower degree of transitivity than the corresponding Vtr [transitive verb] in terms of affectedness.”

Tsunoda based this definition off of Shibatani’s (1985) prototype for the passive, and claims that this ends debates which try to create an artificial line between antipassives and other structures. While his definition is certainly one conception of an antipassive prototype, there are several ways to approach establishing what could be considered a ‘prototypical’ antipassive. I explore several possibilities in this section, namely with respect to frequently-cited examples, number of features, and frequency of various feature combinations as described in section 9.2.

9.3.1 EXEMPLAR-BASED PROTOTYPE

The idea of a prototype for any construction, process, or item necessarily hinges on what, in our experience, has consistently been called by that label. In the common example from cognitive psychology (cf. Rosch 1975, Rosch et al. 1976), this was the association between ‘bird’ and the exemplar ‘robin’, as opposed to less bird-like (less prototypical) birds such as penguins. For the antipassive, the label is most consistently associated with the languages that are most frequently cited in which it has been described.

Based on a survey of the literature, the most commonly-cited examples of antipassive constructions come from Dyrbal, Mam, and West Greenlandic. While the antipassive constructions in all of these languages meet the basic requirements for antipassive [ASYMM, MARK, INTRANS], they also all have optional, oblique-marked patients, they are all productive, and they can all serve syntactic functions. If this particular collection of features—[ASYMM, OBLIQUE, MARK, INTRANS, -LEXICAL, SEMANTICS, SYNTAX]—constitutes the antipassive prototype, then there are 18 languages in the sample which fit this profile. These include a number of Mayan languages from various branches of the family, Eskimo-Aleut languages, three Pama-Nyungan languages (Dyrbal, Warrungu, and Yidij), Chukchi (Chukotko-Kamchatkan), Katukina (Bia dialect only, Harákmbut-Katukinana family), and Movima (Isolate). All of these

languages are at least minimally ergative, and 14 of the 18 are found in the Americas. In terms of typological correlates, these languages exhibit a variety of different word orders, including AVO. Valence orientation patterns roughly with genetic affiliation, such that the only dependent-marking languages in this group are the three Pama-Nyungan languages. Mayan and Movima are head-marking, and the rest exhibit both head-marking and dependent-marking. These languages constitute 78.3% of the syntactically ergative languages with antipassives, 26.1% of ergative languages with antipassives, 14.3% of languages with antipassives, and 4% of the total sample.

This particular type of antipassive ([ASYMM, OBLIQUE, MARK, INTRANS, -LEXICAL, SEMANTICS, SYNTAX]) is therefore quite rare in the world's languages, if it characterizes 14.3% of languages with antipassives, and it is restricted to a handful of genetic groups. While this is, I think, the way that prototypes of structures are typically arrived at, this method has the disadvantage of being biased in favor of languages with a similar typological profile to the language(s) in which the structure was originally identified. It also does not take into account the full range of variation and the frequency of different features related to the construction in question when establishing the prototype.

9.3.2 FEATURE-BASED PROTOTYPE

Another way to look at a prototype of any structure is to compile all the features which we believe that the best exemplars of the concept should have, all else equal. This is in some ways preferable to the exemplar-based prototype, in that it does not need to have a structure in some unrelated language as its point of reference, but rather uses an independent set of criteria to evaluate the prototypicality of a structure in a given language. Some features may of course be more 'prototypical' than others, which is a topic addressed in Chapter 8.

If all of the 11 features related to antipassivization tracked in this study are brought into the definition (with the exception of [-PATIENT] (no implied patient), which conflicts with [OBLIQUE] (the expression of the patient in an oblique phrase)), then a prototypical antipassive would include those seven features that the antipassive constructions of the 18 languages above share (i.e., they are productive, have oblique-marked patients, and may be used for syntactic purposes), as well as a dedicated antipassive marker (i.e., it does not serve other functions, e.g., as also a middle voice or reflexive marker: [DEDICATED]), and the marker for the antipassive

construction would always be valency-decreasing (e.g., it cannot also be used with intransitive verb roots: [VALDEC]).

When these two additional features [DEDICATED, VALDEC] are included, the number of prototypical antipassive constructions drops to one: Katukina. However, Katukina, despite having all of the prototypical antipassive features, is not particularly prototypical. Katukina appears to only allow the patient to be expressed in an oblique phrase in the Bia dialect, and when the antipassive is being used for syntactic purposes the patient is typically juxtaposed instead of being in an oblique phrase (as seen in (9.13c) below) (cf. Queixalós 2010; on other languages which have optional oblique markers see section 8.2.6). The following are all possible options in the Bia dialect:

Itaquai dialect:
 (9.13a) **Wa**-pu tu adu
 AP-eat NEG 1SG
 ‘I didn’t eat’

Bia dialect:
 (9.13b) **Wa**-toman adu wiri **katu** wa
 AP-shoot 1SG peccary SOC.INST PROSP
 ‘I am going to shoot peccaries’

(9.13c) Hanian tan **wa**-dyuman tahi yu
 who here AP-spread water INTERROG
 ‘Who spread the water here?’ (Queixalós 2010:257-258)

There are an additional 10 Mayan languages which have antipassive markers which are shared only with other antipassive-type constructions, where often the marker of the antipassive plus oblique patient construction is also that of the agent focus (AF) or ‘incorporative’ construction (formerly considered a kind of antipassive by Mayanists) (see Chapter 11 for details). Mam, for example, which is widely taken to have a prototypical antipassive construction, also uses the *-n* antipassive marker for the incorporative construction, where an unmodified patient nominal immediately follows the verb, without an oblique marker.

Antipassive:
 (9.14a) Ma Ø-tzyuu-**n** Cheep t-i’ij ch’it
 REC 3SG.ABS-grab-AP Jose 3SG-OBL bird
 ‘Jose grabbed the bird’ (England 1983:212)

Incorporative construction:

- (9.14b) Ma Ø-b'iincha-n qa-jaa
REC 3SG.ABS-make-AP PL-house
'He constructed houses' (England 1983:219)

While AF is generally considered a distinct syntactic construction, the status of the incorporative construction is generally less well-defined, and it could be argued in languages where the markers are the same that incorporation-type constructions are a use of the antipassive, as opposed to an antipassive marker appearing somewhere where it does not have the core meaning of antipassive. If this is the case, then Mam and Akateko have antipassive constructions which would fit this feature-based definition of a prototypical antipassive.

Since the antipassive constructions in Katukina (and Mayan) are not quite as prototypical as their features imply, either cases of languages exhibiting prototypical antipassive with all of the desirable features do not, in actuality, exist, or some characteristics which are in theory desirable are in fact not necessarily defining characteristics of antipassives. The two characteristics which are the most restrictive are [SYNTAX], the use of antipassive constructions in ergative syntactic structures, and [DEDICATED], that the antipassive marker be limited to its use in the antipassive construction. If neither of these is considered necessary components of the prototype, then there are 17 languages which have prototypical antipassive constructions (i.e., with the features [ASYMM, OBLIQUE, MARK, INTRANS, -LEXICAL, SEMANTICS, PRODUCTIVE, VALDEC]). This includes 12 Mayan languages, 2 Pama-Nyungan languages, Chamorro (Austronesian), Guatuso (Chibchan), and Katukina (Haarákmbut-Katukinan). All of these languages are ergative, exhibit a wide range of basic word orders, and they may be head-marking, dependent-marking, or both.

9.3.3 FREQUENCY-BASED PROTOTYPE

The final way which we can look at the prototype for the antipassive construction is based on the frequency of occurrence of patterns which fit under the heading of 'antipassive' (see section 9.2 for a complete discussion of the eight most common feature patterns in the dataset). Interestingly, there was a huge variety of attested combinations of the 11 features examined here, and most patterns did not have more than five languages which shared the same set of features. The most common recurrent feature pattern in the data was [INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), (-PATIENT)], or [D(E)F(I)(K)], which appears in at least 57 languages

in the sample. This describes any intransitive predicate with antipassive-type meaning, including really common phenomena like ambitransitivity and patient omission. That a set of constructions with only the most general antipassive-type features is the most frequent pattern in the data reflects the frequency of antipassive-type meaning coupled with the relative rarity of signature antipassive features.

Another way to look at frequency is to identify the most common recurrent feature pattern in the data which qualifies as an antipassive by the definition used here. The most frequent antipassive pattern was [ASYMM, MARK, INTRANS, SEMANTICS] (ACDF in Appendix A), which describes the most basic antipassive type allowed by the definition, where the antipassive need not be productive, the marker for the antipassive construction is not limited to its use as an antipassive marker or as a voice marker, and the patient cannot be expressed in an oblique phrase. This pattern appears in 18 languages⁵⁴ which are largely non-ergative. If productivity is not considered with respect to these four structural/functional features [ASYMM, MARK, INTRANS, SEMANTICS] (i.e., [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), (-PATIENT)]), as in section 9.2.4), then 40 languages have these characteristics. It is interesting that the two most frequent collections of antipassive-type features in the dataset do not look anything like the ‘prototypical’ antipassive generated by the two other approaches above. This suggests first that what many definitions have conceived of as ‘antipassive’ is very infrequent in the world’s languages, and primarily pertains only to those genetic groups in which it was discovered. It also suggests that perhaps slightly broader definitions of the antipassive such as the one used here are more reflective of the types of structures found cross-linguistically.

However, it is also possible to combine the frequency-based approach and the feature-based approach to look instead at the most frequent feature patterns in the dataset (e.g., more than 10 attestations) that include the greatest number of antipassive-type features. This approach produces a much more comparable exemplar of a prototypical antipassive, [ASYMM, OBLIQUE, MARK, INTRANS, -LEXICAL, SEMANTICS, SYNTAX, PRODUCTIVE, VALDEC] (ABCDEFHIJ in Appendix A). These antipassives have oblique patients and can be used to circumvent restrictions on ergative arguments, and are always valency-decreasing (i.e., may not attach to

⁵⁴ These 18 languages include Avar, Kinyarwanda, Tira, Wolof, Tolowa, Otomí, Apinaje, Hocak, Japhug, Tsovdun, Czech, Latvian, Lithuanian, Polish, Slovene, Hinuq, Kryz, and Haida.

intransitive roots). There are 12 languages in the dataset which fit this profile, most of which are Mayan languages but also includes Warrungu (Pama-Nyungan).

In general, a frequency-based method for determining a prototype is desirable, since it is language-independent, like the feature-based approach, but it is also more flexible than the feature-based approach because it does not require the prototype to have all possible features. However, the combined frequency- and feature-based approach still produces a set of languages which are limited in terms of generic diversity. This suggests that this particular prototype is problematic in some of the same ways as the exemplar-based model.

9.4 SUMMARY

In this chapter I have taken a broader look at the correlations between eleven different features which are commonly associated with antipassive specifically, and voice phenomena in general. In section 9.1 I discussed the relationships among the eleven features tracked in this study. There were three sets of dependencies between features (see Figures 9.1, 9.2, and 9.3) and two features which could apply to any other feature combination. The relationships between features were presented as decision trees, where the presence or absence of various features corresponds to different types of constructions, some of which were antipassives. This schematization serves as a model for understanding the similarities and differences between antipassive-type constructions, as well as for identifying antipassives and antipassive-type phenomena in languages where they might not yet be described.

The most common collections of features found in the constructions investigated in the dataset were discussed in section 9.2. There were 81 attested feature combinations, only 8 of which had more than 10 languages which had that particular feature profile. This included constructions with the following features and profiles:

1. [ASYMM, OBLIQUE, MARK, INTRANS, (-LEXICAL), SEMANTICS, SYNTAX, (PRODUCTIVE), VALDEC] ~ [ABCD(E)FH(I)J], which are relatively prototypical antipassives with oblique patients which participate in syntactic ergativity;
2. [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, DEDICATED, (PRODUCTIVE), VALDEC, (-PATIENT)] ~ [ACD(E)FG(I)J(K)], which are prototypical patientless antipassives with dedicated antipassive markers;

3. [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), VALDEC, (-PATIENT)] ~ [ACD(E)F(I)J(K)], which are mostly cases where a middle/reflexive morpheme also has antipassive uses;
4. [ASYMM, MARK, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), (-PATIENT)] ~ [ACD(E)F(I)(K)], where indicating the antipassive may be one of many functions of a morpheme, not all of which are related to voice;
5. [ASYMM, MARK, (-LEXICAL), SEMANTICS, SYNTAX, (PRODUCTIVE), VALDEC] ~ [AC(E)FH(I)J], which describes Mayan agent focus (AF) constructions;
6. [OBLIQUE, INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE)] ~ [BD(E)F(I)], which describes ambitransitive constructions which lack a voice marker but allow patient to be (optionally) expressed in an oblique phrase;
7. [OBLIQUE, (-LEXICAL), SEMANTICS, (PRODUCTIVE)] ~ [B(E)F(I)], which describes any case of non-canonical patient marking where the predicate is not clearly intransitive;
8. [INTRANS, (-LEXICAL), SEMANTICS, (PRODUCTIVE), (-PATIENT)] ~ [D(E)F(I)(K)], which applies to a wide variety of constructions, including ambitransitives and intransitive verbs that allow juxtaposed patients.

Although this is a rather arbitrary selection of constructions (more than 10 attestations in the present corpus), they represent at least some of the most common antipassive-like construction types in the languages of the world.

Finally, I explored different approaches which could establish what a ‘prototypical’ antipassive might be, against which other constructions can be measured. There are at least three possible ways to define a prototype; first, a prototypical antipassive would ideally have all of the features often found in antipassive constructions and held to be desirable as part of voice operations in general. Second, the prototype may be any construction which shares the features of those examples of antipassives most often cited in the literature. Alternately, the most prototypical antipassive may be the type which appears with the greatest frequency in the languages of the world. The first two methods produce prototypes encompassing fewer than 20 languages from the dataset, and the third method yields a greater number of languages (at least 57), but which only qualify as antipassives under the broadest of definitions.

CHAPTER 10. LANGUAGES WITH MULTIPLE ANTIPASSIVES

In discussions of antipassives in much of this dissertation so far there has been an implicit equation of languages and the features they exhibit such that there are the same number of languages with antipassives as there are antipassives. This is useful when talking about what other types of typological characteristics a language might have that correlate with the presence or absence of antipassive constructions (see Chapters 5, 6, and 7). However, while most languages with antipassives have only one antipassive (96 of 126, or 76.2%), there are a number of languages which have more than one antipassive. The goal of this chapter is to look at the function of the antipassives in languages with more than one and observe any common patterns in the differences between them. As far as I am aware, this is a topic which has not been discussed previously for antipassives.

10.1 DELINEATION

The first issue which arises is a definitional one: what ‘counts’ as multiple antipassives? Per the definition of antipassive used throughout this dissertation (see Chapter 3), all putative antipassives had to (a) clearly correspond to an unmarked or less-marked bivalent transitive construction, (b) and yield agentive (unergative) intransitive construction. However, there are two general classes of differences between antipassives which languages with multiple antipassives exhibit: (1) morphological, where a language has multiple antipassive markers, and (2) syntactic, where a language has multiple antipassive constructions with different syntactic characteristics.

In terms of morphology, it seemed pretty clear that it is not useful to include cases of phonologically conditioned allomorphy. However, other cases are less clear, and sometimes the difference is unknown or unstated in the documentation. Given this, I included any case where more than one antipassive markers were listed for a language as instances of ‘multiple antipassive markers’ if their distribution was either not predictable or they resulted in a difference in meaning. Others might consider these to be instances of grammatically or lexically conditioned allomorphy, but in all cases the relationship between the antipassive markers historically is not clear. There are also instances of cross-over, where the distribution is partly lexical and partly aspectual, for example, which suggests that the markers could previously have

had distinct functions which have since become largely lexicalized.

The second issue with morphology arises with respect to location. Does the use of different verbal antipassive markers have the same types of effects as the use of different oblique markers for the patient? The use of different non-core case markers with the patient in an antipassive construction has been noted in some dependent-marking languages such as Warrungu (Tsunoda 2011:427), as well as some head-marking languages such as Mam (England 1983:222). In Mam, the oblique marker *-i'ij* implies that the action was purposeful, while the oblique marker *-ee* indicates that the action was accidental, incomplete, or happened by surprise. This is demonstrated in the difference between (10.1a) and (10.1b) below.

(10.1a) Kyel x-Ø-'awaa-n t-i'ij kjo'n
 Miguel REC.DEP-3SG.ABS-plant-AP 3SG-OBL1 cornfield
 'Miguel planted the cornfield'

(10.1b) Kyel x-Ø-'awaa-n t-e kjo'n
 Miguel REC.DEP-3SG.ABS-plant-AP 3SG-OBL2 cornfield
 'Miguel planted the cornfield (when it was either not the time or not the place to do it)'
 (England 1983:223)

While in Mam the difference in oblique markers for the antipassive construction signals a difference in interpretation, the difference was unclear in most of the languages with multiple oblique markers in the sample, so this chapter only deals with those languages with multiple verbal antipassive markers, not those with a difference in oblique marking. However, the differences between oblique markers and how these differences relate to differences in verbal antipassive markers is an area for further study.

10.2 OVERVIEW

Of the 126 languages with antipassive constructions in the sample, about 30 have multiple antipassives that match the guidelines established above in section 10.1. This indicates that roughly a fourth of languages with antipassives have more than one antipassive construction or antipassive marker, which is surprisingly high. However, the majority of these languages (21 of ~30, or ~70%) only have multiple antipassive markers, not multiple antipassive constructions. Based on the data in this sample, languages may have between one and four overt (non-null) antipassive markers. Those languages with the largest number of antipassive markers belong to

the Eskimo-Aleut family, where the differences in the function of the various markers has been long debated (see Nagai (2006:129) and the references therein). An example of a single antipassive construction with two verbal markers comes from Japhug (Rgyalrongic), where *rr-* indicates that the patient is non-human, while *sɣ-* indicates a human patient.

(10.2a) Tɣ-rzaβ nuu pɣɣ-**rr**-ephɣt
 INDEF.POSS-wife DET IPFV.EVID-**AP.NHUM**-mend
 ‘The wife was mending (clothes)’

(10.2b) Tehi tu-tu-ste ɲu kɣ-**sɣ**-fstuun
 what IPFV-2-do.this.way NPST.be INF-**AP.HUM**-serve
 ‘How do you serve (your husband and the people from his family)?’ (Jacques 2012:215)

There are a much smaller number of languages in the sample (about 6) which have multiple antipassive constructions, where there are syntactic differences between the two antipassives. These constructions also fulfill the criterion of having different antipassive markers, and may have 2-3 antipassive markers. However, there are no examples in the corpus of a language which has more than two distinct antipassive constructions. This also suggests that multiple distinct antipassive constructions in a single language is a relatively rare phenomenon, as it only occurs in about 20% of languages with multiple antipassives, 4.8% of languages with antipassives generally, and about 1.3% of all languages in the sample.

An example of multiple antipassive constructions in a single language comes from Dyirbal (Pama-Nyungan), which has an antipassive construction marked with *-ɲa-y* (10.3a). However, the reflexive and reciprocal markers can also indicate the antipassive (e.g., the reflexive *-yirri-y*, as shown in (10.3b)). Dixon (1972:91) claims that the difference between the two antipassive constructions is essentially a matter of realis vs. irrealis, where the antipassive *-ɲa-y* indicates that the action is indeed happening, while the reflexive indicates the potentiality of the action, which in the following example indicates that the man is on an eel-hunting expedition, but may not have speared any eels at the time of speaking.

(10.3a) Bayi yaɣa ɖaban-du waga-**na**-ɲu
 there.ABS man.ABS eel-INST spear-**AP**-PRS/PST
 ‘The man is (currently) spearing some eels’

(10.3b) Bayi yaɾa ɖaban-du wagay-**mari-ju**
 there.ABS man.ABS eel-INST spear-**REFL/AP-PRS/PST**
 ‘The man is spearing eels (but isn’t spearing them at the moment)’ (Dixon 1972:91)

Although the syntax of both markers is the same when they are acting as antipassives, the reflexive is considered a different construction since the primary use for that marker is reflexive (which is a separate construction), not antipassive.

The approximately 30 languages in the dataset which are here considered to have multiple antipassive markers and/or constructions belong to only 15 language families. The majority of these languages are spoken in the Americas, including 28 languages from 5 families. The language families which contain languages with multiple antipassives are listed below. Those which have languages with multiple antipassive constructions (as opposed to just markers) are marked with an asterisk.

TABLE 10.1. Language families with members in the sample with multiple antipassives

Family	Number	Family	Number
Algonquian	3	Niger-Congo*	1
Austronesian*	2	Pama-Nyungan*	1
Chibchan*	1	Surmic	2
Chukotko-Kamchatkan (*?)	2	Tibeto-Burman	2
Eskimo-Aleut	3	Uralic	1
Matacoan	1	Washo (Isolate) (*?)	1
Mayan*	7-9	Yukaghir	1
Nakh-Daghestanian	1		

Multiple antipassive markers and multiple antipassive constructions are found in a wide variety of language families, which is to say that no single genetic group has a monopoly on multiple antipassives. Both types can be found scattered in languages all over the world. This fact is illustrated graphically by the map in Figure 10.1, which shows the global distribution of the languages considered here to have multiple antipassives. Blue markers indicate languages with only multiple antipassive markers, while red markers indicate languages with multiple antipassive constructions.

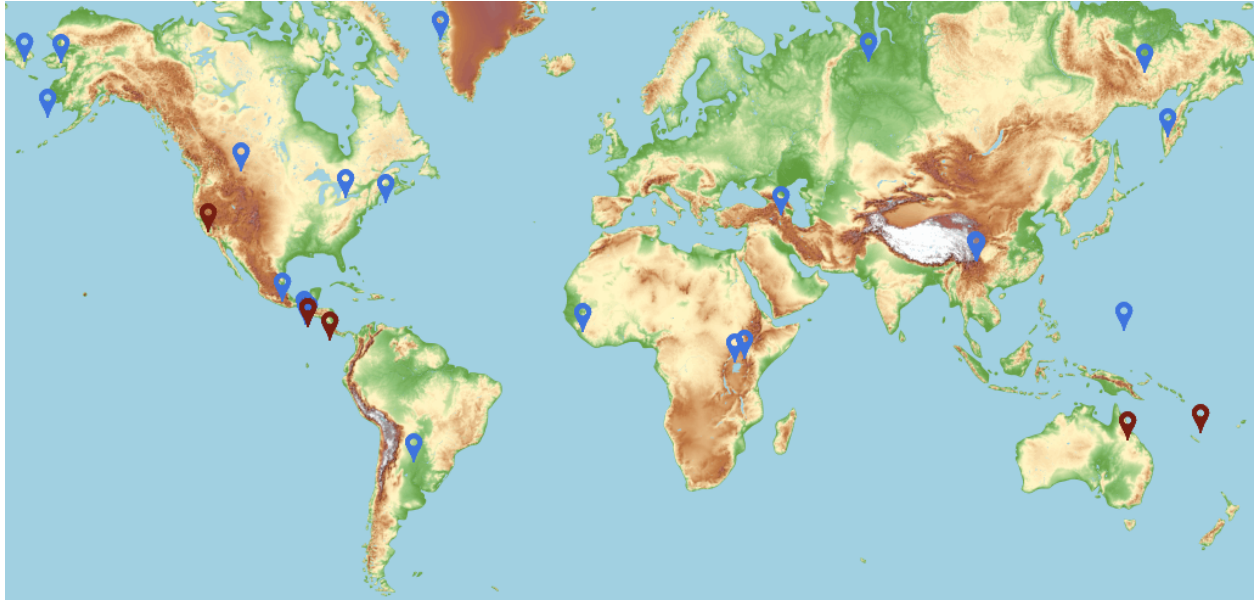


FIGURE 10.1. Map of languages with multiple antipassives in the dataset

At this point it is necessary to make a note about Mayan languages. Mayan is probably the language family which is most consistently described as having multiple types of antipassives or antipassive-like constructions (cf. Smith-Stark 1978, Dayley 1981, Aissen 1992, 1999, *inter alia*). Mayan languages have historically been portrayed as having three basic types of ‘antipassives’ (four with the addition of the ‘crazy’ antipassive in Q’anjob’alan): the ‘absolute’ antipassive, the ‘incorporative antipassive’, and ‘agent focus’ (AF), which is termed in many grammars something like the ‘focus antipassive’ or the ‘agentive antipassive’. However, there is a general consensus among Mayanists that agent focus is not a true antipassive (cf. Ayres 1983, Aissen 1999, Stiebels 2006, Coon et al. 2014). The incorporative construction (see Ajsivinac and Henderson 2011) and the ‘crazy’ antipassive (see Coon et al. 2014) have sometimes been explained using the same or similar mechanisms as AF, and both are discussed in this dissertation as generally lacking definitional features of true antipassive constructions (see Chapter 11). This leaves only one antipassive construction in most Mayan languages, the ‘absolute’ antipassive.

Lastly, while the majority of the languages with multiple antipassives are ergative (~64%), the sample also includes active languages (e.g., Nivaclé, Kolyma Yukaghir), inverse languages (e.g., Algonquian), and nominative-accusative languages (e.g., Tennet, Itelmen) that have multiple antipassives, so there is no one-to-one correlation between alignment type and the

presence of multiple antipassives in a language. A list of the languages in the sample with multiple antipassives, a short description, and how they were categorized here is given in Appendix E.

10.3 A TYPOLOGY OF MULTIPLE ANTIPASSIVE CONSTRUCTIONS

The differences between antipassive markers and antipassive constructions in languages which have more than one fall into the following three broad categories:

1. Primarily lexical differences
2. Primarily aspectual/modal differences
3. Primarily patient-related differences

There are sub-types of each of these categories, since the exact parameters differ somewhat from language to language, which are discussed in more detail in the following sections. Also, as mentioned above, it is possible that a single distinction belongs to multiple categories, particularly for languages with multiple antipassive constructions. This is also especially true for the lexical category, since the distribution may be partly lexicalized, but also still depend on phonological, aspectual, or other factors.

This typology applies equally to both languages with multiple antipassive constructions and languages with multiple antipassive markers only. That there is no systematic difference between the two types suggests that even though languages with multiple antipassive constructions are rarer, the organizing principles that govern their distribution are not substantially different from those that govern antipassive morphology. I return to this point in section 10.5.

Finally, while the antipassives in some languages are clearly distinguished along lines of the above categories, it was not uncommon for the differences between markers not to be well-explicated in descriptions of the languages in question. This led to difficulties placing some languages in the above typology, or led to questions about whether a given language truly has multiple antipassives at all. The following languages have different antipassive markers listed in their descriptions, but do not provide sufficient information about what the distribution is to place them confidently into a particular category: Itelmen, Tundra Nenets, Ch'orti' (info pending, Robin Quizar p.c. 2016), and Washo. These languages were placed into the categories

above based on what information was available, but it should be recognized that if/when additional information becomes available, their characterization here may change.

10.3.1 LEXICAL DIFFERENCES

Of the approximately 30 languages in the sample with multiple antipassives, at least some lexicalization determines the distribution of some of their markers in about 8 languages. Of these 8 languages, 6 have multiple antipassive markers (not constructions). These include Tzeltal (Mayan; *-maj* vs. *-baj*), Yup'ik (Eskimo-Aleut; *-uc* vs. *-kenge*), Inupiaq (Eskimo-Aleut; partly lexical, partly phonological), Hinuq (Nakh-Daghestanian), Kolyma Yukaghir, and possibly Itelmen (Chukotko-Kamchatkan), and Tundra Nenets (Uralic). The following example is from Hinuq, which has two antipassive morphemes, *-li:* and *-do:*. The distribution of these suffixes is lexically restricted (Forker 2013:331). (10.4a) shows the antipassive of a verb that takes *-li:*, while (10.4b) gives the antipassive of a verb which takes *-do:*, which can only appear with causative and anticausative bases.

(10.4a) Hado uži haw b-ič'i-**li:**-ho goła Ø-et'en.k'oλ-o al-λ'o-s
 this boy it III-dig-AP-IPFV.CV be.PTCP I-jump-PRS branch.OBL-'on'-ABL1

gulu-zo moqoli-λ'o-r
 horse-GEN2 back-'on'-LAT

'While it (the horse) is digging repeatedly (the earth with its hoof), the boy jumps from the branch onto the horse's back' (Forker 2013:520)

(10.4b) Yoλu.koka peč-mo-zo maʔa-ho q'idi Ø-iči zoq^we-n
 Cinderello(I) oven-OBL-GEN2 threshold-INAN.LOC down I-sit be-UW.PST

yoλa-t Ø-eq'i-r-**do:**-ho zoq^we-n
 ashes.OBL-CONTACT.LOC I-know⁵⁵-CAUS-AP-IPFV.CV be-UW.PST

'Cinderello was always sitting at the place by the oven and stirring in the ashes' (Forker 2013:522)

The 'lexical' categorization is slightly different for constructions. There are at least two languages in this sample⁵⁶ which were considered to have multiple antipassive constructions

⁵⁵ The antipassive form of 'know' is irregular in meaning, and indicates a rummaging or raking activity (Forker 2013:521).

⁵⁶ Chukchi is described in Kozinsky et al. (1988) as having a third antipassive morpheme *-et-* which is considered in other descriptions to be a reflexive morpheme. It is unclear from the

which differ from each other in terms of productivity, Soninke (Niger-Congo) and Guatuso (Chibchan). In many cases there is a difference in productivity between the two constructions as well as other structural or semantic differences which follow the typology outlined here. The ‘lexical’ characterization for these languages is derived from the origin of the second antipassive construction. As has been noted by a number of authors (e.g., Sansò 2015, Janic 2013, Geniušienė 1987), one common origin for antipassive constructions is the expansion of a middle/reflexive/reciprocal-type marker into the antipassive domain. There are at least three cases where a language has multiple antipassives because a middle marker gained antipassive functions, even though another antipassive construction already existed in the language (Soninke, Guatuso, and Dyirbal).

The middle/antipassive construction is often more restricted in its use as an antipassive than a dedicated antipassive, which is why languages whose second antipassive construction is an extension of the middle voice were categorized as ‘lexical’, even though the middle morpheme itself might be quite productive in other middle-type functions. This is true, for example, in Guatuso (Chibchan), where the antipassive formed with the reciprocal morpheme *ri-/ra-* only has an antipassive meaning in restricted contexts. Quesada (2007:174) suggests that this could be because certain verbs cannot take the dedicated antipassive morpheme.

(10.5a) A-rrá-lang-é
 2.ABS-1.ERG-eat-NFUT
 ‘I ate it’

(10.5b) I-có na-rá-lang-é
 3.ABS-in 1.ABS-REFL-eat-NFUT
 ‘I ate it’ (lit. ‘I ate myself from it’) (Quesada 2007:174-175)

The antipassive use of the reflexive contrasts with a more productive antipassive construction, which appears to have a dedicated antipassive marker.

(10.6a) Ujúti Ø-rra-err-é
 pig 3.ABS-1.ERG-shoot-NFUT
 ‘I shot the pig’

examples given if *-et-* truly has (non-reflexive) antipassive function, and has therefore only tentatively been included here. If *-et-* indeed has antipassive functions, then it would be lexically restricted with respect to the other two, more productive antipassive markers.

- (10.6b) Ujúti lhá na-**f**-err-é
 pig on 1.ABS-**AP**-shoot-NFUT
 ‘I shot on the pig; I did some shooting at the pig’ (Quesada 2007:175-176)

As in the Dyirbal examples in (10.3) above, both antipassive constructions in Guatuso are syntactically similar in that both have verbal voice markers and both allow the patient to appear in an oblique phrase, but they differ in their productivity and in the origins of the two antipassive markers.

10.3.2 ASPECTUAL/MODAL DIFFERENCES

The semantic correlates of antipassivization were discussed in section 8.2.9, where it was found that there is a wide variety of ways in which antipassivization affects not only information structure, but also aspect and mood. It was also pointed out that antipassives often have more than one function, e.g., they may indicate a less affected patient as well as durative aspect. As such, there exists an opportunity within the realm of tense/aspect/mood to divide these functions among different markers/constructions. This is exactly what we find in many of these languages with multiple antipassives, that there is an aspectual difference which results from the use of one marker/construction versus the other. Examples have already been provided where different antipassive constructions indicate an aspectual/modal difference: in Dyirbal the reflexive has an irrealis sense, which contrasts with the realis antipassive marker (cf. (10.3a-b)). Chamorro also has a realis-irrealis distinction in its antipassive markers, where *man-* marks realis modes and *fan-* marks irrealis:⁵⁷

- Realis: *man-*
 (10.7a) **Man**-mantieni yo’ ni banku
AP.REAL-hold.onto 1SG.ABS OBL chair
 ‘I held onto the chair’ (Cooreman 1988b:584)

⁵⁷ Note that Topping (1973) presents the *man-/fan-* difference as allomorphic. Also, this construction (as well as the *-in-* ‘passive’) are treated here as antipassive and passive(-like), respectively, even though they are clearly relatable to Philippine-type voice (cf. Donohue and Maclachlan 1999), because synchronically there is an unmarked transitive construction with which they can be said to alternate.

Detransitivizing reduplication:

- (10.9b) Sari ‘spear X’ → **sari**~sari ‘spear, be spearing’
Lavo ‘plant X’ → **lavo**~lavo ‘plant, be planting’
Uri ‘urge X’ → **uri**~uri ‘keep on urging’ (Jauncey 2011:139)

Reduplication of transitive verbs also may also result in semantic widening, semantic narrowing, semantic extension, or plural patients (Jauncey 2011:139-140). Similar facts are also true for Chukchi, where *-tku-* has an additional iterative sense which *ine-* lacks (Kozinsky et al. 1988:659).

In summary, there are five languages in the sample of ~30 languages with multiple antipassive markers and/or constructions which primarily use their various markers/constructions to indicate aspectual or modal differences. These five languages belong to four geographically disparate languages families (Austronesian, Pama-Nyungan, Surmic, and Chukotko-Kamchatkan), and exhibit a wide range of aspectual/modal differences which mirror those present in antipassives in general.

10.3.3 PATIENT-RELATED DIFFERENCES

The final type of distinction among antipassive types in the same language which was consistently present in the languages in the sample has to do with the coding or characteristics of the patient. There are at least eight languages in the sample (~27%) which have antipassives which code for differences in the characteristics of the patient. These include members of the Algonquian, Tibeto-Burman (Rgyalrongic), Mayan, and Matacoan families, and possibly West Greenlandic (Eskimo-Aleut) and Washo (Isolate). As with the other categories, languages which exhibit patient-related differences in antipassives may do so solely in their morphology (multiple markers), or via syntactic differences (multiple constructions).

One of the primary sub-types of differentiation with respect to the patient common in these data involves different markers for different animacy classes. This type of distinction was already exemplified above by Japhug (see (10.2a-b) above), where one marker indicates an implied human patient, and the other indicates an implied non-human patient. This same type of distinction in animacy can also be found in Algonquian languages and in Tseltal (Mayan; *-wan* vs. *-maj* and *-baj*, cf. Polian 2013:284). In Ojibwe, *-iwe* detransitivizes a transitive verb with an animate primary object (10.10a), while *-ige* detransitivizes a transitive verb with an inanimate primary object (10.10b).

(10.10a) Bmidaabaazhwe
 bimidaabaaN-**iwe**-w
 drive.around.TR.AN-**AP**.AN-3S
 ‘He drives a taxi’ (lit. ‘he drives people around’)

(10.10b) Zgaknige
 Zagakin-**ige**-w
 store.up.TR-**AP**.INAN-3S
 ‘He stores things up’ (Rhodes and Valentine 2015:1233-1234)

See section 7.4 for a discussion of antipassivization and detransitivized constructions in Algonquian.

The second recurrent subtype of antipassives differentiated by patient characteristics is found in those languages which use one marker/construction for patientless antipassives, which do not allow the expression of the patient in an oblique phrase, and another marker/construction for those which do allow patients in oblique phrases.⁵⁸ I have proposed (e.g., Heaton 2016) that this type of distinction exists in some K’ichean languages (see also Chapter 12 and 13.1 for a full account of the data and the arguments). There is evidence to support an analysis in Kaqchikel where the distribution of the markers *-n* and *-o* for antipassive-type constructions is based on the whether the patient can be overly expressed. For example, the antipassive construction from Kaqchikel in (10.11a) has an oblique-marked patient, a focused agent, and is marked with *-o*. In

⁵⁸ This may be the case in Chukchi (Chukotka-Kamchatkan), if the reflexive marker *-et-* indeed has antipassive functions (see fn. 56). If so, it would be another example of multiple antipassives differing in the marking the oblique vs. patientless contrast. The unproductive reflexive(/antipassive) *-et-* does not allow for the expression of an oblique patient, while the antipassive markers *ine-* and *-tku-* allow the patient to be expressed obliquely.

(10.1a) Ətlon **ine**-gənrītə-rkən qaa-k
 he.ABS **AP(+/-OBL)**-guard-PRS deer-LOC
 ‘He guards the deer’ (Kozinsky et al. 1988:665)

(10.1b) *Ətlon eyup-**et**-gʔi rəlg-ək
 he.ABS prick-**AP(-OBL)**-PST finger-LOC
 ‘He pricked [himself] in the finger’ (Kozinsky et al. 1988:659)

(10.1c) Ətlon eyup-**et**-gʔi
 he.ABS prick-**AP(-OBL)**-PST
 ‘He pricked [himself]’ (Kozinsky et al. 1988:659)

contrast, the antipassive in (10.11b) lacks any overt or implied patient, may or may not have a focused agent, and is always marked with *-n*. Given these differences, Kaqchikel is an example of a language which uses different antipassive markers (and constructions) to indicate the presence or absence of the patient.

(10.11a) Roj janila x-*oj-to'*-**o** k-ichin
 1PL really COMPL-1PL.ABS-help-OAP 3PL-OBL
 ‘We really helped them’

(10.11b) Ja ri achin n-Ø-ch’aj-**on**
 FOC DET man INCOMPL-3SG.ABS-clean-AP
 ‘It is the man [that] cleaning/cleans’ (author’s notes)

The total number of languages which distinguish their antipassives based on characteristics of the patients is not currently definitive partly because of the possible inclusion here of other nuclear K’ichean languages. It has not been confirmed that several of the other nuclear K’ichean languages (Sipakapense, Sakapulteko, Uspanteko, Tz’utujil) have the same or a similar pattern as Kaqchikel. However, from existing descriptions of these languages, it seems that it is a distinct possibility, since they all describe the oblique antipassive pattern as the ‘agentive/focus antipassive’, i.e., the same label as AF, and as being marked exclusively with *-o/w* for root transitives (see Dayley (1985:345-351) on Tz’utujil, Can Pixabaj (2007:386-387) on Uspanteko, Barrett (1999:242-243; 248) on Sipakapense, and Du Bois (1981:200; 246-250) on Sakapulteko). However, even if the patientless construction (marked by *-(o)n*) and the oblique construction (marked by *-o(w)*) are not syntactically separate constructions in these other languages, as in Kaqchikel, it seems relatively clear that these languages have two antipassive markers.

Other languages have other kinds of distinctions which constitute minor subtypes within the larger category of patient characteristics. Nivaclé (Matacoan) was discussed in section 8.2.7 as having two antipassive markers, *wank(a)-* and *-jan*, which differ in productivity as well as in their treatment of the patient. While both result in patientless antipassives, *-jan* (with the allomorph *-jun* when following /u/) indicates that the patient may be known but is unspecified, while *wank(a)-* removes the patient entirely (Campbell p.c. 2016).

- (10.12a) Xa-y-ϕuyu-**jun**
 1SG.ACT-VBLZ-cure/blow-AP1
 ‘I blow, I cure (people)’ (note: shamans blow on people for curing)
- (10.12b) Xa-**wanka**-klôn
 1SG.ACT-AP2-kill
 ‘I slaughter (things)’ (Campbell p.c. 2016)

Washo (isolate) appears to have a similar type of distinction, where the marker *ʔum-* creates a patientless intransitive from a transitive verb, while the ‘static’ prefix *w-* derives ‘diffuse patient’ intransitives with transitive roots (Jacobsen 1964). Both of these languages (Washo and Nivacle) therefore make a distinction in the nature of the patient, even though both antipassives in the language do not take overt patients.

Also potentially in this category is Western Greenlandic. Although the nature of the differences between the multiple antipassive markers in this language is a matter of debate, many proposed differences, e.g., in definiteness, topicality, givenness, etc., pertain to the patient and as such argue for inclusion in this category. However, there are also proposals that the distinction is primarily aspect-based (e.g., Bittner 1987), in which case Western Greenlandic would fit better into the category above on aspectual distinctions.

10.4 ON STACKING

In a few languages with multiple antipassive markers, it is possible for two markers to appear simultaneously on the same verb form. This type of antipassive ‘stacking’ has been discussed for Chukchi (Chukotka-Kamchatkan), Western Greenlandic/Inuktitut (Eskimo-Aleut), and has recently been identified in Nivacle (Matacoan). Also, although Salishan languages were not considered here to have antipassive constructions, stacking has been reported in several Salishan languages, and therefore merit mention here. While proposals for why stacking occurs have been given for individual languages, no unified explanation exists (to my knowledge). As this phenomenon is rare and still poorly understood, a unifying explanation is still elusive. However, this section briefly provides examples of stacking in individual languages, and then makes some general observations about stacking which may serve as hypotheses or expectations if any further cases of stacking are encountered.

Chukchi allows the antipassive markers *ine-* and *-tku-* to stack with some verbs, which results in a form with the properties of a normal antipassive, as illustrated in (10.13).

- (10.13) Tirkə-tir n-ena-nomawatə-**tko**-qen...
 sun-red(ABS) IPFV-AP-heat(?)-AP-PRS
 ‘The sun heats (imperf.), i.e., gives warmth’ (Kozinsky et al. 1988:661)

Kozinsky et al. (1988:661) suggest that perhaps the two affixes ‘support’ each other, since both markers also function as both antipassive and agreement markers when used in isolation.

There are also a number of examples in Nivacle where two antipassive markers appear in the same verb form. While both antipassive markers *-jan* and *wanka-* are fairly productive independently (although *-jan* is less productive than *wanka-*), there are only a few verbs known to allow them both in the same form. Antipassive stacking in Nivacle is exemplified in (10.14).

- (10.14) **Wanka-eyjats-jan**
 AP2-teach-AP1
 ‘To teach, instruct; teacher’ (Campbell p.c. 2016)

As previously mentioned, the two markers have different functions. However, this is the only example of antipassive morphemes stacking which differ with respect to characteristics of the patient. It is possible that this pertains to the fact that *-jan* attaches primarily to verbs derived from nouns, but any preliminary analyses are tentative.

As mentioned above and as is discussed more thoroughly in section 8.2.2, the Salishan activity suffix and middle marker were seen here as operating primarily on intransitive unaccusative predicates (following e.g., Wiltschko 2006), and not directly on transitive predicates. However, Gerdts and Hukari (2005) discuss cases of stacking in Halkomelem (*-m* ‘middle’ and *-els* ‘activity’), and the explanation is quite different from that given above for Chukchi. They suggest first that the two markers differ in terms of their aspectual effects, where *-els* has an additional ‘activity’ meaning. Also, at least some of the verbs which allow *-m* and *-els* do not allow *-els* in isolation, in which case *-m* creates a base from that verb to which *-els* may attach. This hypothesis is corroborated by the fact that *-m* always precedes *-els* when they appear together (Gerdts and Hukari 2005:58-62).

- (10.15) Q^wəl-ə**m**-els cən ce? ?ə k^w sce:ltən ?əw’ k^weyəl-əs
 bake-MID-ACTIV 1S FUT OBL DET salmon COM day-3S.SUB
 ‘I am going to barbeque fish tomorrow’ (Gerdts and Hukari 2005:58)

Similar constructions are attested in other Salishan languages, including Thompson and Lillooet. Although van Eijk (1997:118) does not provide an account for those “few words” in

Lillooet which allow both markers *-əm* and *-xal*, as in (16), since Lillooet is related to Halkomelem, it is possible that the distribution and functions are the same or similar in both languages.

- (10.16) *Mán'x-əm-xal*
smoke-MID-UNERG
'To have a smoke together, to get together for a good time' (van Eijk 1997:118)

In this particular example, the root *mán'x-* does not occur in isolation; it always occurs with *-əm* (van Eijk 1997:48), and as such may function as a lexicalized unit to which *-xal* attaches.

Thompson and Thompson (1992:106) note that there are a few examples in Thompson where what they call the “control” and “non-control” middle morphemes can stack, where they consider the non-control form to be added to the control middle base *cəh-əme* ‘put (s.t.) away’.

- (10.17) *Ch-em-nwéln=k^w*
arrange-MID.CTL-MID.NCTL=2SG.INDIC
'You manage to put (s.t.) away' (Thompson and Thompson 1992:106)

Additionally, the middle *-əme* may stack upon itself as an addition to a middle stem (Thompson and Thompson 1992:105), where */úym'x^w-m/* is a lexical suffix.

- (10.18) *Xək-m-úym'x^w-m*
mark-MID.CTL-land-MID.CTL
'Make a sign to identify an area' (Thompson and Thompson 1992:105)

It may be that there is no single profile of languages which allow antipassives to stack, and that there is no single reason that a language allows this to happen. However, there are some observations which can be made based on these limited examples which work towards generalizing about these constructions.

First, the existence of stacked antipassives in a language does not appear to be tied to ergativity or any other verb alignment, as Nivaclé has active-stative alignment. Second, none of the languages considered here has what one might call productive stacking; in all cases, forms with multiple antipassive or antipassive-type markers appear to be restricted to some small number of verbs. This is particularly interesting in light of the fact that all the antipassive markers which can be stacked are largely productive when used in isolation. There also appear to be ordering restrictions in cases where stacked antipassive morphemes are adjacent.

As a final note on antipassive stacking, Gerdts and Hukari (2005) discuss how stacked intransitivizers are problematic, since theoretically one marker attaches to an already intransitive base, as the verb has already been intransitivized by the other marker. However, this does not strike me as particularly problematic. One solution is that which Gerdts and Hukari adopt, which is to claim that one of the affixes applies to transitive roots, not transitive bases. However, a potentially simpler and cross-linguistically applicable solution may be simply to note that it is not at all uncommon for antipassive markers to also attach to intransitive or transitive stems and not affect valency (cf. sections 8.2.9 and 8.2.5). If the language already allows this, then this is an obvious solution, and if not, it is possible that stacked antipassive constructions should be considered their own domain in which this may take place.

This type of approach, where a marker may be either antipassive or aspectual, is akin to what Spreng (2001) and Johns (2006) propose as to why antipassive stacking appears in Inuktitut. Both authors distinguish aspectual and antipassive functions of antipassive markers, which allows cases of stacking to be explained by one marking being antipassive, while the other is aspectual.

(10.19) Anguti kunik-**si-si**-vuq arna-mik
 man kiss-**AP-INCEPT**-3S woman-OBL
 ‘The man is starting to kiss the woman’ (Spreng 2001:165)

10.5 SUMMARY AND ADDITIONAL THOUGHTS

In this chapter I sought to create a typology describing common differences between antipassives in languages which have more than one antipassive marker or construction. Languages were found to differentiate their antipassives in one or more of the following ways: distinctions related to lexical categories, distinctions related to aspect and mode, and distinctions related to characteristics of the patient. The majority of the differences between antipassive constructions in this sample were at least partially lexical (10.8-10.10), although there was overlap with the other two categories. There were also at least eight languages with patient-related distinctions, primarily with respect to animacy or the presence of the patient in an oblique phrase, and five languages with aspectual distinctions. The categorization was not noticeably affected by the type of antipassives a language had, i.e., multiple antipassive markers vs. multiple antipassive constructions. The only language with multiple antipassives which exhibited

a distinction which did not fit readily into one of the three categories proposed here was Tirmaga (Surmic), which has a distinction in person, where *-nen* is used for 1st and 2nd persons, but *-ne* for 3rd persons and 1st inclusive (Bryant 1999:92).

The geographic distribution of the languages in this dataset with multiple antipassives is given below, color-coded for how they were placed in the classification created in this chapter. Blue indicates multiple antipassives differentiated by patient characteristics; red/maroon indicates those differentiated lexically; pink indicates those differentiated primarily by aspect; and black is used for those which lack sufficient information to discern a difference, as well as Tirmaga.

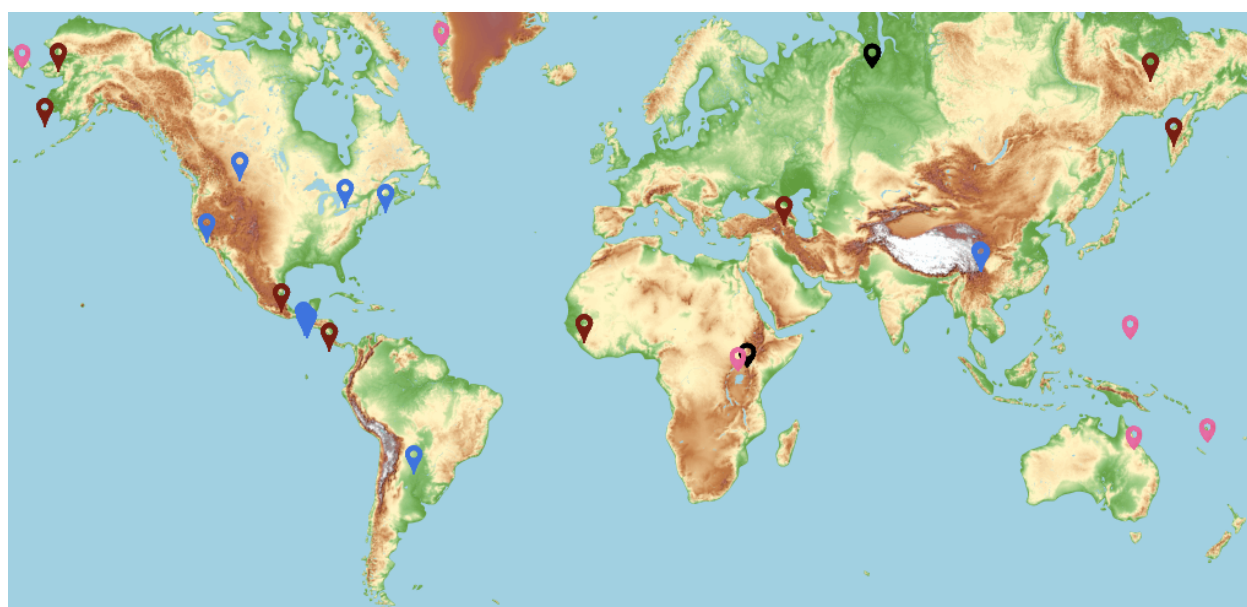


FIGURE 10.2. Languages in the data set with multiple antipassives by type

As discussed in Chapter 2, other typological works on antipassives have proposed functional categories for antipassive constructions, namely Foley and Van Valin's (1984, 1985) 'backgrounding' vs. 'foregrounding' antipassives and Dixon's (1994) pragmatic vs. syntactic antipassives (a.k.a. those that feed a syntactic 'pivot'). Both of these characterizations were designed to deal with different types of antipassive constructions across languages with any number of antipassives, and did not specifically address languages with multiple antipassives. However, it is a logical possibility that the types of distinctions which exist between antipassives cross-linguistically would be the same as those exhibited between antipassive constructions within a single language.

Both Dixon's and Foley and Van Valin's definitions consider the primary distinction in antipassive types to be essentially what was discussed here as syntactic: antipassives which allow the agent to be the 'pivot', or be in a syntactically privileged position, versus those that mainly background or remove the patient from the discourse. Interestingly, this distinction is not reflected in languages with multiple antipassives. The closest case of something similar may be Kaqchikel and some of the other K'ichean languages, since one antipassive may be used in focus or non-focus contexts, while the other is limited to focus. However, the distinction with respect to the morphology is not focus vs. non-focus, but rather whether the patient can be expressed (see Chapters 12 and 13 for examples). However, findings here suggest languages with multiple antipassives do not tend to exhibit distinctions pertaining to syntactic vs. non-syntactic use. Rather, the same types of functional differences which are found outside of the realm of syntax—those aspectual, patient vs. patientless, animate vs. inanimate, and lexical differences observed here—are also characteristics of antipassives in languages which only have one (see Chapter 8).

The other possible parallel which has been put forth in the literature is between passives and antipassives. While I am unaware of any typology of languages with multiple passives like the one proposed here for multiple antipassives, the same types of information structure/syntactic differences as those discussed in the literature for antipassives have also been proposed for passives in general (e.g., Foley and Van Valin (1985), where passives are likewise 'foregrounding' or 'backgrounding'). Although passives and antipassives are not mirror-image structures as was once thought (see Chapter 2), it is possible that the same types of distinctions found in languages which multiple antipassives are present in languages with multiple passives.

While it is not possible to make any concrete parallels without the same type of data on passives as that which I have collected here for antipassives, limited examples suggest that this idea has merit. First, many Mayan languages have multiple passives in addition to multiple antipassives. Passives in K'ichean languages are distinguished primarily by aspect, where the *-taj* 'completive' passive which emphasizes the result of the activity and/or its termination, and contrasts with the simple passive (cf. Dayley 1983:35-36). Both types may optionally be accompanied by the agent in an oblique phrase. This aspectual difference between passive constructions is similar to the aspectual differences discussed in section 10.3.2 between different antipassive markers/constructions. The following examples are from Tz'utujil.

Simple passive:

- (10.20a) Jar iib'ooy x-Ø-kam-s-**ax** (k-umaal ja tz'i')
DET armadillo COMPL-3SG.ABS-die-CAUS-PASS 3PL-OBL DET dog
'The armadillo was killed (by the dogs)' (Dayley 1985:341)

Completive passive:

- (10.20b) X-in-tzuku-**taj** (aw-umaal)
COMPL-1SG.ABS-search-COMPL.PASS 2SG-OBL
'I was finished being looked for (by you)' (Dayley 1983:36)

Chamorro likewise has two passive-like constructions, one marked with *ma-* and the other *-in-*, the latter of which is related to the patient voice marker in Philippine-type voice systems. Cooreman (1988b:570) notes that although both permit the agent to appear in an oblique phrase, one of the primary differences between the two is that the majority of *ma-* passives occur without mention of the agent, while many *-in-* passive-like constructions require it. This difference is reminiscent of patient-related differences between antipassive constructions discussed in section 10.3.3.

- (10.21a) Todu i taotao ni man-gaige Guam man-**ma**-takpangi
all the people REL PL-stay Guam PL-PASS1-baptize
'All the people who lived on Guam were baptized'

- (10.21b) Si nana-hu ch<**in**>atge gias tata-hu
UNM mother-1SG.POSS smile.PASS2 OBL father-1SG.POSS
'My mother was smiled at by my father' (Cooreman 1988b:570)

In contrast, Japhug (Rgyalrongic) has two passives, neither of which allow the agent to be expressed, and which differ mainly in productivity. The passive marked with *a-* is fully productive (10.22a). However, there is a second passive created by the fusion of the passive and causative markers (*suu-* + *a-* → *sr-*) which has the specialized meaning 'ask (someone) for (something)', which is unproductive (10.22b). The difference in productivity/lexicalization between these two passives parallels the difference in productivity and lexical specification in antipassive constructions discussed in section 10.3.1.

(10.22a) Tʉ-rdoʋ pʉ-a-qru tɛ, ʉ-ŋgu nu tɛu ŋʉl qhoʋqhoʋ
 one-piece AOR-3>3-tear CONJ 3SG.POSS-in DEM LOC silver ingot

tʉ-rdoʋ pʉ-kʉ-mphú-chʉ
 one-piece IPFV.EVID-PASS-wrap-EVID
 ‘He opened one piece (of bread), and there was a silver ingot wrapped inside it’

(10.22b) ʒjtsu tʉ-khutsa a-nʉ-tʉ-sʉ-mbi
 chili one-bowl IRR-PFV-2-CAUS.PASS-give
 ‘You will ask him for a bowl of chili’ (Jacques 2012:209,211)

Given these limited examples, it is possible that languages with multiple passives may follow a similar typology as languages with multiple antipassives. Further research will be necessary to determine if these initial similarities continue to hold with a larger sample.

CHAPTER 11. BACKGROUND ON MAYAN

Mayan languages have figured prominently in discussions of antipassivization and the role of antipassives in ergative languages. Given that, any typological overview of antipassives necessarily has to deal with what often are complicated facts involving different antipassive-like constructions in Mayan languages. There have been significant developments in the area of Mayan syntax since much of the original descriptive work on Mayan languages was done and antipassive-type structures were first identified in these languages (cf. Smith-Stark 1978, Dayley 1981, among others). It is therefore important to revisit the characteristics of antipassive-type constructions in Mayan languages, given more current treatments of Mayan syntax.

This chapter provides a basic overview of Mayan languages and general typological features which are relevant to the discussion of antipassive constructions. The goal is not to be comprehensive in a discussion of Mayan syntax; the goal is rather to provide the background helpful for non-Mayanists to understand both the features of antipassive-type constructions in Mayan languages generally, and the more in-depth discussions of antipassive-type constructions in K'ichean languages in Chapters 12 and 13. For a more comprehensive overview of Mayan languages with respect to phonology, syntax, and semantics, see the special issue of *Language and Linguistics Compass* on Mayan linguistics (Bennett et al. 2016 and the articles therein).

A brief overview of the Mayan language family and a general typological profile of these languages with respect to argument marking, word order, and transitivity is given in section 11.1. Morphological and syntactic ergativity in Mayan languages are addressed in section 11.2. In section 11.3 I present the traditional view of antipassive-type structures in Mayan, which is then compared in section 11.4 with the categorization of these structures for the purposes of this typological study. A summary of the general facts with respect to detransitivization in Mayan languages is given in section 11.5.

11.1. BASIC STRUCTURES

11.1.1 THE MAYAN LANGUAGE FAMILY

Mayan languages are spoken primarily in Mexico and Guatemala, although also in Honduras and Belize and in diaspora communities in the US and Canada. The Mayan language

family consists of approximately 30 languages⁵⁹ which, according to Kaufman (1990), belong to 4 primary branches: Huastecan, Yucatecan, Western Mayan (Q'anjob'alan and Cholan-Tseltalan), and Eastern Mayan (Mamean and K'ichean). Although a range of dates have been proposed for the time depth for the family, Kaufman's (1976) figure of approximately 4,200 years is the most-cited. A recent classification of Mayan languages (Campbell 2016), where the degree of indentation corresponds to degree of relatedness, is given in Figure 11.1.

Discussions also often distinguish "highland" and "lowland" Mayan languages, which is a geographical and cultural designation rather than a genetic one. "Highland" refers to those languages spoken in the more mountainous regions of Guatemala to the south ("cold country"). "Lowland" refers to those languages spoken in the lowland areas ("hot country") in northern Guatemala and in Mexico (also related to the complex of pre-colonial Maya archaeological sites and the glyphic texts). The lowlands are also a diffusion area (linguistic area) involving the Mayan languages of the lowlands where contact among languages led to considerable borrowing and structural influence among languages (Justeson et al. 1985, Law 2014).

⁵⁹ The exact number of languages in the family depends on the language/dialect status of several varieties, which for sociopolitical reasons are registered either as languages or as dialects. See, for example, England (2003a:739) and references therein on the status of Achi.

Huastecan
 Huastec,⁶⁰ Chicomuceltec
 Core Mayan (Central Mayan)
 Yucatecan
 Yucatec (Yucatec Maya), Lacandón
 Itzaj (Itzá, Itza'), Mopán
 Western Mayan
 Ch'olan-Tseltalan
 Ch'olan
 Ch'ol, Chontal (Yokot'an)
 Choltí (extinct), Ch'orti'
 Tseltalan
 Tseltal, Tsotsil
 Greater Q'anjob'alan (Q'anjob'alan-Chujean)
 Q'anjob'alan
 Q'anjob'al, Akateko, Jakalteko (Popti')
 Mocho' (Motozintlec) (with Tuzantec)
 Chuj-Tojolabal
 Chuj, Tojolabal
 K'ichean-Mamean (Eastern Mayan)
 K'ichean
 Q'eqchi'
 Uspanteko
 Poqom
 Poqomam, Poqomchi'
 Central K'ichean (K'ichean Proper)
 K'ichee'
 Kaqchikel, Tz'utujil
 Sakapulteko
 Sipakapense
 Mamean
 Mam, Tektiteko (Teko)
 Awakateko, Ixil

FIGURE 11.1. The Mayan language family (Campbell 2016)

Although there are significant differences among Mayan languages, they all share a number of typological characteristics. In addition to the features discussed below with respect to word order, transitivity, and ergativity, verbs Mayan languages are morphologically complex,

⁶⁰ The spelling of the names of Mayan languages in Guatemala follows the follows recommendations of the *Academia de Lenguas Mayas de Guatemala* (ALMG) (<http://www.almg.org.gt/>), and the spellings for those languages spoken in Mexico follow the spellings of INALI (2009).

such that verb roots are rarely bare. All Mayan languages are also head-marking in the sense of Nichols (1986), meaning that they cross-reference the roles of verbal arguments via verbal affixes/clitics, and they lack nominal case. A basic version of the template for transitive verbs in Mayan languages (after Coon 2016) is given below. The various elements of this template are discussed in the following sections. Absolutive markers are in parenthesis here to indicate that some languages have absolutive markers which are prefixes(/proclitics) while others have absolutive markers which are suffixes.

TAM – (ABS) – ERG – ROOT – VOICE – STATUS – (ABS)

This lack of overt nominal case brings up an important point with respect to antipassivization, that since these languages lack morphological cases that mark oblique relations in the traditional sense, they must mark the patient as an oblique argument in an antipassive construction in some way other than morphological case. Mayan languages have a closed word class of what are called ‘relational nouns’, which signal oblique arguments, among other functions. They are structurally nouns in that they are mandatorily possessed, but they function as prepositions do in English and other European languages in that they precede a noun phrase and express a relation to another word or element in the clause (hence the label ‘relational noun’).

Because Mayan languages (like many other ergative languages) have ergative/genitive syncretism, the possessive prefix for relational nouns is largely homophonous with the ergative marker. Although some authors have labeled relational noun prefixes as ‘ergative’ for this reason, relational nouns are nouns, and therefore the function of the prefix is more accurately genitive/possessive.⁶¹ To avoid any confusion I have consistently glossed this prefix simply with its person and number features, since neither possessive nor ergative functions are particularly relevant to relational nouns in the antipassive context. The number of relational nouns can vary from Mayan language to Mayan language, and their forms and functions may vary even among closely related languages (see K’ichee’ vs. Kaqchikel in section 12.3). However, some common

⁶¹ At least in K’ichean languages, there are morphological differences between the ergative and the possessive in the 1st person singular, where the ergative marker is *in-/inw-*, while the possessive is *nu-/w-*. The latter forms appear on relational nouns.

examples of relational nouns in Kaqchikel which can function both as oblique markers in voice constructions and as other entities in other contexts are given in (11.1-11.2) below.

-ichin, possession; antipassive oblique marker for the patient:

(11.1a) Akuchi' k'o wi ri **aw-ichin** (rat)?
 where exist LOC DET **2SG-OBL** 2SG
 'Where is yours?' [textual, instructional_ML]

(11.1b) Rije' x-e-to'-on⁶² **r-ichin** nu-te'
 3PL COMPL-3PL.ABS-help-AP **3SG-OBL** 1SG.POSS-mother
 'They helped my mother' [textual, conversation_KX_RH]

-oma, 'because'; passive oblique marker for the agent:

(11.2a) **Iw-oma** (rix) rin in b'oq-öl chupam re ch'abäq re'
2PL-OBL 2PL 1SG 1SG plop-POSIT inside this mud this
 'Because of you (all) I am sprawled out into this mud' [textual, narrative_MS]

(11.2b) X-Ø-taq el **r-oma** ri ixöq
 COMPL-3SG.ABS-send.PASS DIR **3SG-OBL** DET woman
 'He was sent off by the woman' [textual, narrative_MS]

An additional point which needs to be addressed is that all of the Mayan languages are in some state of endangerment (cf. *Catalogue of Endangered Languages* 2016 [www.endangeredlanguages.com]). Some already have no native speakers (Ch'olti', Chicomulseltec), and some are severely endangered (Itzaj, Lacandon). All of the languages which continue to be spoken today are in contact with and under pressure from Spanish, which is increasingly the language of daily life in much of Guatemala and the regions of Mexico where Mayan languages are spoken. Most Mayan language speakers also have some competence in Spanish, and younger speakers and educated speakers are bilingual. Even for bigger languages like Kaqchikel, and even in relatively isolated towns where almost everyone is ethnically Kaqchikel, it is not uncommon for people in their 20's (and younger) to understand but not to speak the language, with the result that their children are not Kaqchikel speakers. Partly in response to the increasing prevalence of Spanish, there is a desire in the community of Mayan scholars to minimize and eliminate any possible effects that contact with Spanish has had on

⁶² This particular speaker is from San Juan Comalapa, where the *-o* and *-on* antipassive-type suffixes have merged to *-on* (see section 13.2). In other dialects (as well as historically), this construction would take *-o*, not *-on*.

Mayan languages (cf. England 2003b:38-39). Mayan language planning, policy, and revitalization efforts are currently overseen by *the Academia de Lenguas Mayas de Guatemala* (ALMG) and its associated programs.

11.1.2 WORD ORDER

Mayan languages have relatively free word order and a wide variety of different word orders are possible, but convey different pragmatic, semantic, or discourse-related meanings (cf. England 1991). Additionally, word order in Mayan languages can be affected by the respective animacy and definiteness of the participants. With that said, one or two word orders tend to be more common, and pragmatically more neutral. With such factors taken into consideration, basic word order in Mayan languages is verb-initial. England (1991) gives a break-down of different basic word-order patterns within the family, which include:

1. Languages with **fixed VSO** order, including Mamean, Q'anjob'al, Jakalteko and one dialect of Chuj. Norman and Campbell (1978) consider fixed VSO to be innovative.
2. Languages which are **predominantly VOS**, including Yucatecan, Tojolab'al (Tojolabal), Tzotzil (Tsotsil), and single dialects of Tz'utujil and Ixil. Importantly, these languages also allow SVO, and England (1991:451) notes that "In general, it is difficult to decide on which [order] is more 'basic'." However, it is generally the case that in SVO contexts the agent can be analyzed as a topic (see below).
3. Languages with **both VOS and VSO** orders, including Wasteko (Huastec), Tzeltal (Tseltal), Kaqchikel,⁶³ K'iche' (K'ichee'), Akateko, Mocho', and some dialects of Chuj and Tz'utujil. In these languages, the relative definiteness and/or animacy of the two arguments affects the order such that less definite/animate patients immediately follow the verb. SVO order in these languages can likewise be attributed to the topicality of the agent.

⁶³ On the basis of my data I would argue that at least some dialects of contemporary Kaqchikel have basic VOS word order, since when arguments are of equal in animacy and definiteness, speakers prefer VOS (or SVO) to VSO. However, as England (1991:472-473) notes, certain speakers have difficulty interpreting verb-initial sentences, and interpretations may vary. England (1991:472) states that "Kaqchikel is the language of the K'ichean branch that is perhaps the most insistent on SVO today."

4. Languages with **SVO** orders. Although Quizar (1994) considers SVO to be the basic word order in Ch’orti’, she includes examples where A is a topic, since she argues that the ‘natural’ state of a definite agent is to be a topic. However, it is noteworthy that intransitive sentences in Ch’orti’ are about equally split between SV and VS orders, which suggests that post-verbal subjects are possible and common. Also, while Tuyuc Sucuc (2001:148) describes Uspanteko as an SVO language, Can Pixabaj (2007:520) describes Uspanteko as VOS.

Verb-initiality is central to arguments surrounding the workings of Mayan syntax. The idea that arguments move to the preverbal position when they are topical or focused is a long-standing observation in Mayan linguistics, although this understanding was most notably formalized in Aissen (1992). Aissen proposed that Mayan languages have two preverbal topic positions which precede a preverbal focus position, as schematized in Figure 11.2 below (the verb and its arguments are generated farther down the tree).

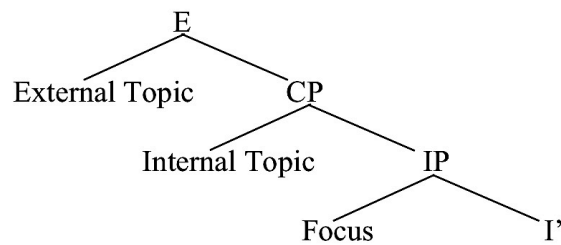


FIGURE 11.2. Topic and focus positions in Mayan according to Aissen (1992), from Clemens (2013)

In this view, any preverbal argument is either a topic or is focused. Topics are, broadly, what the sentence is about, and in Mayan topics are generally definite and sometimes accompanied by topic particles/morphemes. Focus, on the other hand, highlights a particular argument, and can be read like a cleft in English (“it was X that...”). If multiple arguments are preverbal, SOV results from a topicalized agent and a focused patient, while OSV results from a topicalized patient and a focused agent (Aissen 1992:43-44). An example of an SOV sentence in Tsotsil is given in (11.3).

		S		O		V
(11.3)	A	ti	prove	tzeb-e	sovra	ch'ak'bat
	TOP	DET	poor	girl-ENC	leftovers	was.given
	'It was leftovers that the poor girl was given' (Aissen 1992:51)					

The evidence for both an internal and an external topic position comes from differences observed between Tz'utujil (which has internal topics) and Jakalteko and Tsotsil (which have external topics): Topics in Tz'utujil may appear in embedded clauses and may be third person pronouns, which is not true of topics in Jakalteko and Tsotsil. Also, while topics in Tsotsil and Jakalteko may be offset by a pause, there is no significant pause separating topics in Tz'utujil from the following clause (Aissen 1992:71-76). Aissen argues that this is evidence that topics in Tz'utujil, but not Jakalteko and Tsotsil, are internal to CP. Aissen also notes that the external topic position is associated with new or contrastive topics, while internal topics tend to be continuing topics.

While the topicalization of an argument does not require any additional morphosyntactic marking (other than topic particles/enclitics in those languages which have them, as in (11.3) above), focusing arguments can trigger the use of special morphosyntactic marking in some languages (see also sections 11.1.3 and 11.2.2 below). For example, focusing the agent of a transitive verb in Jakalteko involves the use of an agent focus construction (as in (11.4a)), while topicalizing the agent of a transitive verb does not (11.4b).

(11.4a)	Ha'	naj	x-Ø-maq- ni		ix
	FOC	he	COMPL-3SG.ABS-hit-AF		she
	'It's he that hit her'				

(11.4b)	Naj	Pel	Ø-s-maq		naj	ix
	CLF	Peter	3SG.ABS-3SG.ERG-hit		he	she
	'Peter, he hit her' (Craig 1977:11-12, cited in Aissen 1992:62-63)					

In a number of Mayan languages, this type of morphosyntax which distinguishes topics from focused elements is an important feature of their grammars (see sections 11.2.2, 11.3, and Chapter 13).

11.1.3 TRANSITIVITY

All Mayan languages are characterized by verbs classes which are strongly differentiated based on transitivity. Mayan languages have transitive and intransitive verb classes, as well as a

positional class. Positionals are a separate class of roots which describe physical configurations of objects, but which can be used as transitives or intransitives if given additional derivational morphology. Very few verbs (if any) in a given Mayan language are ambitransitive/labile. For Tojolabal, Furbee-Losee (1976:55) claims that a few roots of the form CVC may be inflected either transitively or intransitively. Vázquez Álvarez (2011:110-113) also identifies a handful of verbs in Ch’ol which can be used transitively or intransitively, as demonstrated by *-pul* ‘burn’ in (11.5a-b) below, which requires only a change in ‘status’ (see below).

(11.5a) Tyi pul-**i**-Ø
 PFV burn-**INTR**-3.ABS
 ‘It burned’

(11.5b) Tyi i-pul-**u**-y-Ø-ob
 PFV 3.ERG-burn-**TR**-EP-3.ABS-3PL
 ‘They burned it’ (Vázquez Álvarez 2011:111)

Also, Edmonson (1988:179-180; 615-625) identifies 66 verbs in Huastec which are A=O ambitransitive verbs, in that they can appear with either transitive or middle thematic suffixes, and can be used as a transitives or middles, respectively, without any additional derivational morphology. However, Huastec is somewhat of an outlier in this respect, as examples of ambitransitivity in other Mayan languages are very limited.

Transitive and intransitive verbs in Mayan languages are differentiated by verbal cross-referencing morphology. Mayan languages are pro-drop, and few clauses have both an overt A argument and an overt O argument, so the identification of transitive or intransitive verbs lies in the verbal morphology. In transitive constructions, both the agent and the patient are cross-referenced on the verb, either through agreement affixes or clitics (although the third person singular absolutive is very often null). Intransitive verbs, on the other hand, only involve verbal indexing for the agent, which is of the absolutive pronominal series (“Set B” in the earlier Mayanist literature). Typical intransitive verbs cannot take a patient argument of any kind. In those languages which have them, ‘status’ suffixes (cf. Kaufman 1990) also indicate transitivity, where transitivity or intransitivity is indexed by a suffix (or its absence) indicating aspect and clause type. The morphological differences between transitive and intransitive verbs are demonstrated in (11.6a-b) from K’ichee’. The transitive verb has both ergative and absolutive cross-referencing prefixes, as well as a transitive ‘status’ suffix. The intransitive verb has only an

absolutive prefix, and in this example takes the ‘status’ suffix which appears with intransitive verbs in the imperative.

Transitive:
(11.6a) Š-Ø-ki-k’ux-uh
COMPL-3SG.ABS-3SG.ERG-chew-TR
‘They chewed it’ (Mondloch 1981:53)

Intransitive:
(11.6b) K-iš-war-oq!
IMP-2PL.ABS-sleep-DEP.INTR
‘(You pl.) sleep!’ (Mondloch 1981:80)

Within these two transitivity categories, Mayan languages also make a morphological distinction between whether the verb inherently belongs to a particular class (called ‘root’ transitives or intransitives), or whether they belong to that class as the result of derivation (called ‘derived’ transitives or intransitives). Verb roots are predominantly of the form CVC, and verbs with other forms tend to belong natively to other word classes. Whether a particular form is built upon a verb root or a derived form has consequences in other areas of the morphology, particularly voice marking and TAM (tense/aspect/mood) marking. The root vs. derived contrast is also sometimes referred to as a ‘polysyllabic’ vs. ‘monosyllabic’ contrast, since the presence of derivational/voice affixes results in a polysyllabic base.

This distinction between root and derived verbs is most relevant to the current discussion with respect to transitive verbs and voice morphology. In many Mayan languages, voice morphology has a different form with root transitive verbs than it does with derived transitive verbs. One of the clearest examples of this is in one of the two passive constructions in K’ichee’, where root transitives are passivized by lengthening the root vowel, as in (11.7b), while derived transitives are passivized by the suffix -š, as in (11.7c).

Transitive:
(11.7a) Š-in-a:-č’ay-oh
COMPL-1SG.ABS-2SG.ERG-hit-TR
‘You hit me’ (Mondloch 1981:106)

Passive of a root transitive:
(11.7b) K-in-č’a:y-ik
INCOMPL-1SG.ABS-hit.PASS-INTR
‘I will be hit’ (Mondloch 1981:121)

Passive of a derived transitive:

- (11.7c) K-iš-loq'o-š-ik
INCOMPL-2PL.ABS-love-PASS-INTR
'You(pl.) are loved' (Mondloch 1981:125)

A similar distinction can be seen in the various agentive detransitivized constructions in Mayan languages. For example, while the agent focus (AF) construction (discussed in more detail in section 11.3.3) in Tz'utujil is marked with *-o(w)* when the verb is a root transitive, as in (11.8a), but is marked with *-(V)n* when the verb is a derived transitive (11.8b).

AF with a root transitive:

- (11.8a) Jar iixoq x-Ø-ch'ey-**ow**-i
DET woman COMPL-3SG.ABS-hit-AF-INTR
'The woman [was the one who] hit him'

AF with a derived transitive:

- (11.8b) Jaa? n-in-ilii-**n**-i
3SG INCOMPL-1SG.ABS-care.for-AF-INTR
'She is the one who takes care of me' (Dayley 1985:350-351)

Whether 'derived' transitive status suffixes are treated as status (and thus status suffixes show the root vs. derived contrast) or voice (where derived transitives then lack status suffixes) in a given language differs among scholars.

11.1.4 VOICE

Mayan languages are known for having a large number of voice distinctions (e.g., Campbell 2000 on valency-changing operations in K'ichee'). Although the status of some of these processes as true instantiations of 'voice' has been debated, I present all of the major operations here. Antipassive-type constructions (AF, antipassives, incorporation) are discussed separately in sections 11.3 and 11.4. This section discusses other voice-type operations commonly found in Mayan languages, including passives, causatives, middles, instrumentals, and reflexives/reciprocals.

Most Mayan languages, despite being ergative, have passive valency-decreasing operations, which is notable since in the past some have claimed that ergative languages lack passive constructions. Passivized verbs are intransitive verbs which correspond to transitive verbs and have patientive subjects. The agent argument may either be expressed in an oblique

phrase or be unexpressed. In Mayan, the passive is usually marked via verbal suffixes, although it can also be marked by root-internal modification (see (11.7b) above from K'ichee'). Most Mayan languages have two morphologically and semantically distinct types of passive, a 'completive' passive (sometimes called 'mediopassive') and a 'simple' passive (also 'absolute' passive). This distinction between completive and simple passives exists in Sakapulteko, where (11.9a) exemplifies a simple passive, marked by root-internal vowel lengthening, and (11.9b) gives a completive passive, marked by *-tax*. Both passives can take an oblique agent, and both permit two oblique markers: *-ima:l* 'because of' and *mi* 'by, malefactive' (Du Bois 1981:243-244).

(11.9a) L me:šaj Ø-Ø-k'a:t w-uma:l
 ART table ASP-3SG.ABS-burn.PASS 1SG-OBL
 'The table was burned by/because of me'

(11.9b) Š-in-kun-**tax** a:w-uma:l
 ASP-1SG.ABS-cure-COMPL.PASS 2SG-OBL
 'I was cured by you' (Du Bois 1981:244-245)

Some Mayan languages (e.g., Mam, Jakalteko) have been reported to have as many as four morphologically distinct passives. In Mam, passive constructions differ with respect to their morphology, semantics, and productivity. The *-eet* passive (11.10a) is the "regular syntactic passive", and very productive, and generally assumes the action was purposeful. In contrast, the *-njtz* passive (11.10b) is only partially productive, the agent can only be a third person, and it indicates that the agent does not have control of the action. The *-j* passive (11.10c) is similar to the *-njtz* passive, but agents are not restricted to third persons. Finally, *-b'aj* passives (11.10d) only allow third person agents, and are further restricted in that they only occur with the use of a directional to indicate that "X happened because someone went to do it" (England 1983:200-207).

(11.10a) Ma Ø-tx'eem-**at** tzee' t-u'n Cheep
 REC 3SG.ABS-cut-PASS tree 3SG-OBL José
 'The tree was cut by José' (England 1983:201)

(11.10b) Ma Ø-tzeeq'a-**njtz** Cheep t-u'n Kyel
 REC 3SG.ABS-hit-PASS José 3SG-OBL Miguel
 'José was hit by Miguel (by accident)' (England 1983:203)

(11.10c) Ma Ø-juus-j chib'aj t-u'n Mal
 REC 3SG.ABS-burn-PASS meat/food 3SG-OBL María
 'The food was burnt by María (by accident)' (England 1983:205)

(11.10d) Ma-a' ch-ex q'i-b'aj eky' t-u'n Mal
 REC-EMPH 3PL.ABS-DIR take/bring-PASS hen 3SG-OBL María
 'María went to bring the hens (María went to get them, and therefore they are brought)'
 (England 1983:207)

Causatives are also quite common in Mayan languages, and apply to intransitive predicates to create transitive ones. As far as I am aware, causative suffixes cannot be attached to inherently transitive verbs, and do not create ditransitive predicates from transitive verbs. In general, triadic verbs in Mayan are at most transitive, where the recipient gets expressed in an oblique phrase. Most Mayan languages only have a single productive causative affix, although England (1983:104-107) reports that Mam has a number of (~9) unproductive causativizers in addition to one semi-productive causativizer (*-saa*). The following examples of causatives are from Ch'ol.

(11.11a) Chonko i-be-k'äjk-is-añ-on=la
 PROG 1.ERG-continuously-raise-CAUS-TR-3.ABS=1PL.INCL
 'It [our government] is continuously raising us up (e.g., improving our lives)'

(11.11b) Chon y-ajñ-is-añ-Ø majle li i-ts'i'
 PROG 3.ERG-run-CAUS-TR-3.ABS DIR DET 3SG.POSS-dog
 'He is chasing his dog' (Vázquez Álvarez 2011:314)

Although a middle voice is not particularly common in Mayan generally, a middle voice or middle voice-like phenomena have been described for a few Mayan languages. There is also lack of clarity in the term 'mediopassive', whether the construction it describes is more appropriately a passive (cf. the 'completive' passive discussed above) or the middle voice (as Hofling (2000:56-57) discusses for Itzaj and Lois (2011) for Yucatecan generally). Those cases aside, Palosaari (2011) argues that what is antipassive marking in other Mayan languages developed into a middle marker in Mocho', which is discussed further in section 11.4. The Mayan language with the clearest case of a 'middle' category is Huastec, where middle verbs form their own inflectional subclass (cf. Edmonson 1988:179-182).

Many Mayan languages also have a construction which is sometimes called the 'instrumental voice' or an 'instrumental applicative'. Whether this constitutes a 'voice' is a

matter of debate; for example, Dayley (1981) considers the instrumental to be a voice, since the instrument is no longer in an oblique phrase and the verb gains a voice suffix (or at least a suffix which appears in the same position on the verb as voice suffixes). However, Ayres (1983) on Ixil and Du Bois (1981) on Sakapulteko contend that the core arguments of the verb are unaffected, i.e., the patient is not demoted, and the verb does not cross-reference the instrument. But regardless, the instrumental construction is only available when an instrument is focused, in which case the verb gains the suffix **-b'e*. The following example illustrates this phenomenon in Tz'utujil.

(11.12a) Machat x-Ø-a-choy-**b'e**-j chee?
 machete COMPL-3SG.ABS-2SG.ERG-cut-INST-TR tree
 'It was a machete that you cut wood with'

(11.12b) Naq x-Ø-a-b'an-**b'ee**-j?
 WH COMPL-3SG.ABS-2SG.ERG-do-INST-TR
 'What did you do it with?' (Dayley 1985:355-356)

However, in K'ichee' the direct object can (and for non-third persons must) be expressed in an oblique phrase, in which case the absolutive prefix on the verb cross-references the instrument, which is the expected pattern for an instrumental applicative.

(11.13) Če:ʔ š-Ø-in-č'ay-**ab'e**-x aw-eh
 stick COMPL-3SG.ABS-1SG.ERG-hit-INST-TR 2SG-OBL
 'I used a stick to hit you' (Mondloch 1981:50)

Also, while instrumental verbs can be passivized in Tz'utujil (cf. Dayley (1985:356)), antipassive and agent focus forms cannot be used with focused instruments. However, this is in fact possible in Ixil and in Jakalteko (as noted in Smith-Stark 1978:173), in which case the instrument appears preverbally,⁶⁴ the verb agrees only with a single argument and has the agent focus suffix, and the agent optionally appears in an oblique phrase (which is unexpected for AF). A transitive construction with a non-focused instrumental phrase in Jakalteko is given in (11.14a), followed by an example of a focused instrument with an AF verb and oblique agent in (11.14b).

⁶⁴ Ayres (1983:32, fn.17) notes that in Ixil the instrument may also appear in the subject position, but in that case the verb does not bear agent focus morphology.

(11.14a) X-Ø-a-mak metx tx'i' y-u hune' te'
 COMPL-3SG.ABS-2SG.ERG-hit CLF dog 3SG-OBL one stick
 'You hit the dog with a stick'

(11.14b) Tzet x-Ø-mak-ni metx tx'i' haw-u?
 WH COMPL-3SG.ABS-hit-AF CLF dog 2SG-OBL
 'What did you hit the dog with?' (Craig 1977:17)

Lastly, reflexives/reciprocals in Mayan languages generally are not valency-decreasing in that they are regular transitive constructions. The reflexive/reciprocal morpheme is a bound element (akin to English *-self*) which acts at the object of a transitive verb. The transitive verb invariably cross-references a third person singular object, while the person and number features of the agent(s) are expressed via the possessive marker on the bound reflexive/reciprocal element. If there is a singular agent/patient argument in this construction, it is interpreted as a reflexive, while constructions with plural referents can be interpreted as either reciprocal or reflexive, given the appropriate semantic context (e.g., people are more likely to be hitting each other than themselves, whereas it is equally plausible that people could be adorning each other or themselves). An example of this type of transitive reflexive/reciprocal construction in Tseltal is given in (11.15) below.

(11.15) Och k-uts'in-Ø=ix j-ba-tik, ya j-maj-Ø
 enter 1.ERG-bother-3.ABS=already 1-REFL-1PL INCOMPL 1.ERG-hit-Ø
 j-ba-tik
 1.ERG-REFL-1PL
 'We started to bother each other, and to hit each other' (Polian 2013:303) [my translation]

While most Mayan languages construct reflexives/reciprocals in this way, some also have the option of using a detransitivized or incorporation-type construction, often in a restricted set of contexts (see section 12.5). However, in Mam the reflexive/reciprocal is always expressed using a detransitivized construction. It has several interesting features, namely that the verb bears a detransitive (antipassive) marker, despite the fact that it also has ergative instead of absolutive marking. Also, the person enclitic which typically appears after the verb stem appears after the reflexive, which England (1983) takes as evidence that the reflexive patient is incorporated into the verb.

(11.16) Ma b'aj n-tx'ajoo-n w-iib'=a
 REC DIR 1SG.ERG-wash-AP 1SG-REFL-1SG
 'I washed myself' (England 1983:187)

How (or if) this type of detransitivized reflexive/reciprocal construction is related to the incorporative construction (see section 11.3) appears to vary by language (again, see section 12.5 on Kaqchikel vs. K'ichee').

11.2 ERGATIVITY

11.2.1 MORPHOLOGICAL ERGATIVITY

Ergativity is a very consistent feature of the Mayan family, and reconstructions of Proto-Mayan grammar also have Proto-Mayan with ergative alignment (cf. Robertson 1980, Kaufman 1986). All Mayan languages (or nearly all, as some have claimed several Mayan languages have active alignment (e.g., Danzinger 1996 on Mopan)) are morphologically ergative. Since Mayan languages are head-marking as opposed to dependent-marking, ergativity is manifested in verbal cross-reference. Ergative markers cross-reference transitive subjects (called "Set A" in the earlier Mayanist literature, which are also mostly homophonous with the markers of pronominal genitive/possession), while absolutive markers cross-reference both transitive objects and intransitive subjects ("Set B"). This ergative head-marking pattern is demonstrated in the examples in (11.17) from Mam, where the ergative arguments are bolded and absolutive arguments are underlined (overt pronouns and NPs are optional).

(11.17a) Ma chi t-tzeeq'a-ya
 REC 3PL.ABS 2SG.ERG-hit-2SG
 'You hit them' (England 1983:174)

(11.17b) Ma chi b'eet
 REC 3PL.ABS walk
 'They walked' (England 1983:58) [bolding and underlining are mine]

Many Mayan languages are also discussed as exhibiting split ergativity, where (some) non-completive aspects and subordinate clauses exhibit nominative-accusative alignment, as opposed to ergative-absolutive alignment in completive aspects and main clauses (Larsen and Norman 1979). While all Mayan languages have been said to have some element of the grammar which exhibits nominative-accusative alignment, they differ with respect to how many contexts

that includes (cf. Law et al. 2006). With respect to subordination, Jakalteko is frequently provided as an example of a language which has nominative-accusative alignment in aspectless embedded clauses. (11.18a-b) demonstrates ergative alignment in main clauses. However, in (11.19b), the subject of the embedded intransitive verb takes the ergative/genitive/Set A prefix, and in (11.19a) the verb has agent focus (AF) and intransitive status marking (more on this below).

(11.18a) **Xc-ach** w-abe
 COMPL-**2SG.ABS** 1SG.ERG-hear
 ‘I heard you’

(11.18b) **Xc-ach** toyi
 COMPL-**2SG.ABS** go
 ‘You went’

(11.19a) X-Ø-(y)-il naj [hin **ha-mak-n-i**]
 COMPL-3SG.ABS-3SG.ERG-see CLF/he 1SG.ABS **2SG.ERG-hit-AF-INTR**
 ‘He saw you hit me’ (Craig 1977:111)

(11.19b) X-Ø-w-il [**ha-cañalw-i**]
 COMPL-3SG.ABS-1SG.ERG-see **2SG.ERG-dance-INTR**
 ‘I saw you dance’ (Craig 1977:116)

Relatedly, focused adverbials (in addition to other forms of subordination) in Mam and other closely related languages can embed verbs which then triggers the use of a similar nominative-accusative pattern to that found in Jakalteko.

(11.20a) Na’x-tzan t-e-x **q-laq’o-’n** k’uxb’il-a noq-tzan
 still.not-well 3SG.ERG⁶⁵-DIR-DIR **1PL.ERG-buy-DIR** tool-1PL.POSS only-well
 ‘We still haven’t bought the tool’ (England 1983:271)

(11.20b) Pal-alaan t-iky’ nimaal ich’
 lying.down-AVS **3SG.ERG-pass.by** DEM⁶⁶ rat
 ‘Floating, the big rat went by’ (England 1983:269)

⁶⁵ Mam, unlike Ixil and Jakalteko, marks both the patient and the agent with the ergative in these constructions, which may more properly be considered a neutral alignment as opposed to a nominative-accusative one, although it still gets discussed as part of the same family of split-ergative phenomena in Mayan. See England (1983:258-264) for a discussion.

⁶⁶ *Nimaal* in Mam means ‘big, important’, from *nim* ‘a lot’ (England 1983:120), although England also glosses it throughout her grammar as DEM, as in this example.

In terms of aspect, some Mayan languages have nominative-accusative patterns in non-perfective (non-completive) aspects, i.e., the progressive or both the progressive and the imperfective/incompletive. Ch'ol and Yucatec both exemplify the latter category, where intransitive verbs take ergative/Set A/genitive marking in both the imperfective (11.21b) and the progressive (11.22b), which contrast with intransitive verbs in the perfective, which take the absolutive (11.21a and 11.22a). The examples below are from Ch'ol.

(11.21a) Tyi jul-i-**ety**
 PFV arrive.here-INTR-**2SG.ABS**
 'You arrived here'

(11.21b) Mi a-jul-el
 IPFV **2SG.ERG**-arrive.here-NMLZ
 'You arrive here' (Coon 2010:220)

(11.22a) Tyi wäy-i-**Ø** ñeñe`
 PFV sleep-INTR-**3SG.ABS** baby
 'The baby slept'

(11.22c) Choñkol i-wäy-el ñeñe`
 PROG **3SG.ERG**-sleep-NMLZ baby
 'The baby is sleeping' (Coon 2010: 239)

In some other Mayan languages, only the progressive exhibits a nominative-accusative pattern, while the imperfective and the perfective have ergative alignment. In Q'anjob'al, intransitive verbs in the incompletive receive absolutive marking (11.23a), which contrasts with (11.21b) from Ch'ol above. However, the progressive in Q'anjob'al, indicated by *lanan*, involves ergative/Set A/genitive marking which references the agent (11.23b).

(11.23a) Ch-**ach** way-i
 INCOMPL-**2SG.ABS** sleep-INTR
 'You sleep'

(11.23b) Lanan **ha**-way-i
 PROG **2SG.ERG**-sleep-INTR
 'You are sleeping' (Montejo and Pedro 1996:73,154, cited in Law et al. 2006:419)

Some other Mayan languages also exhibit a type of split agreement pattern in the progressive. However, unlike in the Q'anjob'al examples above, the ergative/Set A/genitive marker indexes the *patient* as opposed to the agent when the second clause involves a dyadic

verb. These constructions have been called ‘raising’ constructions (cf. Robertson 1993, Law et al. 2006). In raising constructions, the agent of the dependent clause becomes the subject the main clause. Embedded transitive verbs may undergo passivization or antipassivization, and are nominalized. The main verb and the imbedded verb may also be separated by a preposition. Some examples of progressive raising constructions in Kaqchikel are given in (11.25a-b), which contrast with the incomplete transitive and intransitive verbs in (11.24a-b). See Imanishi (2014) for a thorough discussion of raising constructions in Kaqchikel.

Incomplete:
 (11.24a) Y-e'-in-q'ete-j ri ak'wal-a'
 INCOMPL-3PL.ABS-1SG.ERG-hug-TR DET child-PL
 ‘I hug the children’

(11.24b) Y-e'-atin
 INCOMPL-3PL.ABS-bathe
 ‘They bathe’

Progressive:
 (11.25a) Y-in-ajin chi ki-q'ete-x-ik ri ak'wal-a'
 INCOMPL-1SG.ABS-PROG PREP 3SG.ERG-hug-PASS-NMLZ DET child-PL
 ‘I am hugging the children’

(11.25b) Y-e'-ajin chi atin-ik
 INCOMPL-3PL.ABS-PROG PREP bathe-NMLZ
 ‘They are bathing’ (author’s notes)

However, the progressive *-ajin* in Kaqchikel does not always embed a nominalized predicate. Compare the aspectless embedded verb in (11.25a-b) above with the embedded verbs in (11.25c-d) which have aspect marking and are not nominalized.

(11.25c) Y-in-ajin y-e-in-q'ete-j ri ak'wal-a'
 INCOMPL-1SG.ABS-PROG INCOMPL-3PL.ABS-1SG.ERG-hug-TR DET child-PL
 ‘I am hugging the children’

(11.25d) Y-e'-ajin y-e'-atin
 INCOMPL-3PL.ABS-PROG INCOMPL-3PL.ABS-bathe
 ‘They are bathing’ (Author’s notes)

Larsen and Norman (1979) observed that all of the examples of nominative-accusative patterns in Mayan involve complex predicates, which, they argued, are all examples of splits in

alignment based on subordination. All of the nominative-accusative patterns in Mayan involve (synchronically or diachronically) an aspectual predicate which can imbed a non-verbal predicate, which has been demonstrated in an increasing body of work on split-ergativity in Mayan (e.g., Larsen and Norman 1979, Bricker 1981, Mateo Toledo 2003, Coon 2010, Imanishi 2014:100-102). If nominative-accusative patterns in Mayan are the result of aspectual, adverbial, and other verbal predicates taking nominalized complements, it is perhaps better to analyze these apparent ‘splits’ in alignment as ergative verbs which imbed nominalizations. The ergative marking on intransitive predicates arises from ergative/genitive syncretism, where the nominalized predicates take genitive marking. In this view, main verbs in Mayan languages are uniformly ergative in alignment. See Coon (2010) for a recent articulation of this analysis.

11.2.2 SYNTACTIC ERGATIVITY

In addition to being morphologically ergative, a number of Mayan languages are also syntactically ergative. Syntactic ergativity can be broadly defined as the differential treatment of arguments as ergative vs. absolutive determined by aspects of the syntax (for a more complete discussion of syntactic ergativity, as well as its relationship to antipassivization, see section 6.4). In Mayan, syntactic ergativity refers specifically to the use of antipassive-type constructions (particularly agent focus (AF), see section 11.3.3) to extract the agents of transitive verbs in relative clauses, *wh* questions, and focus/clefts. These three syntactic contexts are referred to collectively as ‘focus’, or A’ extraction in the generative literature. Mayan languages do not exhibit syntactic ergativity in coordination of arguments or clauses, as some Australian languages do.

In many Mayan languages, ergative arguments cannot be directly questioned, relativized or focused. However, absolutive arguments (objects of transitive verbs and intransitive subjects) are free to be directly questioned, relativized, or focused without affecting the form of the verb. This pattern is illustrated by the focus constructions in Tz’utujil in (11.26) below.

- Focused S:
 (11.26a) Je’ee’ k’aawari’ b’an-ol b’ey x-e’-uul-i
 FOC these make-AGT road COMPL-3PL.ABS-arrive-INTR
 ‘It’s these road-builders that arrived’

Focused O:

- (11.26b) Jaa k'aawa' n-tzyaq x-Ø-in-loq' ri' (inin)
FOC this 1SG.POSS-clothes COMPL-3SG.ABS-1SG.ERG-buy this 1SG
'It's these clothes that I bought' (Dayley 1985:386)

Focused A:

- (11.26c) *Ja ch'ooy x-Ø-uu-tij ja kéeso
FOC rat COMPL-3SG.ABS-3SG.ERG-eat DET cheese
Target: 'It was the rat that ate the cheese' (based on Dayley 1985:385)

In order to focus the agent of a transitive verb, any voice-type operation which preserves the agent as the (non-ergative) subject can be used instead. In Tz'utujil this includes a patientless antipassive, an antipassive plus oblique patient construction, or the agent focus construction (AF). AF is the most common construction used to focus agents, and the AF form of (11.26c) is grammatical, as shown in (11.26d) below.

- (11.26d) Ja ch'ooy x-Ø-tij-ow-i ja kéeso
FOC rat COMPL-3SG.ABS-eat-AF-INTR DET cheese
'It was the rat that ate the cheese' (Dayley 1985:385)

AF and the other common antipassive-type constructions in Mayan languages are discussed in sections 11.3 and 11.4. In sum, while patients of transitive verbs can be focused directly, focusing of agents of transitive verbs requires a special construction, which cannot be used to focus the patient of a transitive verb. The requirement of different constructions for processes involving A arguments vs. S and O arguments is evidence of syntactic ergativity in Mayan (cf. Dayley 1981, Pye 1992, Stiebels 2006, *inter alia*).

While almost all Mayan languages are morphologically ergative, not all Mayan languages are syntactically ergative. Coon et al. (2014) tie the presence of syntactic ergativity in a given Mayan language to the position of the absolutive morpheme. Notice that in the verbal template given for Mayan languages in section 11.1.1 (repeated below), the absolutive morpheme in some languages appears before the verb root, while in others it appears after the verb root:

TAM – (ABS) – ERG – ROOT – VOICE – STATUS – (ABS)

Coon et al. (2014) refer to those languages where the absolutive morpheme precedes the verb root as HIGH-ABS languages, and those where the absolutive follows the verb root as LOW-ABS languages. This contrast is exemplified in (11.27-11.28) in Uspanteko and Mopan, respectively

(bolding and underlining are mine). Note that this is somewhat of a simplification, since some Mayan languages may have pre- or post-verbal absolutive markers depending on the construction (e.g., Tsotsil).

HIGH-ABS, Uspanteko:
 (11.27) **X-at-j-voj-aaj**
 COMPL-**2SG.ABS-3SG.ERG**-push-TR
 ‘S/he pushed you’ (Can Pixabaj 2007:203) [my translation]

LOW-ABS, Mopan:
 (11.28) In-wuy-aj-e’**ex**
1SG.ERG-hear-COMPL.TR-**2PL.ABS**
 ‘I heard you(pl)’ (Danzinger 1996:384)

It happens to be the case that generally speaking, HIGH-ABS languages are syntactically ergative, while LOW-ABS languages are not (see also Tada 1993:104-105). This is a fairly good generalization, as there are only a few languages which do not generally comply.⁶⁷

Although syntactic ergativity in Mayan languages is often discussed as a restriction or ban on focusing (extracting) ergative arguments, in a number of Mayan languages ergative arguments can in fact be focused in at least some environments. In some languages, only one of the three main focus environments (relativization, *wh* questions, focus) allows transitive verbs when the agent is focused (e.g., relativization in Ixil (Ayres 1983:31-33)), while in others, transitive verbs are permitted with focused agents in all three contexts (e.g., Tsotsil (Aissen 1999:453)). For a more in-depth discussion of the optional use of transitive verbs in focus contexts in Mayan languages, see section 13.2.

11.3 GENERAL OVERVIEW OF THE PRIMARY ANTIPASSIVE-TYPE STRUCTURES

It is not uncommon for reference works on Mayan languages to include descriptions of

⁶⁷ Coon et al. (2014, fn.8) discuss how the facts for Huastec, Tsotsil, Yucatec, and Ixil are somewhat more complicated, in that absolutive morphemes may in some cases appear both preceding and following the verb root, may have different properties, or the nature of the extraction asymmetry might be different. Coon et al. (2014) also formalize this distinction between HIGH-ABS/syntactically ergative languages vs. LOW-ABS/non-syntactically ergative languages in terms of where absolutive case is formally assigned. They call this the Mayan Absolutive Parameter, which states that in HIGH-ABS languages, absolutive case is assigned by Infl^0 , whereas in LOW-ABS languages absolutive case is assigned within νP (cf. Coon et al. 2014:194).

three types of antipassives (i.e., antipassive-like constructions), often termed something like “absolute”, “focus” or “agentive”, and “incorporating” antipassives (cf. Smith-Stark 1978, Dayley 1981). While all of these constructions are antipassive-like in that they are based on transitive predicates and only bear a single agreement morpheme, the current consensus is that not all of these constructions are cross-linguistically comparable instantiations of ‘antipassive’.

This section provides an overview of some of the basic characteristics of these three ‘antipassive’ constructions across the Mayan family. Not all Mayan languages have all three of the above constructions, nor do the terms as they are used in one description necessarily describe precisely the same phenomenon as that same term describes in another language. As such, this section also discusses some of the key differences between these constructions across the languages in the family. Then in section 11.4 the distribution of what are considered antipassives by the definition used in this dissertation (see Chapter 3) is discussed for the sample of Mayan languages.

11.3.1 ABSOLUTE ANTIPASSIVES

First, many Mayan languages have what is called an ‘absolute’ antipassive construction. In general, absolute antipassives are derived from transitive verbs via the addition of an antipassive marker to the verb. Absolute antipassives are intransitive in that the verb only cross-references the agent (and cannot cross-reference the patient), and they occur frequently in pragmatically neutral contexts. In some of the Yucatecan languages, absolute antipassives are patientless, i.e., there is no option to express the patient in an oblique phrase (cf. Hofling (2000:393-395) on Itzaj). Patientless antipassives also exist in Kaqchikel, and likely also in a few other K’ichean languages (see Chapter 12).⁶⁸ Polian (2013:283-288) discusses the fact that Tseltal has three absolute antipassive suffixes: *-wan*, which is the most productive and implies a human patient, and *-maj* and *-baj*, which are both unproductive and imply an inanimate patient. In the closely related language Tsotsil, Aissen (1987) describes the absolute antipassive *-van* as having an implied patient, although when the absolute antipassive is formed from ditransitive

⁶⁸ Although there are certainly antipassives in Kaqchikel and the other K’ichean languages which have oblique patients, I argue that those antipassives constitute a separate construction from the absolute antipassive. This is supported by data from K’ichee’, which, unlike Kaqchikel, has both this separate oblique antipassive construction and an absolute antipassive which allows the patient to be expressed in an oblique phrase.

verbs (as opposed to regular transitive verbs) the patient may appear in an oblique phrase.

However, in most of the other Mayan languages (e.g., Mamean, Q'anjob'alan, Huastec, K'ichee'), the patient in the absolutive antipassive can optionally be expressed in an oblique phrase. An example of this construction in Ixil is given in (29b) below.

(11.29a) Kat a-q'os in
 ASP 2SG.ERG-hit 1SG.ABS
 'You hit me'

(11.29b) Kat q'os-**on** axh (s wi?)
 ASP hit-AP 2SG.ABS OBL 1SG
 'You hit (me)' (Ayres 1983:27)

Although most Mayan languages have a single marker for the absolutive antipassive, Huastec has three (*-Vl*, *-Vm*, *-Vsh*), whose distribution is predictable from the transitive stem class marker (p.c. Ana Kondic 2016). Lastly, in most Mayan languages with an absolutive antipassive, the absolutive antipassive is quite productive, the patient may be of any type (animate, definite, modified, etc.), and it can appear in most syntactic contexts (focus and non-focus). However, in Q'anjob'al, the absolutive antipassive is lexicalized, appearing with only about two dozen verbs (Mateo Toledo 2008:73-74).

11.3.2 INCORPORATIVE ANTIPASSIVES

The 'incorporating' or 'incorporative' antipassive differs from the absolutive antipassive primarily in that the patient either immediately follows the verb or appears within the verbal complex, and does not appear in an oblique phrase. Additionally, the patient argument must be bare, unmodified by adjectives, classifiers, etc., and have a non-specific referent. Some of the best-known examples of the incorporative construction in Mayan come from Yucatec, where the patient argument can appear between the verb root and the detransitive marker (as in (11.30b)). The verb takes antipassive marking (*-n*), and only cross-references the agent via the absolutive suffix (*-en*). Mithun (1984) considers this to be an example of Type I compounding, where the noun in the compound is non-referential, unmodified, and has no independent syntactic status.

(11.30a) T-in-č'ak-ah-Ø če'
 COMPL-1SG.ERG-chop-COMPL.TR-3SG.ABS tree
 'I chopped a tree'

(11.30b) Č'ak-č'e'-n-ah-en
 chop-tree-AP-COMPL.TR-1SG.ABS
 'I wood-chopped' (cf. Mithun 1984:857, based on Bricker (1978))

This particular type of compounding is unproductive in Yucatec, and is not found in other Mayan languages. In other Mayan languages, the patient simply follows immediately after the verb, and cannot appear within the verb complex (as in example (11.31) below from Q'anjob'al, bolding and underlining are mine). Since the patient appears in its canonical syntactic position, there is less motivation to claim that it is incorporated/compounded.

(11.31) B'ab'el-al max-ni waj-wi sakate
 first-ABSTN COMPL-1SG.ABS gather-INC fodder
 'First I gathered fodder' (Mateo Toledo 2008:72)

Additionally, the incorporative construction in many languages which have it appears to share more features with agent focus (discussed below) or with antipassivization than it does with noun incorporation. First, while in most Mayan languages the verb in the incorporative construction agrees exclusively with the agent, in K'ichee' the verb can agree with the patient if the patient is plural (see also section 12.4.1).

(11.32) Nax k-e:-pil-ow ak' le: išoq
 long.time INCOMPL-3PL.ABS-butcher-AF chicken DET woman
 'It takes a long time for the woman to chicken-gut' (Mondloch 1981:250)

One of the primary features of the agent focus (AF) construction in K'ichee' is that agreement is governed by a salience hierarchy, which is a characteristic shared with the incorporative construction. As such, it would appear that the incorporative construction in K'ichee' has more in common with AF than the incorporative construction does in other Mayan languages.

Also, some Mayan languages (namely Huastec and Q'eqchi') require an antipassive/incorporative construction in some contexts based on features of the patient. In both Huastec and Q'eqchi', detransitivization is mandatory when the patient is indefinite. When the patient is indefinite, a construction akin to the incorporative construction is used, where the verb agrees only with the agent and receives an antipassive marker, and the patient (and accompanying determiners in Huastec) appears immediately following the verb (as in (11.33a) and (11.34a)). However, the patient is expressed in an oblique phrase if the patient is definite (and the agent is focused in Q'eqchi'), as in (11.33b) and (11.34b).

Huastec: Incorporative-type construction with an indefinite patient and no oblique:
 (11.33a) An olom k'ap-**uumath** juun i way
 DEF pig eat-**AP.PRF** one PTCL maize.cob
 'The pig has eaten a maize cob'

Huastec: Antipassive-type construction with a definite patient and an oblique:
 (11.33b) An olom k'ap-**uumath** an **ti** way
 DEF pig eat-**AP.PRF** DEF **PREP** maize.cob
 'The pig has eaten the maize cob' (Kondic 2016)

Q'eqchi': Incorporative-type construction with an indefinite patient and no oblique:
 (11.34a) T-e'-yiba-**n-k** poch li ixk
 FUT-3PL.ABS-make-**AP-ASP** tamale DET woman
 'The women will prepare tamales' (Berinstein 1985:215)

Q'eqchi': Antipassive-type construction with a definite patient and an oblique:
 (11.34b) L_{ain} x-in-sac'-**o-c** **r-e**
 1SG TNS-1SG.ABS-hit-**AP-ASP** **3SG-OBL**
 'I hit it' (Berinstein 1985:183)

In Huastec and Q'eqchi', the fact that the presence of the oblique marker for the patient is conditioned by the definiteness of the patient makes this look less like two different constructions (incorporation vs. antipassive) but rather an antipassive which allows differential patient marking. This same type of differential marking with respect to the patient in an antipassive construction is also found in Chamorro (cf. examples in Chapters 4 and 8).

Finally, which other similar construction(s) share a marker with the incorporative construction is not consistent within the family. In Akateko, as in Yucatec, the verbal marker for the incorporative construction is the same as that which marks the absolutive antipassive, as demonstrated in (11.35a-b) (which in Akateko contrasts with the marker for AF, which is *-on*, as in (11.35c)).

(11.35a) X-Ø-nooch-**wi** aan no' txitam
 COMPL-3SG.ABS-eat.biting-**AP** corncob CLF pig
 'The pig was eating the corncob'

(11.35b) Ch-ach-tx'aa-**wi** y-iin pitchile
 INCOMPL-2SG.ABS-wash-**AP** 3SG-OBL cloth
 'You are washing the clothes' (Zavala 1997:456-457)

(11.35c) Ja'-in Ø-ij-**on**-toj naj unin
 FOC-1SG 3.ABS-back.carry-**AF**-DIR CLF boy
 'It is I [who] carried the boy' (Zavala 1997:452)

However, the opposite is true in Kaqchikel, where the marker for the incorporative construction is the same as the marker for AF (*-o*, as in (11.36a-b)), which is not the marker of the absolutive antipassive (*-on*, as in (11.36c)). This is also illustrated in example (11.32) from K'ichee', where the marker is *-ow* as opposed to *-o* (*-o* and *-ow* are cognate morphemes).

-o marker for the incorporative construction:

(11.36a) X-e-tik-**o** ixim ri achi'-a'
 COMPL-3PL.ABS-plant-**AF** corn DET man-PL
 'The men planted corn'

-o marker for AF:

(11.36b) Ja ri achi'-a' x-e-tik-**o** ri ixim
 FOC DET man-PL COMPL-3PL.ABS-plant-**AF** DET corn
 'It is the men [who] planted the corn'

-on marker for the absolutive antipassive:

(11.36c) X-e-tik-**on** ri achi'-a'
 COMPL-3PL.ABS-plant-**AP** DET man-PL
 'The men planted' (author's notes)

Incorporative constructions in Kaqchikel do not share other characteristics with AF, as in K'ichee' (see section 12.3). But regardless, these examples from Akateko and Kaqchikel illustrate that the verbal marking used synchronically in incorporative constructions is not consistently the same as verbal marking for either the absolutive antipassive or AF within the family.

11.3.3 AGENTIVE/FOCUS ANTIPASSIVE (AGENT FOCUS)

The third antipassive-type construction in Mayan, the 'focus' or 'agentive' antipassive (now consistently called 'agent focus' or AF), has received a lot of attention in the literature because of its unusual set of characteristics and functions. While not all Mayan languages have an AF construction, examples of AF can be found in languages in most branches of the family. AF, like the other constructions discussed in this section, involves a verb which only cross-references one of its semantic arguments. However, AF differs from the absolutive and the incorporative constructions in several ways; first, the patient argument is always either overtly

above) in Akateko, where the agent is first person but the verb indexes the third person patient.

(11.39/11.35c) Ja'-in Ø-ij-**on**-toj naj unin
 FOC-1SG 3.ABS-back.carry-**AF**-DIR CLF boy
 'It is I [who] carried the boy' (Zavala 1997:452)

However, several of the other Q'anjob'alan languages (Q'anjob'al, Jakalteko, Chuj) only use AF when the agent is third person. Patient agreement in these languages makes sense from a salience point of view, since the patient will generally be more or equally as salient as a 3rd person agent.

(11.40a) gives an AF clause in Chuj, while (11.40b) demonstrates that AF does not appear when the agent is not a third person.

(11.40a) Ha ix ix-in-il-**an**-i
 FOC CLF/woman COMPL-1SG.ABS-see-**AF**-INTR
 'It was she/the woman [who] saw me'

(11.40b) Ha in ix-Ø-w-il ix
 FOC 1SG.ABS COMPL-3SG.ABS-1SG.ERG-see CLF/woman
 'It was I who saw her/the woman' (Hou 2013:11)

Although K'ichean languages allow either the agent or the patient to be first or second persons in AF, they do not permit AF when neither argument is a third person (i.e., in 1>2 or 2>1 person combinations). This is demonstrated by the Kaqchikel examples in (11.41).

(11.41a) *Ja rīn x-i-ch'ay-**o** **rat**
 FOC 1SG COMPL-1SG.ABS-hit-**AF** **2SG**
 Target: 'I hit you'

(11.41b) Ja rīn x-**at**-in-ch'äy
 FOC 1SG COMPL-**2SG.ABS**-1SG.ERG-hit
 'I hit you' (author's notes)

While AF constructions in most Mayan languages are marked morphologically by a verbal suffix (typically either *-o(w)* or *-on*), Yucatec has a similar, unmarked construction which is often discussed as AF. In addition to lacking a verbal marker, 'AF' in Yucatec (and Lacandon) also differs in that it retains transitive 'status' marking, whereas AF clauses receive intransitive status marking in most other Mayan languages (cf. the Chuj example in (11.40a)). (11.42b) illustrates an 'AF' clause in Yucatec.

(11.42a) Maax t-uy-il-**ah**-Ø María?
 WH PRF-3SG.ERG-see-COMPL.TR-3SG.ABS María
 ‘María, who did she see?’

(11.42b) Maax il-**eh**-Ø María?
 WH see-SUBJN.TR-3SG.ABS María
 ‘María, who saw her?’ (Tonhauser 2007:545)

In addition to differences between AF and other antipassive-type constructions with respect to the status of the patient and argument indexing, AF only exists in syntactic contexts when the agent of a transitive verb is focused. ‘Focus’ for Mayan traditionally includes *wh* questions, relative clauses, and other cases where a (non-topic) argument appears in front of the verb. In Q’anjob’alan proper, AF also appears in non-finite embedded transitive clauses (dubbed the ‘crazy’ antipassive in Kaufman (1990)). The appearance of AF in clauses in Q’anjob’al where the agent is focused is demonstrated in (11.43a) (as well as every other example of AF in this subsection). (11.43b) gives an AF verb in Q’anjob’al in a non-finite embedded clause. See Coon et al. (2014) for a proposed formal explanation of what unifies these two contexts.

(11.43a) Maktxel max-ach il-**on**-i?
 WH COMPL-2SG.ABS see-**AF**-INTR
 ‘Who saw you?’

(11.43b) Chi uj [hach y-il-**on**-i]
 ASP be.able.to 2SG.ABS 3SG.ERG-see-**AF**-INTR
 ‘She can see you’ (Coon et al. 2014:180)

AF is the primary way to focus agents of transitive verbs in those Mayan languages which have AF. In those languages which lack AF, the absolutive antipassive assumes that function (e.g., in Huastec and Mam). However, many Mayan languages have both an absolutive antipassive and AF. In languages with both, absolutive antipassives “seem to be disfavored as a means of disambiguation in most Mayan languages that exhibit agent focus” (Stiebels 2006:513). This is corroborated by my data on Kaqchikel, where AF is four times more frequent in focus contexts than antipassives are (although both forms are grammatical). For a discussion of the difference between antipassives and AF in focus contexts in Kaqchikel see Chapter 13.

While the function of AF is primarily to focus the agents of transitive verbs, Aissen (1999) has suggested that AF in Tsotsil also serves an inverse function. In Tsotsil, AF is used when the agent is focused and the patient is more animate, definite, or individuated than the

agent. When that is not the case, transitive verbs tend to be used. Transitive verbs in other Mayan languages show differences in the respective animacy/definiteness/individuation of their arguments in other ways, e.g., with respect to word order (see section 11.1.2). For a discussion of inverse-type functions with respect to Kaqchikel, see section 13.3.

In this section I have discussed the main characteristics of AF and the major ways in which this construction varies across the languages of the family. However, there are many smaller ways that AF differs even among closely related languages, in terms of its distribution and use. For a discussion of some of these points in K'ichean see section 12.2.

11.4 ANTIPASSIVES IN MAYAN

While the 'absolutive', 'incorporative', and 'focus'/'agentive' constructions have been considered antipassives by various authors in the history of Mayan linguistics, not all of these constructions satisfy the criteria used here for antipassives, nor are they widely considered to be antipassives by Mayanists currently. Most notably, many scholars (Ayres 1983, Stiebels 2006, Tonhauser 2007, Coon et al. 2014, *inter alia*) have contested the idea that AF constructions constitute antipassives. AF clauses are not intransitive, as they involve two non-oblique core arguments of the verb, and the verb may agree (or in some languages always agrees) with the patient. Therefore, most scholars writing on topics related to Mayan syntax have switched from terminology which suggests this construction is an antipassive to the more neutral term 'agent focus' (AF).

Additionally, although the incorporative construction is sometimes considered an antipassive (or alternately gets discussed in connection with AF, e.g., by Ajsivinac and Henderson 2011), it has not been considered an antipassive by the definition used here, repeated from Chapter 3:

1. There is an overt marker for the antipassive construction;
2. The antipassive clearly corresponds to an unmarked or less marked bivalent transitive construction;
3. The agent of the transitive construction is preserved, while the patient is either unexpressed or expressed obliquely;
4. The antipassive construction is intransitive.

While the incorporative construction in Mayan has an overt marker which is lacking in the

corresponding transitive construction, the patient does not appear in an oblique phrase, nor is it omissible. As such, the resulting construction is not clearly intransitive, particularly in languages like K'ichee' which allow agreement with the patient.

However, the absolutive construction is a clear example of an antipassive. The verb exclusively indexes the agent, there is a verbal marker for the construction, and, depending on the language, the patient either appears optionally in an oblique phrase or cannot be overtly expressed. As such, those Mayan languages with an absolutive antipassive are the ones that are considered to have antipassive constructions according to the criteria used in this dissertation.

The sample for the typological study (see Chapter 4) included 23 of the ~30 Mayan languages, and included at least one member from each subgroup. The full list of Mayan languages surveyed, as well as the data collected from them, can be found in Appendices A-C, and an abbreviated summary is also given in Table 11.1 in section 11.5. Of those 23 languages, 18 have absolutive antipassives.⁶⁹ Of these 18 languages, 9⁷⁰ allow the patient of the antipassive to be expressed (optionally) in an oblique phrase.

The five languages (Ch'ol, Jakalteko, Mopan, Mocho', and Q'eqchi') which appear to lack an absolutive antipassive, at least one which shares the same general characteristics as absolutive antipassives in other Mayan languages, require some explanation. First, Ch'ol has an antipassive morpheme *-oñ* which is cognate with the **-Vn* detransitivizing morphemes in other Mayan languages. However, predicates with the *-oñ* marker in Ch'ol are nominalizations, and do not appear independently as finite verbs (cf. Coon 2013). So, while Ch'ol has a cognate antipassive structure, the fact that it does not exist as a finite verbal predicate has precluded its inclusion here as an antipassive.

Mopan is closely related to Yucatec, which marks absolutive antipassives either with tone or a *-n* suffix. However, Danzinger (1996) discusses the fact that the loss of tone in Mopan, as

⁶⁹ These 18 languages include Akateko, Ch'orti', Chuj, Huastec, Itzaj, Ixil, K'ichee', Kaqchikel, Mam, Q'anjob'al, Sakapulteko, Sipakapense, Tojolbal, Tseltal, Tsotsil, Tz'utujil, Uspanteko, and Yucatec.

⁷⁰ These 9 languages include Akateko, Ch'orti', Chuj, Huastec, Ixil, K'ichee', Mam, Q'anjob'al, and Tsotsil (although only in ditransitive constructions). The (in)ability for the patient to appear in an oblique phrase in a number of K'ichean languages is discussed in Chapter 12. The information on Tojolabal suggests that the patient cannot be expressed, but more information is necessary to verify this. Note that some languages have non-absolutive antipassive(-type) constructions which do allow the patient to be expressed in an oblique phrase.

well as the shift to an active alignment system, caused constructions which are antipassives in Yucatec to be realized in Mopan by a change in the root-internal vowel. For example, in (11.44a) the transitive form has a root vowel /ä/, while in (11.44b) the intransitive has a root vowel /a/, which Danzinger (1996:399) claims is cognate with the Yucatec falling tone on the antipassive stem.

(11.44a) Tan in-päk'-ik-Ø in aros
 DUR 1.AGNT-plant-INCOMPL.TR-3.P 1.POSS rice
 'I'm planting my rice'

(11.44b) Tan in-pak'
 DUR 1.AGNT-plant
 'I'm planting' (Danzinger 1996:398)

This type of system, where internal changes signal transitive versus intransitive versions of stems is an equipollent system of marking, akin to the [+/-ATR] vowel alternations in transitive and intransitive stems in a number of Nilotic languages (see section 8.2.2). Since in equipollent patterns neither the transitive nor the intransitive pattern is necessarily more basic, those types of alternations were not considered to be instantiations of antipassive in this study.

Next, Palosaari (2011) argues that in Mocho' the antipassive marking in other Mayan languages developed into a middle voice construction marked by *-o:n*. Mocho' differs from the other Mayan languages with absolutive antipassives in that it lacks the use of relational nouns in detransitivized constructions. As such, the *-o:n* marker in Mocho' covers the usual patient-omitting (11.45a) and incorporative (11.45b) functions that antipassive-type constructions have in the other Mayan languages, but there are a few examples where the patient may be definite and specific, as in (11.45c), and does not appear in an oblique phrase.

(11.45a) We winaq ch-Ø-'e:lq'a-:n-i
 DET man INCOMPL-3SG.ABS-steal-AP-INTR
 'The man is robbing (as a lifestyle)' (Palosaari 2011:201)

(11.45b) K-Ø-lo'-o:n-qe ixì:m
 PTN-3SG.ABS-eat-AP-PL corn
 'They eat corn' ('they are raised on corn' or 'they corn-eat')

(11.45c) Chk-i:-me:su-:n i:-nhaj
 INCOMPL.PROG-1SG.ABS-sweep-AP 1SG.POSS-house
 'I'm sweeping my house' (Palosaari 2011:195-196)

However, in almost all examples, the subject of the construction is agentive, not patientive, as would be characteristic of the middle voice. Additionally, these *-o:n* constructions produce the same habitual/durative aspectual associations, and emphasize the predicate (cf. Palosaari 2011:200) in the same way that the absolutive antipassive does in other Mayan languages. Because this construction clearly serves to decrease the transitivity of the predicate in ways which mainly overlap with the functions of the antipassive, I have tentatively considered it to be a type of antipassive. However, I did not include it in the list of Mayan languages with absolutive antipassives above because it clearly does not share all of the properties of absolutive antipassives.

Finally, it appears that Jakalteko and Q'eqchi' both lack absolutive antipassives. Both of these languages have detransitivized constructions which preserve the agent and express the patient in an oblique phrase. However, the oblique patient is mandatory and cannot be omitted, and there is no evidence of a separate patientless antipassive structure (e.g., as exists in Kaqchikel) to fill that function. The examples in (11.46) below from Q'eqchi' demonstrate that the oblique patient phrase cannot be omitted, even though the verb is morphologically intransitive.

(11.46a) Lain x-in-sac'-**o-c** **r-e**
 1SG TNS-1SG.ABS-hit-**OAP-ASP** **3SG-OBL**
 'I hit it'

(11.46b) *Lain x-in-sac'-**o-c**
 1SG TNS-1SG.ABS-hit-**OAP-ASP**
 Target: 'I hit' (Berinstein 1985:183)

As discussed above in section 11.3.2, in Q'eqchi' the oblique marker only appears when the patient is definite/referential. Otherwise, the oblique is omitted and the construction looks more like the incorporative construction in closely related languages.

Craig (1979:143) states that the oblique patient in the antipassive-like construction in Jakalteko "is characterized by (a) its obligatory presence, (b) its animacy, and (c) its non-dative relational noun." As Craig mentions, the patient must be animate. As such, the distribution of this construction is restricted in both Jakalteko and in Q'eqchi' in ways it is not in other Mayan languages. Because the oblique patient arguments are obligatory in both Jakalteko and in Q'eqchi', I have not considered either of these constructions to be antipassives here.

Lastly, seven Mayan languages of the 23 sampled were considered to have multiple antipassives (see Chapter 10 and Appendix E). This includes Tseltal which has multiple antipassive markers (*-wan* vs. *-maj* and *-baj*), as well as a number of K'ichean languages, which have both an absolutive antipassive construction and a separate oblique antipassive construction which exists only in focus contexts (see section 12.3).

11.5 SUMMARY

Mayan languages have traditionally been described as having up to three antipassive constructions: the absolutive antipassive, the incorporative antipassive, and the focus/agentive antipassive. However, it is important to realize that not all of those constructions are in fact antipassives in a cross-linguistically viable sense, and there is quite a bit of variation subsumed under each construction type. In a survey of 23 Mayan languages, 18 (tentatively 19, including Mocho') were found to have antipassive constructions, also several more have antipassive-type constructions which involve markers which are cognate with antipassive morphemes in other Mayan languages. A summary of which antipassive-type constructions have been described for the 23 Mayan languages surveyed are given in Table 11.1.

TABLE 11.1. Overview of antipassive-type constructions in 23 Mayan languages

Language	#APs	AbsAP?	Incorporative?	AF?
Yucatec	1	Yes (patientless)	Yes (compounded)	No (similar)
Itzaj	1	Yes (patientless)	Yes	No
Mopan	0	No (equipollent)	No	No
Huastec	1	Yes	Yes	No
Ch'ol	0	No	No	No
Ch'orti'	1	Yes	Yes	??
Tseltal	3	Yes (patientless)	No	No
Tsotsil	1	Yes (obl in ditrans. only)	No	Yes
Tojolabal	1	Yes (patientless)	??	??
Chuj	1	Yes	Yes	Yes
Q'anjob'al	1	Yes	Yes	Yes
Akateko	1	Yes	Yes	Yes
Jakalteko	0*	No	Yes	Yes
Mocho'	1/0	Yes(?)	Yes(?)	No
Mam	1	Yes	Yes	No
Ixil	1	Yes (patientless)	Yes (1 dialect)	No
Kaqchikel	2**	Yes (patientless)	Yes	Yes
Tz'utujil	2**	Yes (patientless)	??	Yes
K'ichee'	2**	Yes	Yes	Yes
Sakapulteko	2**	Yes (patientless?)	??	Yes
Sipakapense	2**	Yes (patientless?)	??	Yes
Q'eqchi'	0*	No	Yes	No
Uspanteko	2**	Yes (patientless?)	Yes	Yes

* Q'eqchi' and Jakalteko both have antipassive-type constructions with oblique patients where the oblique patient cannot be omitted.

** These K'ichean languages have an antipassive construction in addition to the absolutive antipassive construction where the agent is focused and the patient is in an oblique phrase, which is discussed in detail in section 12.3.

CHAPTER 12. ANTIPASSIVE-TYPE CONSTRUCTIONS IN K'ICHEAN

The K'ichean branch of the Mayan family includes ten languages: Q'eqchi', Uspanteko, Poqomam, Poqomchi', and then six quite closely related languages including Kaqchikel, K'ichee', Achi, Tz'utujil, Sakapulteko, and Sipakapense. Although these languages share a significant amount in terms of general structure, there are some notable differences between them in relation to the different antipassive-type constructions, which are the topic of this chapter. I have used the label 'antipassive-type' or 'antipassive-like' here as a cover term for these constructions, since they all have agentive subjects and the verb only cross-references one of the two arguments of a dyadic predicate. However, most of these constructions are not true antipassives and do not necessarily share many of the other typical antipassive features (see Chapter 8).

While most of the Kaqchikel data comes from my fieldwork (2012-present), and constitutes the main contribution of this section, it is useful to compare these facts to the facts as we know them from other languages. The amount of detailed information about antipassive-type constructions in these other languages is much more restricted (with the exception of K'ichee'), and comes from the primary descriptions of these languages, many of which were themselves dissertations. I have attempted here to include relevant points of comparison where possible,⁷¹ and to note holes in the documentation which indicate areas for further research. For a general overview of Mayan languages with respect to classification, alignment, and antipassive-type constructions, see Chapter 11.

This chapter discusses in detail five different antipassive-type constructions in Kaqchikel, and the morphological, syntactic, and semantic features which differentiate them. Also, although there are only two verbal markers for these five constructions (*-on* and *-o*), these markers have been glossed in accordance with the construction they are in, as a way of being neutral as to the relationship between a given construction and the other constructions which share this morpheme. For a discussion of the difference between these two morphemes see section 13.1.

'Absolutive' or patientless antipassives are discussed in section 12.1, the agent focus construction is discussed in section 12.2, and the antipassive with an oblique patient, and how it

⁷¹ Achi, Poqomam and Poqomchi' are not discussed here because they were not in the typological sample.

contrasts with patientless antipassives and agent focus is examined in section 12.3. Section 12.4 deals with the incorporative construction (formerly the ‘incorporative antipassive’), while section 12.5 deals with the detransitivized reflexive/reciprocal construction. The chapter concludes with a brief summary of findings in section 12.6. I argue here that Kaqchikel has five different antipassive-type constructions which form a functional continuum that re-combines the same structural elements in different ways to cover a range of related antipassive-type functions. Interestingly, none of these five constructions is a prototypical antipassive by any of the possible prototype criteria discussed in section 9.3, which is a point revisited here in section 12.6. However, by the definition of antipassive used in this dissertation (which includes as criteria that the construction has a verbal marker, is intransitivizing, and asymmetrically corresponds to a transitive construction, see Chapter 3), two of the five constructions qualify as antipassives and were considered such in the typological study discussed in Chapters 4-10.

12.1 PATIENTLESS ANTIPASSIVES

What I am calling here the ‘patientless’ antipassive is what is traditionally considered in K’ichean to be the ‘absolute’ antipassive, or part of the ‘absolute’ antipassive, depending on the description. For example, in Mondloch’s (1981:183-184) description of K’ichee’, the ‘absolute antipassive’ is described as a fairly standard antipassive which detransitivizes the predicate such that the verb only receives absolute marking, and the logical patient is expressed in an oblique phrase, or is omitted entirely. However, Dayley (1985:345-347) uses the same ‘absolute antipassive’ label in Tz’utujil to describe only those instances where the verb is intransitivized and the patient cannot be expressed.

The ‘patientless’ antipassive construction as I discuss it here applies only to the ‘absolute antipassive’ as it is described in Dayley (1985), and does not include instances where the patient is expressed in an oblique phrase. Kaqchikel has lost the ability to express the patient in an oblique phrase in the absolute antipassive, a point discussed further in the following sections. However, Kaqchikel does have a separate antipassive which does allow the patient to be expressed obliquely (here termed the ‘oblique antipassive’ or ‘oblique AP’), which is discussed in section 12.3. Although those two antipassive patterns are not typically treated as distinct, there are several compelling reasons to consider the oblique AP construction to be a distinct construction in Kaqchikel.

Patientless antipassives in Kaqchikel are intransitive verbs which correspond to a transitive construction. They almost always have agentive subjects, but cannot express the patient in an oblique phrase. Unlike agent focus constructions (henceforth AF, see section 12.2), patientless antipassives cross-reference the agent on the verb, and can never cross-reference the patient.

Patientless antipassive from a root transitive:

- (12.1a) Jeb'ël y-a-kem-**on**⁷²
 beautiful INCOMPL-2SG.ABS-weave-AP
 ‘You weave well’ [textual, conversation, AC_CR, Santa María de Jesús⁷³]

Patientless antipassive from a derived transitive:

- (12.1b) Man üt ta y-ix-k'ayi-**n** wawe'
 NEG good IRR INCOMPL-2PL.ABS-sell-AP here
 ‘It’s not good for y’all to be selling here’ [textual, conversation, AC_CR, Santa María de Jesús]

Ungrammatical antipassive with an oblique patient:

- (12.1c) *N-Ø-mich'-**on** ri xtän r-ichin ri äk
 INCOMPL-3SG.ABS-pluck-AP DET girl 3SG-OBL DET chicken
 Target: ‘The girl is plucking the chicken’ [elicited]

The minor difference between *-on* in (12.1a) and (12.1c) and *-n* in (12.1b) for the patientless antipassive is simply that the vowel in the derived transitive is maintained (yielding *-in*, *-on*, *-un*, or *-an*), while root transitives take only *-on* or *-un* (where *-un* appears when the vowel of the root is /u/ and in all other cases is *-on*). For a discussion of the difference between root and derived transitives see Chapter 11.

Patientless antipassives also receive different morphological marking from the other four constructions discussed in this section; while the others are typically (and historically) marked with *-o* for root transitives, the patientless antipassive is marked with *-(o)n*, for both root and

⁷² The orthography used here for the Kaqchikel examples is the standard developed by the Academia de Lenguas Mayas de Guatemala. Examples from other sources are cited as they appear in that source, and are not otherwise standardized.

⁷³ This represents the dialect the example is from, which correspond to towns/municipalities. However, in some cases the examples have been standardized for homogeneity in ways which are not relevant to the present arguments (e.g., *nk-* vs. *y-* TAM marking in Santa María de Jesús). Elicited examples were checked or given by speakers from different dialects.

derived transitives. Contrast the examples above with *-o*-marked oblique AP construction from a root transitive:

- (12.2) Öj k'a x-øj-b'e-k'am-**o** r-ichin Tunatiw
 1PL DM COMPL-1PL.ABS-go-bring-AP 3SG-OBL Tunatiw
 'We, then, went forth to bring Tunatiw' (colonial Kaqchikel, Maxwell and Hill 2006:259)

Unlike agent focus and the oblique AP construction, the agent NP in the patientless antipassive (when overtly present) can appear either pre-verbally or post-verbally (i.e., it is not restricted to contexts where the agent is focused). Although the agent is most frequently post-verbal, it can be focused, in which case it appears before the verb, and the morpheme marking the construction is still *-on* in both cases.

No focused agent:

- (12.3a) Xe ka'i' mul, oxí' mul **y-e-wux-un** chupam jun
 only two time three time INCOMPL-3PL.ABS-harvest-AP inside one
 semana cha
 week DM
 'They only harvest two or three times a week' [textual, conversation, AC_CR, Santa María de Jesús]

Focused agent:

- (12.3b) Achike r-oma xaxe ri Chacon **n-Ø-ch'ak-on?**
 WH 3SG-because only DET Chacon INCOMPL-3SG.ABS-win-AP
 'Why does only Chacon win?' [textual, narrative, LB, Tecpán]

As a point of clarification, there are many instances in Kaqchikel texts where an antipassive-type construction agrees with the agent, lacks an overt patient, and is marked with *-o* instead of *-on*. However, these are agent focus constructions or oblique AP constructions where the patient is known from context, not patientless antipassives. The difference is clear in elicitation, since when speakers are presented with patientless *-o* detransitives, they assume the patient is known. Also, the *-o* form is ungrammatical with the agent in post-verbal (non-focused) position.

- (12.4a) Ri ala' x-Ø-ch'ay-**o**
 DET boy COMPL-3SG.ABS-hit-AF/OAP
 'The boy hit [someone, previously identified]' [elicited]

(12.4b) *N-Ø-t'is-ø ri xtän
 INCOMPL-sew-AF DET girl
 Target: 'The girl sews' [elicited]

Patientless antipassives are functionally distinct from all other antipassive-type constructions discussed in this chapter. First, they do not express a proposition equivalent to a transitive one. Like patientless antipassive constructions all over the world, their primary purpose is to remove the patient argument from the discourse, generally because it is unknown or irrelevant. This has the concomitant effect of highlighting the agent, as it is the sole argument in the clause, and also focusing on the action of the verb. The patientless antipassive also has an additional semantic effect, to insinuate that the action is habitual, often like a job, a skill, or a vice (e.g., 'she weaves'), or atelic or durative (e.g., 'he was thinking'). Semantic correlates such as these are not as prevalent in the other constructions discussed in this chapter.

Finally, although patientless antipassives tend to have habitual readings and occur with incomplete TAM marking, they can appear in any aspectual category (incomplete, complete, future, or progressive). As such, patientless antipassives are not restricted either in terms of tense/aspect or in terms of lexical features of the verb such as telicity or high vs. low transitivity. They are highly productive and quite frequent, and can appear with the vast majority of, if not all, transitive verbs in the language. The patientless antipassive, like all of the other constructions discussed here, cannot appear with intransitive roots.

12.1.1 COMPARISON WITH OTHER LANGUAGES

Patientless antipassive constructions exist in all of the K'ichean languages surveyed here, with the exception of Q'eqchi' (present in Kaqchikel, K'ichee', Tz'utujil, Uspanteko, Sakapulteko, and Sipakapense). According to Dayley (1985:346), Du Bois (1981:250-251), and Barrett (1999:243), patientless antipassives in Tz'utujil, Sakapulteko, and Sipakapense are very similar to those in Kaqchikel, as they appear when the speaker does not know or wish to mention the patient, and they describe habitual activities. However, with respect to Tz'utujil, Dayley (1985:346) describes the patient as "nonspecific" and "implied", but then says that "no specific patient is ever recoverable from the speech context" (1985:346). I would consider the patient in Kaqchikel to be non-recoverable, and not implied except in a few instances of lexicalization, such as 'drinking' in (11.5a-b), where the patientless antipassive implies drinking alcohol.

(12.5a) N-Ø-u-qūm ya' ri achin
 INCOMPL-3SG.ABS-3SG.ERG-drink liquid DET man
 'The man drinks water' [elicited]

(12.5b) N-Ø-qum-**un** ri achin
 INCOMPL-3SG.ABS-drink-**AP** DET man
 'The man drinks (alcohol)' [elicited]

Even most canonical actions have multiple possible themes (e.g., wash clothes/dishes, plant beans/corn, plucking chickens/turkeys, etc.), and in these cases any specific patient of these of these verbs in the patientless antipassive construction is non-recoverable and unimportant, and importance is given to the action itself.

In Uspanteko, it appears that some patients may be implied. In (12.6), the translation suggests that non-specific pots are the referents of the absent patient. However, how much of this is dependent on the verb as opposed to the patientless antipassive construction more generally is unclear.

(12.6) Lamas x-at-tz'aq-**on-k**
 where COMPL-2SG.ABS-make-**AP**-INTR
 'Where did you make (pots)?' (Can Pixabaj 2007:554) [my translation]

In the descriptions of Uspanteko, Sipakapense and Sakapulteko, no examples are given where the patient appears in an oblique phrase with the 'absolutive' antipassive. However, negative evidence would be necessary to confirm that 'absolutive' antipassives in these languages are indeed patientless.

In K'ichee' and Tz'utujil, while patientless antipassives have agentive subjects in the vast majority of cases, it is possible for a patientless antipassives to have a non-agentive subject. All examples appear to be anticausative or what Mondloch (1981:196) calls 'pseudopassive'. In some cases, without context, such constructions can be read as either an antipassive or anticausative, as in the Tz'utujil example in (12.7) below. In (12.8b) from K'ichee', the oblique marker is the same marker used for the passive.

- Tz’utujil:
 (12.7) X-Ø-raq-**oon-i**
 COMPL-3SG.ABS-break-AP-INTR
 ‘It broke (was broke)’
 ‘He was breaking (something)’ (Dayley 1985:116)

- K’ichee’:
 (12.8a) Š-Ø-wuli-**n** le: xah
 COMPL-3SG.ABS-dismantle-AP DET house
 ‘The house fell down’ (Mondloch 1981:185)

- (12.8b) Š-Ø-wuli-**n** le: čoma:l **aw-oma:l**
 COMPL-3SG.ABS-dismantle-AP DET meeting **2SG-OBL**
 ‘The meeting was wrecked by you/you wrecked the meeting’ (Mondloch 1981:196)

The anticausative use of the antipassive is not shared by Kaqchikel, and all examples like (12.7-12.8) above were rejected by Kaqchikel speakers, or were interpreted as having a known agent. However, there are a few, very limited examples in Kaqchikel where the subject of the antipassive is more of an undergoer or experiencer. For example, the subject of a patientless antipassive may be an experiencer with the emotion predicate *-b’isoj* ‘to miss X’ (from the noun *b’is* ‘sadness’), which is very frequently used in the antipassive to mean ‘X is sad’.

- (12.9) Y-i-b’iso-**n**
 INCOMPL-1SG.ABS-sad-AP
 ‘I am sad’ [elicited]

Also, although many middle-type actions (e.g., washing, caring for) are expressed as reflexives in Kaqchikel, at least one patientless antipassive predicate has a middle-type meaning, *-tzolin* ‘return, come back’ < *-tzolij* ‘return X’. The subject in this case can be conceived of as acting upon themselves, and not a third party as is typical of antipassives.

- (12.10) Jampe y-a-tzoli-**n?**
 WH INCOMPL-2SG.ABS-return-AP
 ‘When are you coming back?’ [elicited]

Another relatively common example of an antipassive without an agentive construction is a specialized meaning of *-tzu* ‘to see’. While *-tzu* in the antipassive frequently has an agentive subject, as in (12.11a), it can also mean ‘to appear, seem’ when accompanied by an adjective (as in (12.11b)).

(12.11a) Ri moy-i' ja ri ri winäq ri man y-e-tzu'-un ta
 DET blind-PL FOC DET DET person REL NEG INCOMPL-3PL.ABS-see-AP IRR
 'The blind are those people who can't see [Los ciegos son las personas que no miran]'
 (PLFM 2001:196)

(12.11b) Ri winäq aj pa täq taq'aj choj säq y-e-tzu'-un
 DET person from PREP PL coast straight white INCOMPL-3PL.ABS-see-AP
 'The coastal people appear very pale [Las personas costeñas se ven muy
 palidas]' (PLFM2001:5) [glossing and English translations are mine]

This more passive-type use of the antipassive is limited to a few lexical items. However, there is evidence that historically passive-type uses of the antipassive appear to have been more common. There are a number of passive-type uses of the antipassive which are no longer intelligible to modern speakers which can be found in colonial Kaqchikel texts. In the first colonial example (12.12a) below, an antipassive is juxtaposed with a passive, where both apparently having the same subject and the same general meaning (i.e., the *alcaldes* were not flogged and also doing slashing, as would be the more typical antipassive-type interpretation). In the second example (12.12b), the antipassive appears to take what is typically a passive oblique marker (-*oma*, as opposed to the antipassive oblique marker for the patient -*ichin*, reminiscent of the K'ichee' pseudopassive example in (12.8b) above), which encodes the number of the agent. Neither of these constructions is acceptable to modern speakers, even when the rest of the sentence is modernized.

(12.12a) Mi-x-e-rap-äx altes; x-e-soka-n
 REC-COMPL-3PL.ABS-flog-PASS alcaldes COMPL-3PL.ABS-cut-AP
 'The *alcaldes* were flogged; they were slashed'⁷⁴ (Maxwell and Hill 2006:314)
 Not: *'The *alcaldes* were flogged; they were slashing'

(12.12b) Ma-ni chik k'a x-Ø-k'ulub'e-n ajaw k-uma öq
 NEG-NEG again DM COMPL-3SG.ABS-consult-AP lord 3PL-OBL when

 x-e-käm
 COMPL-3PL.ABS-die
 'The lord was never again consulted by them, when they died' (Maxwell and Hill
 2006:172)

⁷⁴ This is also an example of a paired couplet, common to ritual speech styles. In is telling here that the author juxtaposed a clear passive with what is in form a patientless antipassive as the second half of the couplet.

Beyond issues relating to the thematic role of the subject, K’ichee’ differs significantly from the other languages discussed here in that the ‘patientless’ antipassive in K’ichee’ in fact allows a patient to be expressed in an oblique phrase. While the patient may be absent, as in all the examples in this section from other languages and as shown for K’ichee’ in (12.13a), the patient may also appear in an oblique phrase, as in (12.13b).

K’ichee’:
 (12.13a) Si b’alax k-iš-yax-**an-ik**
 really a.lot INCOMPL-2PL.ABS-scold-**AP**-INTR
 ‘You really scold a lot’ (Mondloch 1981:175)

(12.13b) Le achi x-Ø-il-**on** ch-w-e
 DET man COMPL-3SG.ABS-see-**AP** PREP-1SG-OBL
 ‘The man saw me’ (Davies and Sam-Colop 1990:526)

Davies and Sam-Colop describe antipassive with an oblique patient as a ‘retreat clause’ (in the terminology of Relational Grammar) in which the patient is marked by the preposition *chi-* plus the relational noun *-e(ch)*. This construction takes the same morphology as the patientless construction (*-n*), and cannot appear with the other antipassive-type marker *-ow*, as demonstrated in (12.13c) below (see section 12.3 for a comparison). As in the patientless construction, the verb always agrees with the agent.

(12.13c) *Le achi x-Ø-il-**ow** ch-w-e
 DET man COMPL-3SG.ABS-see-**AF** PREP-1SG-OBL
 Target: ‘The man saw me’ (Davies and Sam-Colop 1990:526)

While the antipassive with *-n* may be used in agent focus contexts, as in (12.14a) and also (12.13b) above, it may also appear outside of focus contexts, as demonstrated in (12.14b) where the agent NP follows the verb.

(12.14a) Xačín š-Ø-yoq’-**on** č-e: ri: išoq?
 WH COMPL-3SG.ABS-mock-**AP** PREP-(3SG)OBL DET woman
 ‘Who mocked the woman?’ (Mondloch 1981:189)

(12.14b) X-Ø-ul-tzuku-**n-a** ri: achi che: lah
 COMPL-3SG.ABS-look.for-**AP**-INTR DET man OBL 2SG.FORMAL
 ‘The man came to look for you’ (Mondloch 1981:175)

Additional support for the idea that in K'ichee' the absolutive antipassive is not found exclusively in focus contexts comes from the position of other elements. In Kaqchikel, oblique AP morphology (-o) cannot appear if any element other than the agent is focused. However, this is permitted for the absolutive antipassive in K'ichee'; when an oblique phrase is fronted/questioned, the verb bears antipassive morphology, and the agent appears post-verbally. The former location of patient phrase is marked with a locative trace *wi*.

(12.15) Xačín (č-e:) š-Ø-yoq' -on wi ri: išoq?
 WH PREP-3SG COMPL-3SG.ABS-mock-AP TRACE DET woman
 'Who did the woman mock?' (Mondloch 1981:190)

To summarize, the cognate structure in K'ichee' to the patientless antipassive in Kaqchikel is not necessarily patientless; it is simply a canonical antipassive, where the logical patient in the antipassive construction may or may not appear in an oblique phrase, and it may appear in both focus and non-focus contexts.

12.1.2 PRELIMINARY SUMMARY

The patientless (or 'absolutive') antipassive in Kaqchikel, while not necessarily prototypical for an antipassive as it lacks the ability to express a patient in an oblique phrase and may also (very limitedly) have a non-agentive subject, qualifies as an antipassive by the criteria used here in that (a) it has an antipassive marker, (b) it is intransitive, and (c) it corresponds to a less-marked transitive structure. The patientless antipassive in Kaqchikel is a fairly typical patientless antipassive in that it removes an unimportant or unknown patient from the discourse, and has habitual and/or durative aspectual correlates. As such, it primarily has pragmatic functions, although it can be used in contexts with focused agents (a.k.a. syntactic ergativity). The key characteristics which define the patientless antipassive in Kaqchikel are summarized below.

1. It lacks any mention of the patient (non-recoverable);
2. It cannot express a patient in an oblique phrase;
3. It is morphologically and syntactically intransitive;
4. It is always marked by the morpheme *-on*;
5. It generates habitual/durative aspect;
6. It always shows agreement with the agent/subject;

7. It is very productive;
8. With a very small number of verbs, the subject may be non-agentive.

12.2. AGENT FOCUS

Agent focus (AF) in K'ichean languages is like AF in other Mayan languages (see section 11.3.3) in that it involves a morphologically intransitive verb (evidenced by a single absolutive agreement morpheme) in a transitive syntactic configuration, i.e., that it has a non-incorporated and non-oblique patient NP. However, K'ichean languages are unique in that they exhibit salience-based agreement in AF, which determines whether the absolutive agreement morpheme indexes the agent or the patient. The salience hierarchy involves both person and number, and is structured as follows:

Non-third persons > Third person plural > Third person singular

Those more salient categories to the left will be cross-referenced on the AF verb form preferentially to those less salient categories to the right, regardless of whether that argument is an agent or a patient (see Norman and Campbell 1978:150, Preminger 2011). Example (12.16) below demonstrates this agreement pattern in Tz'utujil, where in (12.16a) agreement is with the first person agent, while in (12.16b) it is with the first person patient.

(12.16a) Inin x-**in**-ch'ey-**ow**-i jar aachi
 1SG COMPL-**1SG.ABS**-hit-**AF**-INTR DET man
 'I was the one who hit the man'

(12.16b) Jar aachi x-**in**-ch'ey-**ow**-i
 DET man COMPL-**1SG.ABS**-hit-**AF**-INTR
 'The man was the one who hit me' (Dayley 1985:349)

In (12.16a-b) above, the form of the verb is identical in both sentences, although which argument is the agent and which is the patient changes. Additionally, that argument which precedes the verb is interpreted as the agent.

AF is compatible with any dyadic verb in the language, and is therefore highly productive. It does not appear with already intransitive verbs, or, as in the case of the patientless antipassive described in section 12.1, with non-agentive subjects. There are likewise no restrictions with respect to definiteness, animacy, or aspect: patients are frequently definite and

animate, and can be names/proper nouns. The verb may be marked for completive or incompletive aspect, as well as future. In Kaqchikel and several other K'ichean languages, the patient NP is regularly omitted when it is signaled by agreement or otherwise known from context. Example (12.17a) shows that the patient pronoun is optional, and the person and number are encoded via the absolutive marker on the verb. In (12.17b), however, the third person patient is known from context, so the patient NP is omitted. Unlike with the patientless antipassive, even when omitted the patient is implied and fully recoverable.

(12.17a) N-Ø-in-kanuj jun, achike xk-in-ili-n (r'in)
 INCOMPL-3SG.ABS-1SG.ERG-look.for one WH FUT-1SG.ABS-care.for-AF 1SG
 'I'm looking for someone who will take care of me' [textual, narrative, TC_San José Poaquil]

[Talking about a cherry vendor in the market:]
 (12.17b) Wakamin cha k'o jun ixöq n-Ø-al-k'am-ø
 now DM be one woman INCOMPL-3SG.ABS-come-bring-AF

 r-ik'in cha
 3SG-with DM
 'Now there's a woman who brings [cherries] with her' [textual, conversation, AC_CR, Santa María de Jesús]

As shown in (12.17b) above, the morphological marker of AF in Kaqchikel is *-o* with root transitives. There is also harmony with the root vowel such that *CüC* roots take *-u* instead of *-o*. Derived transitive verbs, on the other hand, take *-Vn* in AF (as shown in (12.18) below, as well as (12.17a) above), just as they do in all of the constructions discussed in this section. Although this creates some morphological ambiguity, these constructions can still be distinguished by their syntactic properties.

(12.18) Achike x-Ø-kam-isa-n re achin re'?'
 WH COMPL-3SG.ABS-die-CAUS-AF this man this
 'Who killed this man?' [textual, narrative, MK, Tecpán]

The morpheme which marks AF are cognate across the K'ichean languages. As shown in (12.16) above, Tz'utujil marks AF with *-ow* for root transitives, which is also the marker in K'ichee', while Sipakapense has *-w* (Barrett 1999:112) and Sakapulteko has *-Vw* (Du Bois 1981:200).

As with AF in other Mayan languages, AF in Kaqchikel only appears in focus contexts, i.e., the relativization, *wh* questioning, or other focusing of transitive subjects. AF does not

appear in non-focused, pragmatically neutral contexts, where the agent is post-verbal, or when the patient is focused, or when the agent is a topic (see section 11.1.2). It should be noted that focus could be explicitly marked by an overt marker such as *ja* ‘focus’ or *xa xe* ‘only’, but could also simply involve an independent pronoun or NP in preverbal position. Examples of some of the common focus environments in which AF appears are given below. (12.19a) shows an agent with a focus word, (12.19b) a questioned agent, (12.19c) a subject relative clause, (12.19d) an indefinite free relative agent, and (12.19e) a negative indefinite agent.

(12.19a) *Xa xe ri ala' n-Ø-jik'-o ri xtän*
 just only DET boy INCOMPL-3SG.ABS-pull-AF DET girl
 ‘Only the boy is pulling the girl’

(12.19b) *Achike n-Ø-nim-o ri ala'*
 WH INCOMPL-3SG.ABS-push-AF DET boy
 ‘Who is pushing the boy?’

(12.19c) *Ja ri ala' [ri n-Ø-q'et-en ri k'oy*
 FOC⁷⁵ DET boy REL INCOMPL-3SG.ABS-hug-AF DET spider.monkey
 ‘It’s the boy who is hugging the spider monkey’

(12.19d) *K'o n-Ø-wux-u ri xkoya'*
 exist INCOMPL-3SG.ABS-harvest-AF DET tomatoes
 ‘Someone is harvesting the tomatoes’

(12.19e) *Man-jun achike ta n-Ø-qum-u ri ya'*
 NEG-one WH IRR INCOMPL-3SG.ABS-drink-AF DET water
 ‘No one is drinking the soda’ [picture elicitation]

Indefinite agents have also been reported to trigger the use of AF. As shown in (12.20a), speakers judge indefinite, post-verbal subjects to be ungrammatical. As noted in Broadwell (2000:3-4), indefinite agents appear in the preverbal position and require AF without any further focusing.

(12.20a) **N-Ø-u-tij ri saq'ul jun ak'wal*
 INCOMPL-3SG.ABS-3SG.ERG-eat DET banana one child
 Target: ‘A child is eating the banana’ [elicited]

⁷⁵ While *ja* is a focus marker, it is also a demonstrative in K'ichean languages, and also participated in the formation of independent pronouns (e.g., *ri + ja*).

(12.20b) Jun ak'wal n-Ø-tij-**o** ri saq'ul
 one child INCOMPL-3SG.ABS-eat-AF DET banana
 'A child is eating the banana' [picture elicitation]

However, this context with an indefinite agent argument differs from the other AF contexts above in that indefinite patients are almost always post-verbal. In the other focus contexts, focused, questioned, relativized, etc. patients must appear in the preverbal focus position.

There are, however, some exceptions to the above generalization that AF appears in A' extraction contexts. AF cannot appear in all contexts where we would otherwise expect it. Mainly, AF is not permitted in scenarios involving two local arguments (1/2 person combinations, as shown in (12.21a)). In this context AF is substituted for either a transitive (12.21b) or an oblique AP construction (12.21c) in 1>2 or 2>1 contexts.

Agent Focus:

(12.21a) *Ja rīn x-i-ch'ay-**o** **rat**
 FOC 1SG COMPL-1SG.ABS-hit-AF **2SG**
 Target: 'I hit you' [elicited]

Transitive:

(12.21b) Ja rīn x-**at**-in-ch'äy
 FOC 1SG COMPL-**2SG.ABS**-1SG.ERG-hit
 'I hit you' [elicited]

Oblique AP construction:

(12.21c) Ja rīn x-i-ch'ay-**o** **aw-ichin**
 FOC 1SG COMPL-1SG.ABS-hit-AP **2SG-OBL**
 'I hit you' [elicited]

In addition, AF is not acceptable with positive or negative imperatives, even if the second person agent pronoun is overtly expressed. A transitive imperative is given in (12.22a) which contrasts with the ungrammatical AF imperative in (12.22b). It is not the case that imperatives are incompatible with detransitivized forms in general, since the imperative form of the patientless antipassive is perfectly grammatical, as shown in (12.22c).

(12.22a) (Rat) T-Ø-a-tz'et-a' ri teluwäch!
 2SG IMP-3SG.ABS-3SG.ERG-watch-TR.IMP DET television
 '(You) watch the television!' [overheard]

(12.22b) *(Rat) K-a-tz'et-**o** ri teluwäch!
 2SG IMP-3SG.ABS-watch-AF DET television
 Target: '(You) watch the television!' [elicited]

(12.22c) (Rat) K-a-tzij^o-**n**!
 2SG IMP-2SG.ABS-talk-AP
 '(You) speak!' [overheard]

An apparent case of blocking in AF is discussed in Erlewine (2015) and Henderson and Coon (forthcoming), where the introduction of an adverb causes transitive verbs to be grammatical when the agent is focused. (12.23a) and (12.23b) below are identical strings except for the presence of a transitive as opposed to an AF verb form in (12.23b).⁷⁶

(12.23a) Achike kan qitzij x-Ø-tij-**o** ri wäy?
 WH DIR truth COMPL-3SG.ABS-eat-AF DET tortilla
 'Who truly ate the tortilla?' (Henderson and Coon forthcoming:18)

(12.23b) Achike kan qitzij x-Ø-u-tij ri wäy?
 WH DIR truth COMPL-3SG.ABS-3SG.ERG-eat DET tortilla
 'Who truly ate the tortilla?' (Erlewine 2015:27)

Although in some cases there are explanations for apparent anomalies in the distribution of AF, at least in Kaqchikel, the presence of morphology associated with AF is not solely determined by the syntax of A' extraction. Although AF appears in all the contexts discussed in this subsection, it is not mandatory in many of them. This fact is discussed in much more detail in section 13.2.

As discussed in Chapter 11 and as mentioned above, there are multiple preverbal syntactic argument positions. One of these is focus, which triggers AF. The others are topic positions, including contrastive and continuing topics. When the agent is a topic, AF cannot

⁷⁶ Henderson and Coon (forthcoming) explain this apparent blocking of AF morphology by providing arguments that (12.23b) is actually a biclausal structure where there is no movement out of the lower clause, a structure which is schematized in (12.23c). Those elements in parenthesis are null in (12.23b). This contrasts with (12.23a) which is a *wh* question which involves A' movement.

(12.23c) Achike [_{REL} (ri) kan qitzij [(chi) *pro* x-Ø-u-tij ri wäy]]
 WH (REL) DIR truth (COM) PRO COMPL-3SG.ABS-3SG.ERG-eat DET tortilla
 lit. 'Who is it that truly he ate the tortilla?' (Henderson and Coon forthcoming:17)

appear, even though the agent is preverbal. Transitive constructions are used in such cases. This is demonstrated in the following excerpt (12.24), where ‘we’ is the topic, and even though emphasis is placed on ‘we’ in the second clause via an otherwise omissible pronoun reference, and ‘we all’ appears preverbally, the verb in the second clause is transitive.

- (12.24) Roma öj k’o chupam ri alaxib’äl, kan qitzij **öj**
 because 1PL exist in DET Christmas DIR truth **1PL**
- q-onojel** **n-Ø-qa-junumaj** ri qa-way
1PL.POSS-all **INCOMPL-3SG.ABS-1PL.ERG-share** DET 1PL.POSS-tortilla
 ‘Because we are at Christmas time, truly all of us share our food’ [textual, narrative, MS]

Significant attention has been given to issues of topic and focus and how to identify them, although most of the research has looked specifically at K’ichee’. Some of the cues discussed are morphological, while some are prosodic. Can Pixabaj and England (2011) make a distinction between continuing topics and contrastive topics, where contrastive topics may be accompanied by focus marking. With respect to prosody, Yasavul (2013:131) notes that ideas are conflicting, where some have argued that topics in K’ichee’ are not followed by a pause, while Can Pixabaj and England (2011) state that all topics have pauses while foci do not. Yasavul (2013) looked at the prosodic issue and through systematic testing concluded that pauses do not distinguish contrastive topics from foci in K’ichee’.

12.2.1 COMPARISON WITH OTHER LANGUAGES

Kaqchikel has lost many of its ‘status’ suffixes, which indicate transitivity, aspect, and clause type (cf. Kaufman 1990). However, most of the other K’ichean languages retain status marking, which shows up frequently with antipassive-type constructions. In other K’ichean languages, the verb in AF is marked for intransitive ‘status’ as opposed to ‘transitive’ status. The morpheme *-ik* in K’ichee’ appears on fully conjugated AF verbs in clause-final or pre-pause position at an intonational phrase edge (Mondloch 1981:88, Aissen 2011:8, Henderson 2012). This suffix also appears on other intransitives such as passives, as well as root intransitives.

- (12.25) Are: x-Ø-b’an-ow-**ik**
 FOC COMPL-3SG.ABS-do-AF-INTR
 ‘He is the one who did it’ (Mondloch 1981:214)

Intransitive ‘status’ is also marked on verbs in AF and the other detransitivized constructions discussed here in Tz’utuñil (-i), Uspanteko (-ik), Sipakapense (-ik), and Sakapulteko (-ek).

Additionally, K’ichee’ does not allow AF in contexts where the possessor of the patient is co-referential with the subject (‘extended reflexives’). The same sentences are perfectly acceptable when the possessor is interpreted as a third party, not co-referential with the subject.

- (12.26) *X-e:-q-il ri: winaq ri: x-e:-tij-**ow**
 COMPL-3PL.ABS-1PL.ERG-see DET person DET COMPL-3PL.ABS-eat-**AF**
- ki-wa:** iw-u:k
3PL.POSS-food 2PL.ERG-with
 ‘We saw the people_i who ate their_{*ij} food with you’ (Mondloch 1981:234)

Extended reflexives are also discussed with reference to K’ichee’ in Coon and Henderson (2011), for Tsotsil in Aissen (1999), and Coon et al. (2014) for Q’anjob’al. As in K’ichee’, AF verbs in Q’anjob’al do not permit the subject to be coreferential with the possessor (shown in (12.27b). Transitive verbs, on the other hand, require a bound interpretation of the possessor (as in (12.27a)).

- (12.27a) Maktxel max s-b’on s-na?
 WH ASP 3SG.ERG-paint 3SG.POSS-house
 ‘Who_i painted his_{i/*j} (own) house?’
- (12.27b) Maktxel max b’on-**on**[-i] s-na?
 WH ASP paint-**AF**-INTR 3SG.POSS-house
 ‘Who_i painted his_{*ij} house?’ (Coon et al. 2014:226)

The distinction between transitives and AF in extended reflexives in Kaqchikel does not appear to follow this same pattern. The sentences in Kaqchikel equivalent to the Q’anjob’al examples in (12.27) were presented to three different native Kaqchikel speakers. The transitive construction (12.28a) was judged ungrammatical by all three, while the AF version in (12.28b) was acceptable under both a bound and a disjointed interpretation (although one speaker said the disjointed interpretation was more accessible).

- (12.28a) *Achike x-Ø-u-b’on-**ij** r-ochoch?
 WH COMPL-3SG.ABS-3SG.ERG-paint-**TR** **3SG.POSS-house**
 Target: ‘Who_i painted his_{?i/?j} house?’ [elicited]

(12.28b) Achike x-Ø-b'on-in r-ochoch?
 WH COMPL-3SG.ABS-paint-AF 3SG.POSS-house
 'Who_i painted his_{i/j} house?' [elicited]

One might hypothesize that the ungrammaticality of (12.28a) is due to the fact that a transitive verb triggers the expectation that the *wh* word refers to the patient. Unlike in (12.28a) where the bound element is inanimate (house), if it were an animate, it would be available to be interpreted as the agent, and the *wh* element to be interpreted as the patient. This would yield a grammatical sentence, but one which does not have the same binding relationship as the extended reflexive. This is in fact the case. The following sentence with a possessed human argument yields an object *wh* question.

(12.29a) Achike x-Ø-u-k'äm pe r-ixjayil pa nimaq'ij?
 WH COMPL-3SG.ABS-3SG.ERG-bring DIR 3SG.POSS-wife PREP party
 'What did his wife bring to the party?'
 *'Who_i brought his_{i/j} wife to the party?' [elicited]

Interestingly, when the same sentence in (12.29a) appears with an AF verb, all three speakers interpreted the sentence as a subject *wh* question and only with the bound interpretation, illustrated in (12.29b). In order to get the disjointed interpretation, one would have to specify whose wife it was, who cannot be interpreted as co-referential with the referent of the *wh* word (as in (12.29c)).

(12.29b) Achike x-Ø-k'am-o pe r-ixjayil pa nimaq'ij?
 WH COMPL-3SG.ABS-bring-AF DIR 3SG.POSS-wife PREP party
 'Who_i brought his_{i/*j} wife to the party?' [elicited]

(12.29c) Achike x-Ø-k'am-o pe r-ixjayil Ma Xwan
 WH COMPL-3SG.ABS-bring-AF DIR 3SG.POSS-wife HON Juan
 pa nimaq'ij?
 PREP party
 'Who brought John's wife to the party?' [elicited]

With respect to extended reflexives, Q'eqchi' behaves more like Kaqchikel than K'ichee' or Q'anjob'al. Berinstein (1985:122-123) reports that coreferential readings in extended reflexives are unacceptable when the verb is transitive. Although she does not mention if they are acceptable with non-co-referential reading, she does mention that they would be grammatical

with a co-referential reading if the verb were detransitivized. This is more like Kaqchikel in that the non-transitive construction allows the bound interpretation, not the transitive construction.

- (12.30) *Ha' laj banonel (li) qui-Ø-x-col li x-na'
 FOC DET doctor REL PST-3SG.ABS-3SG.ERG-save DET 3SG.POSS-mother
 Target: 'That's the doctor_i who saved his_i mother' (Berinstein 1985:123)

Similarly, Aissen (2011:14) provides evidence that extended reflexives in Tz'utujil also have a bound interpretation in an AF clause.

- (12.31) Naq ya'-o kaan ja r-naquun wawa ri'?
 WH give-AF DIR DET 3SG.POSS-thing here DM
 'Who_i left his_i things here?' (Aissen 2011:14)

Aissen (2011:12-14) points out another quirk of AF present in K'ichee', namely that clauses with a focused agent and a bare, non-human patient do not require AF (shown in (12.32a)). In those cases, both AF and a transitive verb are acceptable, but the AF form differs slightly in meaning that that it presupposes the existence of the patient. This contrasts with cases where the same patients are definite, which are ungrammatical in transitive constructions when the agent is focused (as in (12.32b)).

- (12.32a) Jachiin x-Ø-u-loq' uuq?
 WH COMPL-3SG.ABS-3SG.ERG-buy cloth
 'Who bought cloth?'

- (12.32b) *Jachiin x-Ø-u-loq' rii uuq?
 WH COMPL-3SG.ABS-3SG.ERG-buy DET cloth
 Target: 'Who bought the cloth?' (Aissen 2011:12)

Aissen also states that the reverse is true for Tz'utujil, that AF is required in instances where the patient is indefinite and non-specific, as shown in (12.33).

- (12.33) Naq n-Ø-ya'-o pwaq?
 WH INCOMPL-3SG.ABS-give-AF money
 'Who is giving money?' (Aissen 2011:14)

The facts for Kaqchikel are closer to those for K'ichee' than to those for Tz'utujil with respect to indefinite, non-specific patients. In Kaqchikel, AF and transitive constructions can both appear regularly in focus contexts with unmodified, non-human patients.

(12.34a) K'o n-Ø-tij-ø wäy
 exist INCOMPL-3SG.ABS-eat-AF tortilla
 'Someone is eating tortillas' [elicited]

(12.34b) K'o n-Ø-u-tij wäy
 exist INCOMPL-3SG.ABS-3SG.ERG-eat tortilla
 'Someone is eating tortillas' [elicited]

It is currently unknown if there is any difference in meaning between the transitive and AF constructions in (12.34a) vs. (12.34b) akin to the subtle differences Aissen (2011) reports for K'ichee'. However, these examples are interesting as instances where AF can appear but is not required, and that this differs from what we see in very closely related languages. It is also possible that this overlaps with the incorporative construction (see section 12.4), since an incorporative construction with a focused agent is identical to an AF clause with an unmodified, non-human patient.

12.2.2 PRELIMINARY SUMMARY

We can conclude from the previous section that AF is not uniform, even among this group of closely related languages. Even though there are overarching similarities, the differences have made difficult any attempt to formulate a unified account of AF in Mayan. The features which define AF in Kaqchikel are as follows:

1. The AF construction is syntactically transitive, although the verb is morphologically intransitive;
2. Verbal agreement is with either the patient or the agent on a salience hierarchy;
3. It is highly productive;
4. It is marked by *-o* for root transitives and *-n* for derived transitives;
5. The patient NP is either present or implied;
6. It is only available when the agent of a transitive verb is focused;
7. It does not appear with 1/2 person combinations;
8. It is optional with unmodified non-human patients;
9. It can appear in extended reflexive contexts;
10. It does not appear in the imperative;
11. There are no restrictions on the animacy, definiteness, etc. of the patient;
12. There are no aspectual restrictions/correlates.

AF is not considered to be an antipassive by most Mayanists (cf. Coon et al. 2014:213-216 and references therein), although AF was often referred to as a type of antipassive in the earlier literature. By the criteria used in this dissertation for the identification of antipassives cross-linguistically (see Chapter 3), AF likewise does not qualify as a true antipassive here. While it has what could be called a voice marker, AF is not entirely intransitive, since it involves two non-oblique core arguments, and may cross-reference the patient in certain situations. AF also lacks any corresponding structure outside of focus contexts, which contrasts with the antipassive in most Mayan languages.

12.3 THE OBLIQUE ANTIPASSIVE CONSTRUCTION

What I have called here the ‘oblique antipassive construction’ (henceforth ‘oblique AP construction’) refers to a morphologically and syntactically intransitive construction which expresses the patient of an agentive, intransitivized transitive verb in an oblique phrase and has a focused agent. While several Mayan languages have an antipassive which optionally allows the patient to optionally be expressed in an oblique phrase and optionally to have a focused agent (e.g., as in Q’anjob’al (Coon et al. 2014:214-215), and K’ichee’ (Mondloch 1981:170), called the ‘absolutive voice’), the oblique AP construction is not equivalent to the antipassive in these languages. In K’ichean languages the oblique AP construction is generally grouped not with the antipassive but with AF (e.g., as in Tz’utujil (Dayley 1985:347-351), Sakapulteko (Du Bois 1981:246-248), and K’ichee’ (Mondloch (1981:224-225)). There are compelling reasons why the oblique AP construction in Kaqchikel should be distinguished from both the patientless antipassive and AF, which is why I have treated it here as a separate construction. The properties of the oblique AP construction in several other K’ichean languages and their relationship to AF and the patientless/‘absolutive’ antipassive are discussed in section 12.3.1.

In Kaqchikel, the oblique AP construction overtly expresses two arguments, although only the agent is coded as a core argument (and the patient cannot be cross-referenced on the verb). The patient appears in an oblique phrase (marked by a relational noun), and as such this construction expresses the same basic proposition as a transitive predicate (see (12.35a) vs. (12.35b) below). Unlike the patientless antipassive, the verb is marked with *-o* for root transitives, as in (12.35b). This is the same marker which marks AF, the incorporative construction, and the detransitivized reflexive/reciprocal (see the following sections).

(12.35a) N-Ø-in-tz'ët rĭn achike Ø ru-b'an-on
 INCOMPL-3SG.ABS-3SG.ERG-watch 1SG WH 3SG.ABS 3SG.ERG-do-PRF
 'I've been watching how he's doing' [textual, narrative, JA_AB_FA, San Juan Comalapa]

(12.35b) Ja ri ru-xib'al nu-te'
 FOC DET 3SG.POSS-brother.of.woman 1SG.POSS-mother

x-Ø-tz'et-o r-ichin re kaxa re'
 COMPL-3SG.ABS-watch-OAP 3SG-OBL this box this
 'It was my mother's brother [that] watched this box' [textual, narrative, AC, Santa María de Jesús]

Unlike AF, the verb agrees only with the agent and never with the patient, regardless of the relative salience of the patient vis-à-vis the agent in the person/number hierarchy discussed in section 12.2. In (12.36) below, the patient is a first person, expressed by a bound element attached to the relational noun *-ichin*, while the verb agrees with the third person agent, the bee.

(12.36) Man ja ta ri kab' x-Ø-ti'-o w-ichin
 NEG FOC IRR DET bee COMPL-3SG.ABS-sting-OAP 1SG-OBL
 'It wasn't the bee [that] stung me' [textual, narrative, TC]

As demonstrated by the examples in (12.36) and (12.35b) above, there are no real restrictions on the patient of the oblique AP construction in Kaqchikel. The patient may be human, non-human, definite, modified, and may also be a proper noun (as in (12.37a) below). However, native speakers do not appear to produce, and often judge strange or ungrammatical, oblique clauses where the patient is non-referential, as shown in (12.37b). For examples of non-referential patients in AF, see section 12.2.1. The *-n* marker appears on the verb in (12.37b) because *-k'ayij* 'sell' is a derived transitive.

(12.37a) Öj k'a x-øj-b'e-k'am-o r-ichin Tunatiw, ĩx nu-k'ajol!
 1PL DM COMPL-1PL.ABS-go-bring-OAP 3SG-OBL Tunatiw 2PL 1SG.POSS-son
 We, then, went forth to bring Tunatiw here, you, my sons! (Maxwell and Hill 2006:259)

(12.37b) ^{*/?}Man-jun achike ta n-Ø-k'ayi-n r-ichin äk'
 NEG-ONE WH IRR INCOMPL-3SG.ABS-sell-OAP 3SG-OBL chicken
 Target: 'No one is selling chicken(s)' [elicited]

The only other context I have found in which the oblique AP construction is not freely substitutable for an AF construction or vice-versa is 1/2 person combinations, as mentioned above in 12.2. AF cannot appear when both arguments are non-third persons. In those cases, the oblique AP construction may be used instead, to the same syntactic ends.

(12.38a) *Xaxe rat x-a/i-to'-o rin
 only 2SG COMPL-2SG.ABS/1SG.ABS-help-AF 1SG
 Target: 'Only you helped me' [elicited]

(12.38b) Xaxe rat x-a-to'-o w-ichin
 only 2SG COMPL-2SG.ABS-help-OAP 1SG-OBL
 'Only you helped me' [elicited]

Additionally, the oblique AP construction can only be used with underlyingly transitive verbs, and does not appear on already intransitive roots/stems. There are also no specific semantic associations with the oblique AP construction, and it can be used with all TAM markers. Like patientless antipassive and AF, the oblique AP construction is highly productive and can appear with all or almost all transitive verbs in the language.

In terms of the difference between the patientless antipassive and the oblique AP construction, as the names suggest, the oblique AP construction allows the patient to be expressed in an oblique phrase, while the patientless antipassive does not allow any overt expression of the patient. Additionally, the oblique AP construction is restricted to focus contexts, i.e., when the agent of a transitive verb is focused, questioned, relativized, etc. (see section 12.2 for a list of common focused agent contexts). There are a number of diagnostics which confirm this. First, Kaqchikel speakers consistently reject oblique AP constructions when the agent follows the verb (V-S-Obl, as in (12.39b)), which is the typical position of the agent in patientless antipassive constructions (contrast (12.39a) and (12.39b)). The agent must precede the verb in oblique AP construction clauses, as in (12.39c).

Patientless antipassive:
 (12.39a) X-Ø-kem-on ri ixöq
 COMPL-3SG.ABS-weave-AP DET woman
 'The woman was weaving' [elicited]

Ungrammatical oblique AP with a post-verbal agent:
 (12.39b) *X-Ø-kem-ø ri ixöq r-ichin ri po't
 COMPL-3SG.ABS-weave-OAP DET woman 3SG-OBL DET blouse
 Target: 'The woman wove the blouse' [elicited]

Grammatical oblique AP with a focused agent:
 (12.39c) Ri ixöq x-Ø-kem-ø r-ichin ri po't
 DET woman COMPL-3SG.ABS-weave-OAP 3SG-OBL DET blouse
 'The woman wove the blouse' [elicited]

Like AF, the oblique AP construction cannot be used in the imperative.⁷⁷ The intended meaning in (12.40a) below would have to be expressed with a transitive verb, as in (12.40b).

(12.40a) *(Rat) K-a-tz'et-ø r-ichin la ne'y!
 2SG IMP-2SG.ABS-watch-OAP 3SG-OBL that baby
 Target: '(You) watch that baby!' [elicited]

(12.40b) (Rat) T-Ø-a-tz'et-a' la ne'y!
 2SG IMP-3SG.ABS-2SG.ERG-watch-TR.IMP that baby
 '(You) watch that baby!' [overheard]

The oblique AP construction is also not permitted in other contexts which do not involve focus. Oblique AP constructions do not appear in 'when' clauses, and generally cannot appear when the agent is a continuing topic. In (12.41), the woman is established as the topic in the first sentence, and then continues to be the topic of the following sentence. In that second sentence, the verb may only be transitive (or a patientless antipassive). The oblique AP construction is ungrammatical in this context.

⁷⁷ There is evidence that both AF and oblique AP constructions were permitted in imperatives/hortatives in colonial Kaqchikel. Take, for example, the following:

(12.1a) İx k-ix-sa'-ø ru-wäch!
 2PL HORT-2PL.ABS-achieve-AF 3SG.POSS-eye
 'May you display it!' (Maxwell and Hill 2006:22)

(12.1b) İn k-i-ch'ak-ø k-ichin!
 1SG HORT-1SG.ABS-win-OAP 3PL-OBL
 'May I defeat them!' (Maxwell and Hill 2006:76)

- (12.41) K'o jun ixöq aj-kem n-Ø-u-b'an jun
 exist one woman AGT-weave INCOMPL-3SG.ABS-3SG.ERG-make one
- ru-po't. Q'ij q'ij *n-Ø-kem-o r-ichin ri po't.
 3SG.POSS-blouse day day INCOMPL-3SG.ABS-weave-OAP 3SG-OBL DET blouse
 Target: 'There's a weaver, she is making herself a blouse. Every day she weaves the blouse' [elicited]

The oblique AP construction is permitted in all focus environments, and rejected in all non-focused agent environments. It therefore has the same syntactic distribution as AF, and additionally is indicated by the same morpheme as AF. From this perspective, one can see why some have analyzed the oblique AP construction as a morphological variant of AF. However, a key property of AF is that it is syntactically transitive, i.e., that the patient is not in an oblique relationship with the verb. That relationship is made especially clear in languages like Kaqchikel where the verb may agree with the patient in AF. As such, I view the oblique AP construction as distinct from AF, but which is used to circumvent the same syntactic restrictions as AF.

The oblique AP construction is likewise distinct from the patientless antipassive. While it is tempting to unite them given the usual facts about antipassives allowing oblique patients, the oblique AP construction takes a different morpheme than the patientless antipassive and serves a very different function. While the patientless antipassive removes unimportant or unknown patients from the discourse, the oblique AP construction allows the agent to be focused, while continuing to express a (referential) patient. If the oblique phrase in the oblique AP construction is omitted without any other change, there is the implication of a patient, which is not the case for the patientless antipassive.

Additionally, as described in section 12.1, Kaqchikel lacks an antipassive construction that can have a non-focused agent and which also can express a patient in an oblique phrase. If Kaqchikel were like K'ichee' in having such a construction (see 12.3.1 below), then one would expect both of the following examples to be grammatical: in (12.42a/12.1c) (repeated from 12.1 above), the verb is marked with *-on* and the agent appears post-verbally. In (12.42b), the agent is focused, the verb is marked with *-on*, and the patient is expressed in an oblique phrase.

- (12.42a/12.1c) *N-Ø-mich'-on ri xtän r-ichin ri äk
 INCOMPL-3SG.ABS-pluck-AP DET girl 3SG-OBL DET chicken
 Target: 'The girl is plucking the chicken' [elicited]

- (12.42b) *Ri ixöq x-Ø-kem-**on**⁷⁸ r-ichin ri po't
 DET woman COMPL-3SG.ABS-weave-AP 3SG-OBL DET blouse
 'The woman wove the blouse' [elicited]

Although neither are grammatical, (12.42a) would be grammatical without the oblique phrase (i.e., the patientless antipassive), and (12.42b) would be grammatical either without the oblique phrase (i.e., the patientless antipassive), or if the marker were *-o* instead of *-on* (i.e., the oblique AP construction). These examples, along with those in (12.39a-c) above, demonstrate that Kaqchikel lacks a non-focused agent antipassive with an oblique patient.

12.3.1 COMPARISON WITH OTHER LANGUAGES

Constructions similar to the Kaqchikel oblique AP construction can also be found in Tz'utujil, K'ichee', Q'eqchi', Sipakapense, Uspanteko, and Sakapulteko. Dayley's (1985) description of this construction in Tz'utujil and Can Pixabaj's (2007) description of this construction in Uspanteko match many of the facts described above for Kaqchikel: the oblique AP construction only appears when the agent is focused, agreement is always with the agent, the patient appears in an oblique phrase, and the construction is marked by *-o(w)* for root transitives.

- Tz'utujil:
 (12.43) Ja wajkax x-Ø-toq'-**o** **r-xin** Aa Lu'
 FOC bull COMPL-3SG.ABS-gore-**OAP** **3SG-OBL** youth Pedro
 'It was the bull that gored Pedro' (Dayley 1985:351)

- Uspanteko:
 (12.44) Iin x-in-il-**ow** **aw-e**
 1SG COMPL-1SG.ABS-see-**OAP** **2SG-OBL**
 'I'm the one who saw you' (Can Pixabaj 2007:553) [my translation]

The same general facts appear to hold for Sakapulteko as well, where the oblique AP construction appears only in focus contexts, and is marked with *-Iw*.

- (12.45) E: ra at š-at-č'iy-**iw** **r-e:ŋ** l ak'al-a:b'
 FOC ART 2SG ASP-2SG.ABS-hit-**OAP** **3SG.OBL** DET child-PL
 'You're the one who hit the children' (Du Bois 1981:247)

⁷⁸ As discussed in section 13.2, (12.42b) with *-on* is in fact grammatical for some Kaqchikel speakers who are in the process of merging *-o* and *-on*. However, for speakers who maintain more of a distinction, these constructions consistently take *-o* and are ungrammatical with *-on*.

However, the oblique AP construction in Sakapulteko differs from the constructions discussed above for Kaqchikel, Tz'utujil, and Uspanteko in that the verb does not always agree with the agent. While the verb often agrees with the agent (12.46a), it apparently may also agree with the patient, despite the fact that it appears in an oblique phrase (12.46b).

(12.46a) Ne: wa' Ø-Ø-č'iy-iw w-e:ŋ?
 WH DEM ASP-3SG.ABS-hit-OAP 1SG-OBL
 'Who was it that hit me?'

(12.46b) Ne: wa' š-in-č'iy-iw w-e:ŋ?
 WH DEM ASP-1SG.ABS-hit-OAP/AF? 1SG-OBL
 'Who was it that hit me?' (Du Bois 1981:248)

Because the verb can agree with the patient in the oblique AP construction, this suggests that in Sakapulteko the oblique AP construction is indeed structurally more similar to AF, and further tests would need to be done to determine if the oblique marker in this case indeed means the patient is not a core argument.

In Sipakapense, as in Kaqchikel, the patientless antipassive is used “when the patient is unknown, irrelevant or obvious” (Barrett 1999:242). It is marked by *-n* and is used for habitual actions (12.47a). The oblique AP construction, as in the other languages here, seems to only be available when the agent is focused. However, Barrett (1999:248) claims that the oblique AP construction may only be used when both agent and patient are third persons (singular or plural), e.g., as in (12.47b). Notice that ‘who’ allows either singular or plural agreement in Sipakapense. Although Barrett (1999) demonstrates that the oblique AP construction is not possible when the oblique patient is cross-referenced overtly on the verb (as in (12.47c), as is possible in Sakapulteko), there is no indication whether agreement with the agent in this case would be grammatical (as in the other K'ichean languages).

Patientless antipassive:
 (12.47a) Ma'el tjin k-Ø-t'is-n
 Ma'el PROG INCOMPL-3SG.ABS-sew-AP
 'Ma'el is sewing' (Barrett 1999:243)

3>3 oblique AP construction:
 (12.47b) Chin x-i'-to'-w-ik ch-re?
 WH COMPL-3PL.ABS-help-OAP-INTR PREP-3SG
 'Who (plural) helped him?'

- The oblique patient cannot be cross-referenced on the verb:
- (12.47c) *Chin x-at-to'-w-ik ch-awa?
 WH COMPL-2SG.ABS-help-OAP-INTR PREP-2SG
 Target: 'Who helped you?' (Barrett 1999:248)

Q'eqchi' antipassive-type constructions do not include AF. Rather, there is an opposition between the antipassive-type construction used for non-referential patients (akin to the incorporative construction, see section 12.4) and the antipassive-type construction used for focusing agents. This second construction is similar to the Kaqchikel oblique AP construction in that it only appears in agent focus contexts, agreement is always with the agent, and the patient appears in an oblique phrase (as in (12.48b) below, which contrasts with the transitive construction in (12.48a)). The arguments may be of any person or number.

- (12.48a) T-at-e'x-ch'aj laa
 FUT-2SG.ABS-3PL.ERG-wash you
 'They will wash you'
- (12.48b) Heba'an t-e'-ch'aj-o-k acu-e
 3PL FUT-3PL.ABS-wash-OAP-ASP 2SG-OBL
 'They are the ones [who] will wash you' (Berinstein 1985:152)

An interesting feature of Q'eqchi' is that inanimate agents must be focused, and because they must be focused, such propositions can only be expressed via an oblique AP construction where the patient appears in an oblique phrase. This is shown in (12.49a-b) below.

- (12.49a) Li hab ta-Ø-uk'-o-k r-e li ch'och'
 DET rain TNS-3SG.ABS-flood-OAP-ASP 3SG-OBL DET land
 'It's the rain that will flood the land'
- (12.49b) *Ti-Ø-x-uk' li ch'och' li hab
 TNS-3SG.ABS-3SG.ERG-flood DET land DET rain
 Target: 'The rain will flood the land' (Berinstein 1985:180-181)

However, the oblique AP construction in Q'eqchi' is perhaps most different from that in the other languages discussed here in that the oblique patient may not be omitted in Q'eqchi' in the oblique AP construction. On these grounds, it could be argued that the oblique AP construction in Q'eqchi' is not, in fact, a true antipassive (which is how I have treated it in Kaqchikel and others, see section 12.3.2).

(12.50a) Lain x-in-sac'-**o-c** **r-e**
 1SG TNS-1SG.ABS-hit-OAP-ASP 3SG-OBL
 'I hit it'

(12.50b) *Lain x-in-sac'-**o-c**
 1SG TNS-1SG.ABS-hit-OAP-ASP
 Target: 'I hit' (Berinstein 1985:183)

Lastly, as discussed in section 12.1.1, the K'ichee' equivalent of the patientless antipassive in Kaqchikel also allows the patient to be expressed. K'ichee' therefore has an antipassive with an oblique patient which can appear in both focus and non-focus contexts (shown in (12.51b) below). However, K'ichee' also has a structure equivalent to oblique AP construction in Kaqchikel, as shown in (12.51a) (discussed in Davies and Sam-Colop (1990:539) as the 'Antipassive/2-3 retreat' construction). As in Kaqchikel and Tz'utujil, it is marked with *-ow*, the verb may only agree with the agent, and it can only appear when the agent is focused. It differs from the antipassive in (12.51b) in that the verb (if it is a root transitive) appears with *-ow* instead of *-on* and the oblique marker for the patient is the genitive *-ee(h)* as opposed to the typical antipassive preposition plus oblique marker *ch-e*. The ungrammaticality of (12.51c) demonstrates that these oblique markers are not interchangeable between the two constructions.

(12.51a) Ix x-ix-yoq'-**ow** r-ee lee achi
 2PL COMPL-2PL.ABS-mock-AF 3SG-GEN DET man
 'You are the ones who mocked the man' (Davies and Sam-Colop 1990:539)

(12.51b) Le achi x-Ø-il-**on** ch-w-e
 DET man COMPL-3SG.ABS-see-AP PREP-1SG-OBL
 'The man saw me'

(12.51c) *Le achi x-Ø-il-**ow** ch-w-e
 DET man COMPL-3SG.ABS-see-AF PREP-1SG-OBL
 Target: 'The man saw me' (Davies and Sam-Colop 1990:526)

K'ichee' therefore has two separate antipassive-like constructions where the patient appears in an oblique phrase, while Kaqchikel, and potentially the rest of the languages discussed here, only have one (the *-o(w)*-marked oblique AP construction). The oblique AP construction in K'ichee' presumably has the same function as it does in the other languages (focusing the agent and making the patient a non-core argument), while the antipassive +/- oblique construction can focus the agent but is more concerned with the status of the patient (cf. Campbell 2000). The

relationship between the K'ichee' system and the Kaqchikel system of antipassive-type derivations is explored further in section 13.1. The functional differences between AF, the oblique AP construction, and transitive constructions in Kaqchikel are discussed in section 13.3.

12.3.2 PRELIMINARY SUMMARY

As with many of the constructions discussed here, there are overarching similarities between the oblique AP constructions in different K'ichean languages, but they also differ in significant ways. I have discussed why the oblique AP construction in Kaqchikel should be considered a distinct construction, separate from both the patientless antipassive and AF. The characteristics which describe the oblique AP construction in Kaqchikel are as follows:

1. It expresses the logical patient overtly in an oblique phrase marked by a relational noun (*-ichin*);
2. The verb always agrees with the agent;
3. It only appears when the agent is focused;
4. It may not appear in the imperative;
5. The obliquely-marked patient may be modified, definite, a pronoun, a proper name, etc., but may not be non-referential;
6. It is highly productive;
7. It does not generally express habitual aspect (or have any other aspectual correlations).

For the purposes of this dissertation I have treated the oblique AP construction in Kaqchikel as an antipassive. It has many of the hallmarks of antipassives, including a marker for the construction, a patient in an oblique phrase, and it is intransitive (morphologically and syntactically). However, as in Movima (Isolate), the oblique AP construction is restricted to those contexts where the agent is in focus. Additionally, the requirement that the oblique phrase containing the patient can be omitted is somewhat complicated for the oblique AP construction. If the patient is omitted, the resulting clause has a focused agent, verbal agreement is with the agent, and a specific patient is implied. This is illustrated in (12.52).

(12.52) Pero rin y-i-tz'et-**o** (r-ichin)
 but 1SG INCOMPL-1SG.ABS-watch-OAP(/AF) 3SG-OBL
 'But I'm watching him/it' [elicited]

Ajsivinac and Henderson (2011) discuss several additional aspects of incorporative constructions in Kaqchikel. First, they find human patients to be acceptable, e.g., ‘children’ in (12.58) below.

(12.58) (*)Ütz⁸⁰ n-Ø-q’ete-**n** ak’wal-a’
 good INCOMPL-3SG.ABS-hug-INC child-PL
 ‘He hugs children well’ (Ajsivinac and Henderson 2011:21)

They also report that definite patients are permitted if they are inanimate. Not only does this include those inanimate patients marked by definite articles, as in (12.59a), but also those which are possessed, as in (12.59b).

(12.59a) (*)Ütz y-i-paj-**o** **ri** tzam
 well INCOMPL-1SG.ABS-divide-INC **DET** liquor
 ‘I serve the liquor well’

(12.59b) (*)Ütz y-i-tz’ib’a-**n** **nu-b’i’**
 well INCOMPL-1SG.ABS-write-INC **1SG.POSS-name**
 ‘I write my name well’ (Ajsivinac and Henderson 2011:23)

None of these constructions or similar examples with the same characteristics were regularly judged acceptable by a number of native Kaqchikel speakers from four different dialects. I have only found evidence of the ability of indefinite, non-specific, non-referential, and non-human arguments to be patients in incorporative constructions (although patients may be conceptually or morphologically plural).

It is difficult to judge how productive the incorporative construction is in Kaqchikel. While individual speakers might accept more or fewer transitive verbs in this construction, regular use of these forms are restricted to regular, habitual actions in everyday life. So while it is certainly a productive construction, it is fair to say that it is not used with every transitive verb in the language (primarily those that refer to canonical actions and tasks), and it is also restricted in terms of what the patient may be.

⁸⁰ Ajsivinac and Henderson (2011) consistently use adverbs to introduce incorporative clauses, per Mondloch’s description of the same phenomenon in K’ichee’ (see section 12.4.1 below). However, in general the speakers I worked with did not like incorporative constructions with initial adverbs. So in looking at their claims, in addition to providing these exact sentences, I also gave comparable sentences lacking the adverb and with the agent following the patient to ensure that judgments were not simply being thrown off by the adverb.

It has been increasingly common for the incorporative construction to be treated as a subtype of AF (the result of a lack of formal case for the patient) rather than as a type of antipassive, as was formerly the case. Aissen (2011:15) claims that AF and the incorporative construction in K'ichee' share a common 'neutral' infrastructure. Given that the characteristics of AF and the incorporative construction differ rather significantly among the different K'ichean languages, I have left aside the issue of the formal mechanisms which generate these structures, and seek simply to describe them individually according to the variety of characteristics they exhibit in different languages.

12.4.1 COMPARISON WITH OTHER LANGUAGES

As far as I am aware, the incorporative construction is not discussed for Sakapulteko, Sipakapense, or Tz'utujil. However, there are several key differences between the incorporative construction in K'ichee' versus in Kaqchikel. Mondloch (1981:252) describes the patient in incorporative constructions in K'ichee' as "...obligatorily occur[ing] immediately following the verb. This object nominal, with one exception, must be indefinite. That is, it can be either a singular or plural noun, but it is never possessed, modified by an adjective, or preceded by an article (definite or indefinite)." These facts also hold for Kaqchikel. However, Mondloch (1981:249) also describes these constructions as "invariably introduced by an adverbial." This is demonstrated in (12.60) where the construction is introduced by the adverb *ch'u'j* 'crazily, wrecklessly'.

(12.60) Ch'u'j k-at-b'iin-isa-n ch'iich'
wrecklessly INCOMPL-2SG.ABS-travel-CAUS-INC car
'You car-drive wrecklessly' (Mondloch 1981:250)

While this adverb is mandatory in K'ichee', it is optional in Kaqchikel and, in fact, the adverb is generally dispreferred. This lack of adverbial in my data is mirrored in the Kaqchikel data from García Matzar and Rodríguez Guaján (1997), who provide no examples of incorporative constructions which include an adverbial.

(12.61) Y-e-tik-o ixim ri achi-a'
INCOMPL-3PL.ABS-plant-INC corn DET man-PL
'The men plant corn' (García Matzar and Rodríguez Guaján (1997:381)

Additionally, the patient NP in the incorporative construction in K'ichee' may be animate, as in (12.62a), whereas incorporative constructions with human patients were frequently judged ungrammatical in Kaqchikel.

- K'ichee':
 (12.62a) B'alaj k'ax k-e:-yoq'-ow winaq le:
 very hurtfully INCOMPL-3PL.ABS-mock-INC person DET
 aw-atz
 2SG.POSS-man's.younger.sibling
 'Your younger brother really people-mocks in a vicious manner' (Mondloch 1981:254)

- Kaqchikel:
 (12.62b) *Jantape n-Ø-tz'et-o ak'wal-a'
 always INCOMPL-3SG.ABS-watch-INC child-PL
 Target: 'She is always watching children' [elicited]

(12.62a) also demonstrates another key difference between the incorporative construction in K'ichee' and the cognate structure in Kaqchikel. In K'ichee', the incorporative construction agrees with either the agent or the patient based on the salience hierarchy described in 12.2, while in Kaqchikel agreement is always with the agent (see (12.55) above). In the incorporative construction in K'ichee', patient agreement can also be plural even if the patient is not marked overtly for plurality, as in (12.63) below.

- (12.63) Nax k-e:-pil-ow ak' le: išoq
 long.time INCOMPL-3PL.ABS-butcher-INC chicken DET woman
 'It takes a long time for the woman to chicken-gut' (Mondloch 1981:250)

The incorporative construction in K'ichee' indeed shares more properties with AF than it does in Kaqchikel. Not only do AF and the incorporative construction in K'ichee' share the same verbal suffix and require two overt arguments, they also both exhibit the same salience-based agreement effects, which is a hallmark of AF. However, they still differ in terms of the syntactic position of the agent and in the referential status of the patient (see section 12.2.1 above). K'ichee' also differs from Kaqchikel in that the adverbial is mandatory, while in Kaqchikel the incorporative construction is less about the adverb and more about the canonical, characteristic nature of the actions carried out by the verb.

While the incorporative construction in Uspanteko is similar to the incorporative construction in Kaqchikel in that it only agrees with the agent, the verb is marked with *-ow*, and the patient is non-referential and often (always?) non-human, it differs from Kaqchikel in that the agent is apparently always focused (Can Pixabaj 2007:555). As such, the incorporative construction also shares an important characteristic with AF in Uspanteko which it does not in Kaqchikel.

(12.64) Ri' man ti-ø-mol-**ow** mees x-ø-ee-k'.
 FOC ART INCOMPL-3SG.ABS-collect-INC trash COMPL-3SG.ABS-go-INTR
 'It is he who picks up trash is the one who has left' (Can Pixabaj 2007:555) [my translation]

As in Kaqchikel, the incorporative construction in Q'eqchi' exhibits VOA constituent order, it is marked by *-o*, and the patient must be non-referential and bare (unmodified). The contrast in the examples in (12.65a-b) demonstrates that the incorporative construction is ungrammatical in Q'eqchi' when the patient is definite.

(12.65a) Ma x-Ø-lok'-**o-c** cua laj Lu'
 INTERROG TNS-3SG.ABS-buy-INC-ASP tortillas CLF Pedro
 'Did Pedro buy tortillas?' (Berinstein 1985:218)

(12.65b) *X-at-ti'-**o-c** li ic
 COMPL-2SG.ABS-eat-INC-ASP DET chile
 Target: 'You ate the chile' (Berinstein 1985:225)

However, Q'eqchi' appears to make much wider use of the incorporative construction than Kaqchikel or K'ichee'. In Q'eqchi', transitive verbs may only have referential patients, and therefore require the incorporative construction whenever the patient is non-referential. The ungrammaticality of a transitive construction with a non-referential patient is shown in (12.66a), and the corresponding grammatical incorporative construction is shown in (12.66b).

(12.66a) *X-Ø-ka-tz'iba hu
 COMPL-3SG.ABS-1PL.ERG-write letters
 Target: 'We wrote letters'

(12.66b) X-o-tz'iba-**n** hu
 COMPL-1PL.ABS-write-INC letters
 'We wrote letters' (Berinstein 1985:230)

12.4.2 PRELIMINARY SUMMARY

The incorporative construction varies fairly significantly in its syntactic properties across the K'ichean languages. In Kaqchikel, the incorporative construction has the following characteristics:

1. It takes the *-o/-u* verbal marker;
2. The verb agrees only with the agent;
3. The patient is mandatory and immediately follows the verb;
4. The patient is unmodified, non-human, and non-referential (but may be plural);
5. It appears primarily in non-focus contexts;
6. It is productive, but not particularly frequent except to describe common jobs/tasks;
7. It does not require an adverb like in K'ichee', in fact the adverb is dispreferred;
8. It may be used in the imperative;
9. It conveys characteristic/habitual aspect.

Unlike K'ichee', the incorporative construction in Kaqchikel shares very little structurally with AF—only the verbal morpheme (also shared with other constructions), and an overtly expressed, non-oblique patient NP. It is not limited to focus contexts, it does not exhibit hierarchical agreement, and it is much less common. As such, it has been treated as a distinct construction type here. However, the incorporative antipassive also does not qualify as an antipassive by the criteria used in this typological study. While it is expected that in noun incorporation the patient will be overtly present, for the purposes of evaluating this construction as an antipassive, the fact that the patient cannot be omitted suggests that the construction is not fully intransitive, and therefore does not meet the criteria for an antipassive.

12.5 THE DETRANSITIVIZED REFLEXIVE/RECIPROCAL CONSTRUCTION

There is one other structure that plays a role in the analysis of antipassive-related Kaqchikel morphosyntax, as it shares the same morphological suffix marker as the oblique AP construction, the incorporative construction, and AF. In Kaqchikel, there are two reflexive/reciprocal constructions: one which employs a transitive verb, as in (12.67a), and another which uses a detransitivized verb, as in (12.67b). Both constructions may generally have either reciprocal or reflexive interpretations, depending on the semantics of individual verbs.

(12.67a) N-Ø-ki-ch'äy k-i'
 INCOMPL-3SG.ABS-3PL.ERG-hit 3PL-REFL
 'They are hitting/fighting each other' [elicited]

(12.67b) Y-e-ch'ay-o k-i'
 INCOMPL-3PL.ABS-hit-DETR 3PL-REFL
 'They are hitting/fighting each other' [elicited]

Standard reflexives/reciprocals in Mayan are syntactically transitive constructions with two grammatical arguments, as in (12.67a), despite involving a single semantic participant or set of participants. A morphologically transitive verb can be interpreted as taking the reflexive *-i'* ('self'/'each other') as its object, which is obligatorily possessed, and is invariably marked as third person singular absolutive on the verb. However, the detransitivized reflexive/reciprocal involves an intransitive verb which agrees with the only argument of the verb, but the possessed patient NP remains unchanged (i.e. it does not appear in an oblique phrase).

Mondloch (1981:254) considers the detransitivized reflexive/reciprocal in K'ichee' to be a subtype of the incorporative construction (see section 12.5.1 below). However, there are several reasons not to consider it a subtype of the incorporative construction in Kaqchikel. First, while the patients of incorporative constructions are non-referential and non-human, the patients of the reflexive/reciprocal constructions are overwhelmingly human and referential, as in (12.67b) above. Second, the reflexive element which constitutes the patient is not closely tied to the verbal complex, unlike the patient in the incorporative construction. In (12.68a) below, the patient is separated from the verb by 'again' and a discourse marker, while in (12.68b) the verb is separated from the reflexive element by a locative trace and a de-verbal directional.

(12.68a) Öq x-e-k'ul-u chik k'a k-i' ch(i) (r)u-wi'
 when COMPL-3PL.ABS-meet-DETR again DM 3PL-REFL PREP 3SG.POSS-top
 juyu' Or-on-ik Kaq-jay...
 hill pierce-AP-NMLZ red-house
 'When they met atop the hill, Oronik Kaqjay...' (Maxwell and Hill 2006:75)

(12.68b) K'a chi ri' k'a x-oj-paxi-n wi ul q-i'
 DM PREP DEIC DM COMPL-1PL.ABS-break-DETR LOC DIR 1PL-REFL
 'There then we shattered ourselves' (Maxwell and Hill 2006:54)

The description of the detransitivized reflexive construction is complicated by its current (in)frequency. The detransitivized reflexive is very common in colonial texts, which is why all

almost all of the examples so far in this section are from colonial texts (namely Maxwell and Hill 2006). However, the detransitivized reflexive is not particularly common in many dialects of modern Kaqchikel, a fact which Mondloch (1981:339) also notes for K'ichee'. The detransitivized reflexive construction is still in (relatively infrequent) use in San Juan Comalapa, Patzún, Patzicía, and San José Poaquíl. It has fallen out of use entirely in Santa María de Jesús.

Detransitivized reflexives/reciprocal have also been discussed in the literature with respect to their connection to AF. The detransitivized reflexive construction shares several characteristics with AF, namely that the verb is morphologically intransitive, while the patient (which we know from the transitive can be a grammatical object) does not appear in an oblique phrase. The reflexive shares the same *-o* marker which also marks the incorporative construction, the oblique AP construction, and AF. Salience-based agreement effects cannot be evaluated in this case because the agent and the patient have the same person/number features.

However, the detransitivized reflexive differs from AF in one key way: its distribution is not related to focus. While the detransitivized reflexive may be used in focus contexts (as in (12.69a)), it is also perfectly possible to use a transitive construction in the same contexts to convey the same basic meaning (as in (12.69b)). This was consistently true for all speakers who have the detransitivized construction in their dialect.

(12.69a) Achike x-e-mol-o k-i' ch(i) (r)u-wäch ri
 WH COMPL-3PL.ABS-gather-DETR 3PL-REFL PREP 3SG.POSS-front DET
 r-ochoch ajaw?
 3SG.POSS-home lord
 'Who gathered (themselves) in front of the church?' [elicited]

(12.69b) Achike x-Ø-ki-möl k-i' ch(i) (r)u-wäch
 WH COMPL-3SG.ABS-3PL.ERG-gather 3PL-REFL PREP 3SG.POSS-front
 ri r-ochoch ajaw?
 DET 3SG.POSS-home lord
 'Who gathered (themselves) in front of the church?' [elicited]

Not only are detransitivized reflexive constructions acceptable in focus contexts, they also appear quite frequently outside of agent focus contexts. In other words, the use of a detransitivized reflexive or a transitive reflexive is not governed by the position or discourse

status of the agent. Examples (12.70a-b) come from colonial documents, while (12.70c) is from a modern narrative.

(12.70a) Öq x-*oj-pax-in* q-i' ch(i r)u-wi' juyu'
 when COMPL-1PL.ABS-shatter-DETR 1PL-REFL PREP 3SG.POSS-top mountain
 'Then we shattered ourselves at the top of the hill' (Maxwell and Hill 2006:54)

(12.70b) Chi ri' x-e-tzäq-*o* wi k-i' pan pat-i'
 PREP DEIC COMPL-3PL.ABS-cast-DETR LOC 3PL-REFL PREP hut-POSIT
 pa yan ch'ok-öl ru-b'i'
 PREP be straddle-POSIT 3SG.POSS-name
 'Where they were cast is named, Pan Pati', Pa Yan Ch'oköl' (Maxwell and Hill 2006:104)

(12.70c) Achi'el y-e-xari-*n* k-i', y-e-k'ama-*n*
 like INCOMPL-3PL.ABS-court-DETR 3PL-REFL INCOMPL-3PL.ABS-date-DETR
 k-i'
 3PL-REFL
 'Like they were courting or dating each other' [textual, narrative, TC, San José Poaquil]

The use of detransitivized reflexives outside of AF is also corroborated by their ability to be used as imperatives/hortatives. (12.71a) below gives a detransitivized reflexive imperative, while (12.71b) illustrates a transitive reflexive imperative.

(12.71a) K-ix-wiq-*o* iw-i'!
 IMP-2PL.ABS-adorn-DETR 2PL-REFL
 'Adorn yourselves/each other!' [elicited]

(12.71b) Xa qa-wiq-a' q-i'!
 just 1PL.ERG.HORT-adorn-TR.IMP 1PL-REFL
 'Just let us adorn ourselves' (Maxwell and Hill 2006:44)

There are several additional aspects of the detransitivized reflexive which are unrelated to issues of focus, incorporation, and detransitivization. First, while the transitive reflexive is used frequently with arguments of all persons and numbers, the detransitivized reflexive is more compatible with plural arguments. Only a few verbs can appear in a detransitivized reflexive construction with a singular argument, and even then the judgments are not always consistent

across speakers. While *yijalo wi'* in (12.73b) was generally accepted, *yichajin wi'* in (12.73d) was not, despite the plural counterparts of both being acceptable.

	Transitives:	
(12.72a)	N-Ø-ki-jäl INCOMPL-3SG.ABS-3PL.ERG-change 'They change (places, clothes)'	k-i' 3PL-REFL
(12.72b)	N-Ø-in-jäl INCOMPL-3SG.ABS-1SG.ERG-change 'I change (clothes)'	w-i' 1SG-REFL
(12.72c)	N-Ø-ki-chaji-j INCOMPL-3SG.ABS-3PL.ERG-care.for-TR 'They take care of each other'	k-i' 3PL-REFL
(12.72d)	N-Ø-in-chaji-j INCOMPL-3SG.ABS-1SG.ERG-care.for-TR 'I take care of myself'	w-i' 1SG-REFL
	Detransitivized reflexive/reciprocals:	
(12.73a)	Y-e-jal- o INCOMPL-3PL.ABS-care.for- DETR 'They change (places, clothes)'	k-i' 3PL-REFL
(12.73b)	Y-i-jal- o INCOMPL-1SG.ABS-change- DETR 'I change (clothes)'	w-i' 1SG-REFL
(12.73c)	Y-e-chaji- n INCOMPL-3PL.ABS-care.for- DETR 'They take care of each other'	k-i' 3PL-REFL
(12.73d)	*Y-i-chaji- n INCOMPL-1SG.ABS-care.for- DETR 'I take care of myself' [elicited]	w-i' 1SG-REFL

A few verbs also undergo a semantic change from the transitive to the detransitive in the reflexive which parallels the semantic change they undergo from the transitive to the patientless antipassive. The clearest example is *-q'öl*, which as a transitive is 'to trick, fool, hoodwink', while the antipassive *-q'olon* is 'to joke'. This same semantic difference is present in the reflexive, as illustrated by the difference between (12.74a) and (12.74b).

(12.74a) N-ki-q'öl k-i', achi'el wi k'o ik chupam
 INCOMPL-3PL.ABS-trick 3PL.POSS-REFL like if exist chile inside

ri atz'am
 DET salt

'They trick each other, like if there's chile in the salt' [volunteered]

(12.74b) Y-e-q'ol-o k-i' chi ki-wäch
 INCOMPL-3PL.ABS-trick-DETR 3PL-REFL PREP 3PL.POSS-eye
 'They are joking amongst themselves' [volunteered]

Additionally, the reflexive/reciprocal element *-i'* is not limited to use within the verbal domain. *-i'* can also appear with select nouns as part of a non-verbal predication. The most common example of this is (12.75), which involves the noun *-ach'alal* 'family'. This construction can be used to describe specific familial relationships as well.

(12.75) Qa-ch'alal q-i'
 1PL.POSS-family 1PL-REFL
 'We are family' [overheard]

The reflexive in K'ichee' can likewise appear with nominal elements. (12.76) below provides an example of a reflexive element with a nominalized verb. This type of construction is not grammatical, however, in Kaqchikel.

K'ichee':
 (12.76) Š-e:-pe: chi u-č'a:b'e-š-i:k k-i:b'
 COMPL-3PL.ABS-come PREP 3SG.ERG-talk.to-PASS-NMLZ 3PL-REFL
 'They came to talk to each other' (Mondloch 1981:145)

The question then in Kaqchikel, and in other languages which also have this construction outside of focus contexts is, what is its function? Mondloch noted that he had difficulty establishing a difference between the transitive and detransitivized reflexive/reciprocal in K'ichee':

I have been unable to find any unique syntactic environment where the antipassive voice reflexive is demanded instead of an active reflexive construction. Semantically the two constructions also appear identical. It may be that at the time of conquest these two types of reflexives were used interchangeably. In modern Quiche the antipassive reflexive no longer appears to be used. (Mondloch 1981:339)

This lack of syntactic or obvious semantic distinction between the transitive and the detransitivized reflexive constructions also applies to Kaqchikel. In the summer of 2016, I tested a number of possible distinctions, including reflexive readings vs. reciprocal readings, duration/telicity of the action, intentionality on the part of the agent(s), givenness/newness of the arguments in the discourse, and distance of the person from the event (i.e., did the speaker see it? Did they participate?). While some of these contrasts seemed to apply to individual items or situations, none of them were consistent between speakers and across multiple verbs.

Native speakers do not have strong intuitions about the difference, and when asked to talk about what the differences might be, or if the detransitive or transitive could be substituted for the other in a given context, the answer was almost always, ‘yes, they are the same’. However, the best explanation of the difference I found was developed and ratified by a family of native speakers from an *aldea* (small, more remote town) of San Juan Comalapa. They determined (without any intervention or suggestion from the researcher) that the difference has to do with physical distance. To paraphrase, the detransitivized forms mean that the action took place somewhere else, or farther from the speaker, while the transitive version implies that the action was closer to the speaker. This was described using the verbs *-jäl* ‘change’ (as in (12.73) above) and *-möl* ‘gather, meet’ (as in (12.69) above).

12.5.1 COMPARISON WITH OTHER LANGUAGES

Evidence of detransitivized reflexive constructions similar to those found in Kaqchikel are found in K’ichee’ and Tz’utujil, as well as a number of other non-K’ichean languages such as Mam, Chuj, and Q’anjob’al. This section discusses characteristics of these constructions which differ among the K’ichean languages, as well as some claims which have been made with respect to the reflexive and focus.

As mentioned above, Mondloch considers the reflexive construction in K’ichee’ to be a subcategory of the incorporative antipassive, which he describes as the only example where the patient in the incorporative construction may be possessed (*-i:b*’ cannot appear without a possessive prefix). In these cases, the detransitivized reflexive verb is introduced by an adverb, as in the incorporative construction in K’ichee’.

- (12.77) B'alaj utz k-at-ch'aj-**ow** aw-i:b'
 very good INCOMPL-2SG.ABS-clean-**INC/DETR** 2SG-REFL
 'You self-wash very well' (Mondloch 1981:254)

The other context in which Mondloch discusses the (im)possibility of a detransitivized or 'antipassive' reflexive is with respect to restrictions on ergative arguments. In K'ichee', the verb in the reflexive remains transitive when the agent is focused, even though this is a context where we would expect AF or other forms of detransitivization. Mondloch (1981:232) clearly states that "Even if the subjects of reflexives are extracted in order to be relativized, questioned, or focused, the verb is never taken out of the active voice. That is, it is never put into the antipassive voice." This is illustrated in (12.78), where the transitive reflexive in (12.78a) is grammatical with a focused agent, while the detransitivized reflexive in (12.78b) is not.

- (12.78a) Xači:n maxa: k-Ø-u-kuna-x r-i:b' č-iw-eh
 WH not.yet INCOMPL-3SG.ABS-3SG.ERG-cure-TR 3SG-REFL PREP-2PL-GEN
 'Who of you still hasn't cured himself?'

- (12.78b) *Xači:n maxa: k-Ø-kuna-**n** r-i:b' č-iw-eh
 WH not.yet INCOMPL-3SG.ABS-cure-**DETR** 3SG-REFL PREP-2PL-GEN
 Target: 'Who of you still hasn't cured himself?' (Mondloch 1981:233-234)

This restriction on detransitivization in reflexive clauses when the agent is focused also appears to hold in Q'eqchi' (cf. Berinstein 1985:103). In (12.79), the agent is focused with *ha'* but the verb remains transitive.

- (12.79) Ha' li calejenac (li) x-Ø-t-toch' r-ib sa' li
 FOC DET drunk REL PST-3SG.ABS-3SG.ERG-hit 3SG-REFL on DET
 x-jolom
 3SG.POSS-head
 'That's the drunk who bumped himself on his head' (Berinstein 1985:104)

Recall from section 12.5 above that this is not the case in Kaqchikel, as either a transitive or a detransitivized reflexive form may be used when the agent of a transitive verb is focused. Tz'utujil patterns like Kaqchikel in this respect, where detransitivized reflexives may appear when the agent is focused, as shown in (12.80).

(12.80) Naq x-ewa-n r-ii?
 WH COMPL-hide-DETR 3SG-REFL
 Who hid himself? (Aissen 2011:14)

Outside of K'ichean, Hou (2013) reports a similar pattern in Chuj, where detransitivized reflexives are optional in focus contexts. There is no mention of whether they also appear outside of focus contexts, which is the case for Kaqchikel.

(12.81a) Mach ix-Ø-il-an s-b'a t'a k'en nen?
 WH ASP-3SG.ABS-see-DETR 3SG-REFL at CLF mirror
 'Who saw himself in the mirror?'

(12.81b) Mach ix-Ø-y-il s-b'a t'a k'en nen?
 WH ASP-3SG.ABS-3SG.ERG-see 3SG-REFL at CLF mirror
 'Who saw himself in the mirror?' (Hou 2013:14)

For a discussion of extended reflexives see section 12.2.1.

12.5.2 PRELIMINARY SUMMARY

This section described the characteristics of the detransitivized reflexive/reciprocal construction in Kaqchikel. While the detransitivized reflexive shares several features both with AF and with the incorporative construction, there are a number of important differences, namely that the detransitivized reflexive does not have any syntactic restrictions, and the patient is referential and need not be immediately adjacent to the verb stem. A comprehensive list of the characteristics of detransitivized reflexives in Kaqchikel discussed in this section is given below.

1. The verb is morphologically intransitive;
2. It is marked by *-o* with root transitives;
3. The construction is optional in both focus and non-focus contexts;
4. It can be used as an imperative;
5. There is no requirement that the reflexive element be immediately adjacent to the verb;
6. The patient is necessarily referential (specific, definite, human);
7. The construction has fallen out of use in some dialects;
8. However, it can be used with at least 15+ verbs in those dialects where it is still active;

9. It is generally more acceptable with plural patient referents;
10. The reflexive marker can be used limitedly on nouns;
11. Using the construction may indicate that the speaker is not in proximity to the action described by the verb.

Based on these characteristics, the detransitivized reflexive has not been considered an antipassive construction for the purposes of this dissertation. Like the incorporative construction, it has a non-oblique patient which cannot be omitted. However, it does represent a decrease in transitivity, since it receives *-o* marking and lacks (invariably 3rd person singular) absolutive agreement with the patient characteristic of the fully transitive reflexive construction.

12.6 THE RELATIONSHIP BETWEEN STRUCTURES

In sections 12.1 through 12.5 the morphosyntactic and semantic facts were summarized for five different agent-preserving antipassive-like constructions in Kaqchikel, with comparisons to several other K'ichean languages. I argued that each of these constructions is distinct from the others in Kaqchikel (even though they may not be distinct from one another in other K'ichean languages), based primarily on morphosyntactic criteria. I also highlighted the differences between the characteristics of each of these constructions in Kaqchikel and in other closely related languages.

One of the greater points of departure for this analysis as opposed to previous analyses is recognition of the fact that the oblique AP construction is distinct from the patientless antipassive construction, since they bear different verbal markers and the oblique AP construction cannot appear outside of focus contexts. Further support for this division comes from the perfect, which is marked in Kaqchikel by perfect suffixes and a lack of TAM prefixes. In Kaqchikel (and Tz'utujil), the perfect suffix which appears on antipassive-type constructions is *-(V)yon* (as opposed to the intransitive perfect *-(V)naq* in K'ichee'). *-(V)yon* can mark AF constructions as well as oblique AP constructions, but cannot appear with detransitivized reflexives, the incorporative construction, or patientless antipassives, regardless of whether the agent is focused. Examples demonstrating this, as well as the difference between the perfect and non-perfect forms of these various constructions are given in (12.82-12.86) below.

- AF:
- (12.82a) Achike y-i-tz'et-**o**?
 WH INCOMPL-1SG.ABS-watch-**AF**
 'Who is watching me?'
- (12.82b) Achike in tz'et-**eyon**?
 WH 1SG.ABS watch-**AF.PRF**
 'Who has been watching me?'
- Oblique AP construction:
- (12.83a) Ja ri ala' n-Ø-naq-**o** r-ichin ri xtän
 FOC DET boy INCOMPL-3SG.ABS-bother-**OAP** 3SG-OBL DET girl
 'It is the boy [who] is bothering the girl'
- (12.83b) Ja ri ala' (Ø) naq-**ayon** r-ichin ri xtän
 FOC DET boy 3SG.ABS bother-**OAP.PRF** 3SG-OBL DET girl
 'It is the boy [who] has been bothering the girl'
- Detransitivized reflexive:
- (12.84a) Ja ri je' y-e-ch'ay-**o** k-i'
 FOC 3PL INCOMPL-3PL.ABS-hit-**DETR** 3PL-REFL
 'They are hitting each other'
- (12.84b) *Ja ri je' e ch'ay-**ayon** k-i'
 FOC 3PL 3PL.ABS hit-**DETR.PRF** 3PL-REFL
 Target: 'They have been hitting each other'
- Incorporative construction:
- (12.85a) Y-e-tik-**o** ixim ri achi'-a'
 INCOMPL-3PL.ABS-plant-**INC** corn DET man-PL
 'The men are planting corn'
- (12.85b) *E tik-**iyon** ixim ri achi'-a'
 3PL.ABS plant-**INC.PRF** corn DET man-PL
 Target: 'The men have been planting corn'
- Absolute antipassive:
- (12.86a) N-Ø-t'is-**on** ri xtän
 INCOMPL-3SG.ABS-sew-**AP** DET girl
 'The girl is sewing'
- (12.86b) *Ø t'is-**iyon** ri xtän
 3SG.ABS sew-**AP.PRF** DET girl
 Target: 'The girl has been sewing' [elicited]

Interestingly, the *-(V)yon* perfect suffix is not the perfect counterpart of *-ow*, nor is it sensitive to whether the agent is focused (see (12.84b)). *-(V)yon* also distinguishes the oblique AP construction from the patientless antipassive, since it appears with the first but is ungrammatical with the second (see (12.83b) vs. (12.86b)). The distribution of *-(V)yon* therefore divides those constructions which are dedicated to agent focus contexts from those which are free to occur outside of focus contexts.

However, the distribution of the perfect marker (*-(V)naq*⁸¹) in K'ichee' is quite different. In K'ichee', *-Vnaq* appears in addition to the verbal marker for the given antipassive-type construction, and is perfectly compatible with all of the antipassive-type constructions discussed in this chapter, as shown in the following examples.⁸²

- AF:
- (12.87a) Xachi:n ch-iw-e: ux-il-ow-**inaq**
 who PREP-2PL-GEN 1PL.ABS-see-AF-INTR.PRF
 'Who of you has seen us?' (Mondloch 1981:227)
- Oblique AP:
- (12.87b) Ix ix-il-ow-**inaq** q-eh
 2PL 2PL.ABS-see-OAP-INTR.PRF 1PL-OBL
 'You are the ones who have seen us' (Mondloch 1981:224)
- Incorporative construction:
- (12.87c) Na utz ta e:-tzuku-n-**inaq** u:č le: qa-tz'i:ʔ
 NEG well IRR 3PL.ABS-hunt-INC-INTR.PRF possum DET 1PL.POSS-dog
 'Our dog has not possum-hunted well' (Mondloch 1981:252)
- Antipassive:
- (12.87d) Ø-cha:ku-n-**inaq** (ri: alah) (pa xuyub')
 3SG.ABS-work-AP-INTR.PRF DET boy PREP mountain
 '(The boy) has worked (in the hills)' (Mondloch 1981:183)
- (12.87e) Ux-tzuku-n-**naq** ch-e:ch alaq
 1PL.ABS-look.for-AP-INTR.PRF PREP-GEN 2PL.FORMAL
 'We have looked for you' (Mondloch 1981:184)

⁸¹ Although Kaqchikel also has the perfect/stative suffix *-(V)näq*, it cannot be used with any of the antipassive-type constructions. It only appears on intransitive verbs with non-agentive subjects and indicates a state.

⁸² Although I did not locate any examples, *-(V)naq* in K'ichee' is presumably also compatible with the detransitivized reflexive/reciprocal since it is compatible with the incorporative construction.

The use of *-(V)naq* with all of these constructions in K'ichee' indicates that the grammar of K'ichee' treats all of these constructions as having some level of intransitivity, since *-(V)naq* appears on intransitive but not transitive predicates. It also indicates that there is not only a difference in perfect marking between K'ichee' and Kaqchikel, but that Kaqchikel perfect marking in this case is sensitive to a distinction to which the K'ichee' marking is not.

The major structural contrasts between the different antipassive-like constructions in Kaqchikel can be summarized by referencing several specific features. As discussed above, the oblique AP construction and AF both are restricted to agent focus contexts, and take *-(V)yon* in the perfect. These characteristics are not shared by the other three constructions. The other defining feature of AF is that it can agree with the patient, which in Kaqchikel is not the case for any of the other constructions. Additionally, while the patient in AF and the oblique AP construction can be essentially any NP, patients in the oblique AP construction and the reflexive construction are restricted with respect to definiteness, animacy, and referentiality. Finally, all of the constructions make reference to a patient and allow the patient to be expressed either directly or in an oblique phrase with the exception of the patientless antipassive construction. These facts are summarized in Table 12.1 below. The fact that each construction is distinct with respect to its morphosyntactic profile is demonstrated by a lack of duplication in the sets of values between rows/constructions.

TABLE 12.1. Distinguishing features of the five antipassive-type constructions in Kaqchikel

	Patientless	Oblique	Incorporative	Agent focus	Reflexive
Semantic patient	NO	YES	YES	YES	YES
Restricted patient	N/A	NO	YES	NO	YES
Agree w/ patient	NO	NO	NO	YES	NO
Focus only	NO	YES	NO	YES	NO
Perfect marking	NO	YES	NO	YES	NO

Now that the differences between the five antipassive-type constructions in Kaqchikel are adequately described and summarized, we can turn to the relationship among them, and talk about the role that they play in the grammar of Kaqchikel. There are many ways of looking at the relationship among these structures, but to me it seems clear that they form a cline, both with respect to the relationship of the patient to the rest of the predicate and with respect to information structure. With respect to the patient, these five constructions can be ordered in

terms of the grammatical relationship is between the patient and the verb. For example, the patient in AF is syntactically an object, since it is not relegated to an oblique phrase, and it can also be marked on the verb via absolutive agreement. In contrast, the oblique AP construction expresses the patient in an oblique phrase and only shows agreement with the agent, and as such the patient is less closely associated with the verb. The five constructions discussed above are ordered based on how ‘linked’ the patient is to the verb in Figure 12.1.

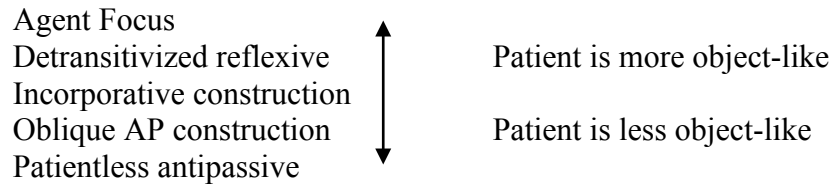


FIGURE 12.1. The association of the patient to the verb in Kaqchikel antipassive-type constructions

These five structures can also be ordered in terms of information structure. There is a rather prominent divide between those constructions which are grammaticalized in agent-promoting functions and focus the agent for the purposes of syntactic ergativity, and those which are not limited to focus contexts. Of those in the latter category, two are concerned with either non-referential patients or removing the patient entirely.

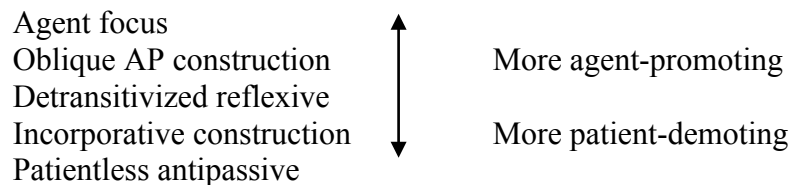


FIGURE 12.2. The information status of the patient vs. the agent in Kaqchikel antipassive-type constructions

This rather unusually large number of distinct agent-preserving, transitivity-decreasing constructions strikes me as Kaqchikel’s way of expressing transitivity as a cline in a language which is very black and white about transitivity as a grammatical category. Indeed, these constructions in K’ichean in general seem to mix and match a set number of morphosyntactic features with respect to agreement, verbal marking, and oblique marking to create a larger set of related constructions with really nuanced subdivisions in function (see also section 13.3). As such, Kaqchikel is an excellent example of a language exploiting existing resources to cover a

wide variety of functions. Although AF has received a disproportionate amount of attention in the literature, viewed in this way it is not so different from other detransitivized constructions with some sort of internal argument, or from the more traditionally antipassive-like constructions, or the oblique AP construction which is an antipassive but likewise operates exclusively in the domain of focus.

It is also important to note that despite Kaqchikel having an unusually large number of distinct agent-preserving, transitivity-decreasing constructions, two of which I have called antipassives, none really fit Dixon's (1994) idea of a prototypical antipassive. While one could consider the oblique AP construction the counterpart of the patientless antipassive, the data from K'ichee' (which has a true, non-focused counterpart to the patientless antipassive) suggest this is not the case. Also, although the oblique AP construction has all of the features of a prototypical antipassive, it does not exist outside of contexts where the agent is focused.

CHAPTER 13. VARIATION AND FUNCTION

In this chapter I look at three issues related to the form and distribution of the five antipassive-type constructions constructions in Kaqchikel. While the data are primarily from Kaqchikel, other K'ichean languages are referenced where applicable. In the first section (13.1) I discuss the features which govern the distribution of the two verbal markers for the five different antipassive-like constructions described for Kaqchikel in Chapter 12. In this section I also describe the fact that the difference between the two markers for antipassive-type constructions is currently being neutralized in some dialects, and report the findings of a study I conducted in 2014 to determine the current state of those markers in nine Kaqchikel dialects.

Next, in section 13.2 I look specifically at those detransitivized constructions which appear only in focus contexts. I describe six experimental tasks used to determine the frequency with which detransitivization occurs in agent focus contexts, which provide a more complete picture of syntactic ergativity in Kaqchikel. Lastly, in section 13.3 I discuss the functional differences between those constructions which may appear in some syntactic contexts where the agent is focused: agent focus (AF), the oblique antipassive (AP) construction, and transitive verbs. The findings of this chapter are summarized in section 13.4.

13.1 ON MARKING FOR ANTIPASSIVE-TYPE CONSTRUCTIONS

The relationship between the verbal marker(s) for the antipassive and how it relates to or differs from the marking used in other similar constructions is in need of clarification, since there are two markers for what I have discussed in Kaqchikel as five different constructions. The difference in the distribution of these two morphemes depends primarily on the features shared between the oblique AP construction (section 12.3), the patientless antipassive (section 12.1), and AF (section 12.2), which are slightly different for different K'ichean languages. This section clarifies the distribution of the two relevant markers (and their cognates), **(V)w* and **(V)n* (cf. Smith-Stark 1978, Dayley 1981) across the various antipassive-type constructions in Kaqchikel with reference to several other K'ichean languages.

As mentioned in section 12.1 and in Chapter 11, there is a difference in the verbal marking for antipassive-type constructions in Mayan languages based on the type of transitive predicate involved, i.e., whether the verb is a root transitive or is a transitive 'derived' via the

transitive suffix $-(V)j$. Derived transitives invariably take $-n$ in all of the antipassive-like constructions in question,⁸³ showing no variation, and therefore will not be discussed further here. The focus will instead be on root transitives, which are marked with either $*(V)n$ or $*(V)w$ in antipassive-type constructions. As indicated by the asterisks, both suffixes can be reconstructed back to Proto-Mayan. However, while the forms may be clear, the functions of the two affixes vary across Mayan languages. Here I address the distribution of these morphemes primarily with respect to Kaqchikel, but also with reference to K'ichee', Tz'utujil, Sakapulteko, Uspanteko, Sipakapense, and Q'eqchi'.

The modern morphemes that are cognate with the historical $*(V)n$ and $*(V)w$ in the various languages discussed here are listed in Table 13.1.

TABLE 13.1. Reflexes of $*(V)n$ and $*(V)w$ in seven K'ichean languages

	$*(V)n$	$*(V)w$
Kaqchikel	$-on$	$-o$
Tz'utujil	$-oon$	$-o(w)$
K'ichee'	$-Vn$	$-ow$
Sakapulteko	$-Vn$	$-Vw$
Uspanteko	$-on$	$-ow$
Sipakapense	$-n$	$-w$
Q'eqchi'	N/A	$-o$

Q'eqchi' appears to lack a $*-Vn$ antipassive marker, as it lacks a patientless antipassive construction. For both $*(V)n$ and $*(V)w$, in languages where the vowel is specified as /o/, it has an allomorph [u] used for roots that have a preceding /u/, but [o] is the allomorph used with roots containing all other vowels.

13.1.1 THE CURRENT DISTRIBUTION

The morphological profile of the various detransitized constructions discussed in sections 12.1-12.5 is summarized in this section in order to determine the difference between the two morphemes $*(V)n$ and $*(V)w$ in Kaqchikel and other languages which pattern similarly. Those constructions which use $*(V)n$ vs. $*(V)w$ are relatively consistent across the six

⁸³ Barrett (1999:112) notes that in Sipakapense that all verbs when marked with $*(V)w$ take $-w$, unlike other K'ichean languages which have a root ($*(V)w$) vs. derived transitive ($*-n$) distinction.

languages discussed here. In Table 13.2, the five constructions from 12.1-12.5 are listed below with the morpheme that they take, regardless of whether a particular language treats any of those patterns as variants of the same construction. The labels used for the various antipassive-type constructions are the same as those used in Chapter 12. ‘N/A’ indicates that language lacks that particular construction, and (?) indicates a lack of information about whether or not that construction exists in that language. Notice that in all of these languages, the only construction which takes **(V)n* is the patientless antipassive (which in K’ichee’ allows the patient to be expressed in an oblique phrase).

TABLE 13.2. Distribution of **(V)n* and **(V)w* markers by language and construction type

	Patientless AP	AF	Oblique AP	Incorporative	Detransitivized Refl./Recip.
Kaqchikel	<i>*(V)n</i>	<i>*(V)w</i>	<i>*(V)w</i>	<i>*(V)w</i>	<i>*(V)w</i>
Tz’utujil	<i>*(V)n</i>	<i>*(V)w</i>	<i>*(V)w</i>	(?)	<i>*(V)w</i>
Uspanteko	<i>*(V)n</i>	<i>*(V)w</i>	<i>*(V)w</i>	<i>*(V)w</i>	(?)
Sakapulteko	<i>*(V)n</i>	<i>*(V)w</i>	<i>*(V)w</i>	(?)	(?)
Sipakapense	<i>*(V)n</i> ⁸⁴	<i>*(V)w</i>	<i>*(V)w</i>	(?)	(?)
Q’eqchi’	N/A	N/A	<i>*(V)w</i>	<i>*(V)w</i>	N/A
K’ichee’	<i>*(V)n</i> (+/- obl. patient)	<i>*(V)w</i>	<i>*(V)w</i>	<i>*(V)w</i>	<i>*(V)w</i>

⁸⁴ Barrett (1999:243-244) provides two examples of the use of the ‘absolute antipassive voice’ marker in contexts outside of what one would expect. In these examples, the marker *-n* appears on the verb, but a 3rd person singular patient (which appears to be able to be definite and also appears to be able to be separated from the verb root by a directional) appears in a context which lacks an overt agent (13.1a), and (13.1b), which has a pre-verbal agent.

(13.1a) Chwaq xk-uj-b’ol-**n** ul b’ros chi’
tomorrow FUT-1PL.ABS-gather-AP DIR yard brush
‘Tomorrow we will gather yard brush’

(13.1b) Wiixa k-Ø-chom-r-s-**n**-ik ri r-kuch Mariy
Wiixa INCOMPL-3SG.ABS-fat-INCH-CAUS-AP-INTR DET 3SG.POSS-pig Mariy
‘Wiixa is fattening up Mariy’s pig’ (Barrett 1999:244)

More examples would be necessary to determine how this fits into what we know about these structures in K’ichean. Although (13.1a) resembles the incorporative construction and (13.1b) resembles AF, based on other examples we would expect *-w* in both cases. Alternately, since Sipakapense has been in intense contact with Mam, these examples could (tentatively) be similar to examples in Mam with a detransitivized verb and two distinct, unfocused arguments:

As concluded from the data in Chapter 12, the five antipassive-type constructions above are morphosyntactically distinct in Kaqchikel, although some may be collapsed in other languages. If we focus for a moment on Kaqchikel, the task is to find what unifies AF, the oblique AP construction, the incorporative construction, and the detransitivized reflexive/reciprocal to the exclusion of the patientless antipassive. The unifying feature cannot be focus, since both the incorporative construction and the reflexive construction, like the patientless antipassive, may appear when the agent is not focused. It also cannot be some level of syntactic transitivity, since the oblique AP construction expresses the patient in an oblique phrase. Rather, it appears that those constructions which take $*(V)w$ are differentiated from the patientless antipassive (which takes $*(V)n$) by the ability to overtly express or imply a specific patient. For example, even when the overt patient NP is omitted in an AF or oblique AP construction, a specific patient is still considered to exist in the mind of the speaker (as in (13.1a)). This contrasts with the patientless antipassive, where no specific patient is implied within the set of logically possible patients (13.1b).

(13.1a) Ri ala' n-Ø-naq'-**o**
 DET boy INCOMPL-3SG.ABS-bother-**AF/OAP**
 'The boy is bothering (unspecified her/him/it)' [elicited]

(13.1b) Ri ala' n-Ø-naq'-**on**
 DET boy INCOMPL-3SG.ABS-bother-**AP**
 'The boy is annoying/bothersome' [elicited]

As such, $*(V)n$ can be said to remove any specific patient argument from the discourse, while $*(V)w$ retains it in some form, as a type of argument (as in AF), a bare incorporated patient (as in the incorporative constructions), a co-referential argument (as in the detransitivized reflexive/reciprocal construction), or as a non-core argument in an oblique phrase (as in the oblique AP construction).

This generalization that $*(V)w$ marks constructions with specific patients (even those that are not overtly expressed) while $*(V)n$ constructions lack a patient also holds for Tz'utujil, Q'eqchi', and possibly Sakapulteko, Uspanteko, and Sipakapense. However, the K'ichee'

(13.2) Ma Ø-tzyuu-**n** Cheep ch'it
 REC 3SG.ABS-grab-**AP** José bird
 'Jose grabbed the bird' (England 1983:213)

antipassive/focus system differs significantly from the Kaqchikel-type system in that it has what is essentially an oblique patient option for both the domain of focus and for normal predication. K'ichee' therefore has a prototypical antipassive construction in the sense of Dixon (1994) in that the patient may either be oblique or omitted, and it is not tied to (but is also available for) focusing the agent. This contrasts with two constructions dedicated to focusing the agent, one of which is syntactically transitive (AF) and the other of which is the oblique AP construction. Those three constructions contrast with antipassive-type constructions which do not involve focus but have decreased transitivity based on features of the patient (incorporated/reflexive).

As such, the difference between the morphemes *-Vn* and *-ow* in K'ichee' is not based on the presence or absence of a specific patient, it is not based on whether the agent is in focus, and it is not based on whether the construction is an antipassive (unless one does not consider the oblique AP construction to be a true antipassive). Rather, K'ichee' appears to have a distinction between those constructions which share AF-type characteristics (either hierarchical agreement or a mandatorily focused agent) and those which do not (a.k.a. the non-focused antipassive, which does not require a focused agent and never agrees with the patient).

The difference between a K'ichee'-type system and a Kaqchikel-type system is that the Kaqchikel system lacks the oblique-patient counterpart to the patientless construction. One might speculate that this was brought on by the loss of the dative oblique marker such that only the genitive oblique (*-ee* in K'ichee', but the genitive relational noun *-ichin* in Kaqchikel) was in use. This would have increased the similarity of the two constructions, such that at some point the *-Vn* antipassive +/- patient pattern fell out of use in favor of the *-o(w)* oblique AP construction (which was the construction with the genitive oblique). This would likely not have generated a large functional gap in the language, since almost all examples of the *-Vn* antipassives with oblique patients in K'ichee' have preverbal agents, and therefore were concomitantly serving agent-highlighting functions.

It is the case that antipassive morphology is distinguished from non-antipassive morphology in some Mayan languages (e.g., Chuj, where the antipassive (+/- an oblique patient) is marked by *-waj*, AF and the detransitivized reflexive by *-an* and the incorporative construction by *-wi*). As hinted at above, it could be said as well for Kaqchikel and K'ichee' that the morphology indexes a distinction between antipassive and non-antipassive, if one considers the oblique AP construction not to be a true antipassive (although I considered it an antipassive

here). However, the patient-related distinction for Kaqchikel is a broader generalization, one which is based less on syntax than on the type of information conveyed by each construction (see section 13.3 for a discussion of information structure). It may also be possible to discuss the difference in terms of case assignment (a la Coon et al. 2014), but this possibility is not explored further here.

13.1.2 VARIATION IN MARKING IN KAQCHIKEL

The data from sections 12.1-12.5 and summarized above in section 13.1 show that in Kaqchikel, the patientless antipassive is marked with *-on*, while AF, the oblique AP construction, the incorporative construction, and the detransitivized reflexive/reciprocal are marked with *-o* with root transitives. This is indeed the case for many Kaqchikel speakers, and is also corroborated by examples from colonial texts. However, it is possible to find examples in the modern Kaqchikel corpus which do not conform to expectations based on that division. (13.2a-d) below provide examples of AF, the oblique AP construction, the incorporative construction, and the detransitivized reflexive/reciprocal marked with *-on* instead of the expected *-o*. In contrast, I have not encountered any examples where the patientless antipassive takes *-o* instead of *-on*.

AF:

- (13.2a) Rije' x-e-b'an-**on** ri utz-ulaj nimaq'ij
 3PL COMPL-3PL.ABS-do-AF DET good-SUPRL party
 'They threw the best party' [textual, narrative_TC, San José Poaquil]

Oblique AP construction:

- (13.2b) Ri lu's ja ri n-Ø-chap-**on** k-ichin ri ch'oy
 DET cat FOC DET INCOMPL-3SG.ABS-grab-OAP 3PL-OBL DET mouse
 'The cat is the one [who] grabs the mice' (PLFM 2001:184) [my translation]

Incorporative construction:

- (13.2c) X-Ø-b'an-**on** ch'aj-o'n ri ixöq
 COMPL-3SG.ABS-do-INC clean-NMLZ DET woman
 'The woman did laundry' [elicited]

Detransitivized reflexive/reciprocal:

- (13.2d) Taq x-øj-ch'ay-**on** q-i' iwir y'in
 when COMPL-1PL.ABS-hit-DETR 1PL-REFL yesterday 1SG

x-i-ch'ak-on

COMPL-1SG.ABS-win-AP

'When we fought yesterday, I won' (PLFM 2001:62)

Based on these new data, it is possible to say that while all constructions marked with *-o* may sometimes (or for some speakers) appear with *-on*, *-on*-marked constructions cannot appear with *-o*. In fact, it has been previously noted in the Kaqchikel literature that *-o* is gradually falling out of use in favor of *-on*. García Matzar and Rodríguez Guaján (1997:374) note that speakers over the age of 70 in Patzún, Santa Catarina Palopó, Patzicía, and Tecpán use *-o*, while speakers of other ages and other dialects use *-on*. Given that those data were collected at least 20 years ago, one might expect *-o* to no longer be in use. Majzul et al. (2000:172) provide a slightly different picture, although they appear to have only looked at differences in AF:

En las variantes de Yepocapa, Dueñas, Ayampuc, Parramos, Sumpango, Acatenango, Santiago Sacatepéquez, Balanyá, Tecpán, Santa Apolonia, Patzicía, Itzapa y Santa Catarina Palopó sufijan el antipasivo de enfoque en raíces transitivas con **-o/u** como también con **-on/un**. Las variantes de Sumpango, San José Poaquil, San Martín Jilotepeque, San Juan Comalapa, Patzún y Zaragoza marcan específicamente con **-on/un** y en las otras variantes se utilizan **-o/u**.

[The dialects of Yepocapa, Dueñas, Ayampuc, Parramos, Sumpango, Acatenango, Santiago Sacatepéquez, Balanyá, Tecpán, Santa Apolonia, Patzicía, Itzapa y Santa Catarina Palopó suffix the focus antipassive [AF] with **-o/u** as well as **-on/un** for root transitives. The dialects of Sumpango, San José Poaquil, San Martín Jilotepeque, San Juan Comalapa, Patzún y Zaragoza specifically mark it with **-on/un**, and the other dialects use **-o/u**. [my translation]] (Majzul et al. 2000:172)

In order to get an updated picture of the distribution of *-o* vs. *-on* across various dialects of Kaqchikel, I conducted a study in the summer of 2014 to determine the extent of the spread of *-on* to constructions which traditionally take *-o*. It included 27 participants from 9 different dialects (named for the towns in which they are spoken): San Juan Comalapa, Tecpán, Santa María de Jesús, Santiago Sacatepéquez, Sololá, Patzicía, Patzún, San Andres Itzapa, and San José Poaquil. I limited my investigation to AF and the oblique AP construction, but results did not show a significant difference between construction type for the use of *-o* vs. *-on* in any dialect. Participants were presented with sentences containing AF or oblique antipassive verbs and were asked if they preferred a pronunciation with a final /n/, or with a verb ending in a vowel

(-o/u). The study included 17⁸⁵ test items, which yielded a total of 459 responses over 27 participants. Derived transitives (which invariably take *-n*) were interspersed throughout as control items. All participants correctly used the *-n* marker with these items.

The percentages representing how often speakers reported to prefer *-on* with AF and oblique antipassives with root transitive verbs are given by dialect in Figure 13.1. If the contrast between *-o* and *-on* is currently as robust as it was in colonial materials, all percentages would be zero. The number of speakers interviewed from each dialect is indicated along with the name of each dialect (n=# of speakers).

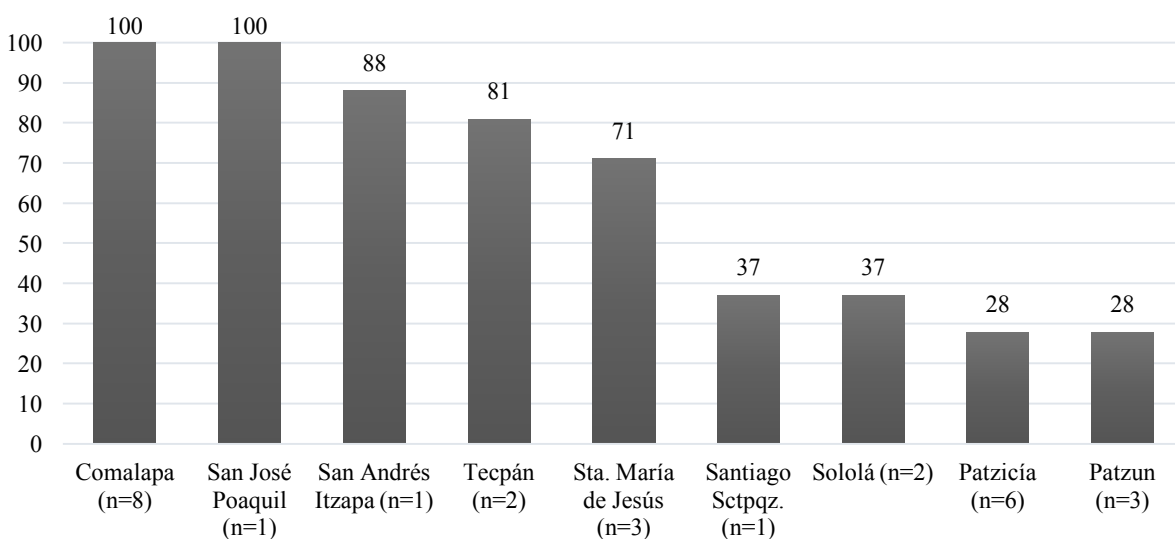


FIGURE 13.1. Percent preference for *-on* with AF and oblique antipassives from root transitive verbs by Kaqchikel dialect

Of the nine dialects surveyed, none maintains the distinction 100% of the time between *-o* and *-on*. Not only is *-on* an option in AF and the oblique AP construction, it is the more common marker in five of the nine dialects surveyed. Additionally, *-o* has been lost entirely in San Juan Comalapa and likely also in San José Poaquil. According to the findings of Majzul et al. (2000), the expectation was that *-on* would be used exclusively in Comalapa, Poaquil, and Patzún, both *-o* and *-on* would be in play in Santiago Sacatepéquez, Itzapa, Patzicía, and Tecpán, and *-o* would still be being used exclusively in Sololá and Santa María de Jesús. Most of these

⁸⁵ There were an additional 3 items in the original design, for a total of 20 target items. However, these involved the verb *-ajo* 'want, like', which has an irregular marking pattern where it commonly surfaces either as *-ajowan* or *-ajo'n*, which is invariant regardless of construction type. Therefore, these items were excluded from the final results.

expectations are borne out, although *-on* is also an option in Sololá and Santa María de Jesús, and *-o* remains the marker for AF and the oblique AP construction in the majority of cases in Patzún. However, the data in Figure 13.1 provide a more nuanced view of how the shift from *-o* to *-on* continues to progress through these different dialects.⁸⁶

Finally, there is also evidence of age-grading, such that younger speakers are more likely to prefer forms with *-on* over *-o* (β : -3.94 ± 1.11 , $p < 0.001$),⁸⁷ which fits with the idea that this is a change in progress, which has been taking place for more than twenty years (per the documentation in García Matzar and Rodríguez Guaján 1997). The percent of answers using *-on* by age group are given in Figure 13.2 below. Younger speakers (ages 20-30) used *-on* over *-o* almost 90% of the time, whereas older speakers used *-on* 44-53% of the time.

⁸⁶ There is one other possibility which may explain these data, other than the shift from *-o* to *-on* as described above. I hypothesized in section 13.1 above that Kaqchikel (and others) lost the ability in the (non-focused) antipassive to express the patient in an oblique phrase sometime after Kaqchikel split from K'ichee'. One possibility is that the **/-Vn* antipassive plus oblique patient pattern was lost completely in favor of the focused **/-(V)w* oblique AP construction (which is essentially the trajectory adopted in this section). However, it is also possible that when oblique marking in Kaqchikel was limited to *-ichin*, variation in the verbal marker would have arisen, since *-o* vs. *-on* would have been the only morphological difference between the oblique AP construction and the antipassive plus oblique pattern. In that scenario we might expect the use of both markers, which is being leveled in some dialects in favor of *-on*. However, this seems unlikely, since I have not been able to find examples of detransitivized focus constructions from root transitives which take *-on* in the colonial data from the Kaqchikel Chronicles (Maxwell and Hill 2006). This is also consistent with what has been reported for the other K'ichean languages. This suggests that if the markers ever were in variation, they would have had to be leveled in favor of *-o* by colonial times, and then more recently are exhibiting variation in a transition to *-on*.

⁸⁷ All beta values, standard errors, and p-values reported in this chapter were calculated using a generalized linear regression model that was fit to the presence or absence of *-on*, with dialect and age as predictors. The model excludes those dialects which are only represented by one speaker (San José Poaquil, Santiago Sacatepequéz, and San Andrés Itzapa), as well as data from the single 50+ speaker from Comalapa, which was required in order for the model to converge. All statistical models are provided in Appendix D.

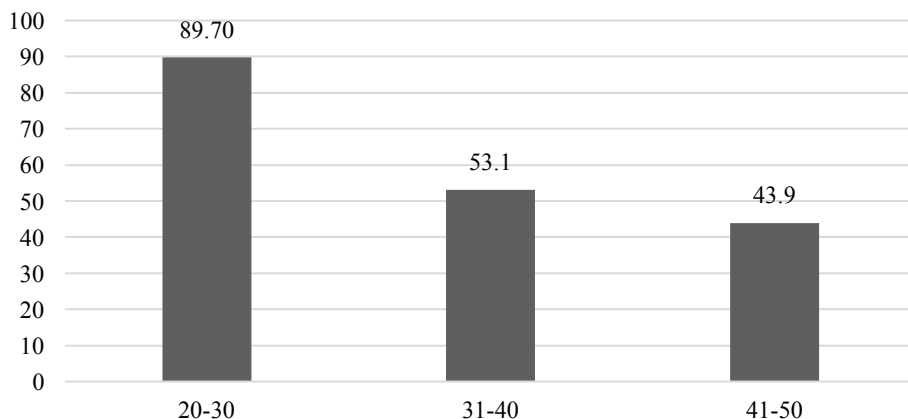


FIGURE 13.2. Percent preference for *-on* with AF and oblique antipassives from root transitive verbs by age group of Kaqchikel speaker

Also note that the two speakers from San José Poaquil and San Andrés Itzapa respectively were both 20 years old at the time the data were collected. This leaves open the possibility that the rate of use for *-on* reported for those dialects is not representative of the dialect as a whole, but rather only of the young adult generation in those places. Given the direction of the age-grading, the overall use of *-on* in those dialects may be lower.

13.1.3 PRELIMINARY SUMMARY

In this section I argued that in Kaqchikel, and likely in several other K'ichean languages, the distribution of the two markers **(V)w* and **(V)n* is governed by whether a specific patient may be expressed or implied. This contrasts with K'ichee', which uses *-Vn* in one construction where the patient may be expressed in an oblique phrase. I also discussed dialect variation with respect to *-o* and *-on* in Kaqchikel, where all dialects surveyed allow the periodic use of *-on* in contexts where we would otherwise expect *-o*. Some dialects like San Juan Comalapa have completely lost *-o* in favor of *-on* in all contexts.

13.2 NON-UNIFORMITY OF SYNTACTIC ERGATIVITY

13.2.1 BACKGROUND

As discussed in section 12.2 and Chapter 11, AF constructions in K'ichean languages are restricted to syntactic contexts where the agent of a transitive verb is focused. The general contexts discussed for Mayan as involving focus include *wh* questions, relativization, and

focus/clefting (cf. Stiebels 2006:505, *inter alia*). A more complete list of syntactic contexts which allow AF is repeated here, with relevant examples from Kaqchikel from section 12.2. All of the agent focus constructions in (13.3a-13.8a) contrast with the transitive constructions in (13.3b-13.8b), which are interpreted as having focused patients.

Focus word:

- (13.3a) Xa xe ri ala' n-Ø-jik'-o ri xtän
 just only DET boy INCOMPL-3SG.ABS-pull-AF DET girl
 'Only the boy is pulling the girl'

- (13.3b) Xa xe ri xtän n-Ø-u-jik' ri ala'
 just only DET girl INCOMPL-3SG.ABS-3SG.ERG-pull DET boy
 'It is only the girl [that] the boy is pulling'

Wh question:

- (13.4a) Achike n-Ø-nim-o ri ala'
 WH INCOMPL-3SG.ABS-push-AF DET boy
 'Who is pushing the boy?'

- (13.4b) Achike n-Ø-u-nim ri ixöq
 WH INCOMPL-3SG.ABS-3SG.ERG-push DET woman
 'Who is the woman pushing?'

Relative clause:

- (13.5a) K'o ri retal pa ru-wi' ri ala' ri n-Ø-q'ete-n
 exist DET sign PREP 3SG.POSS-hair DET boy REL INCOMPL-3SG.ABS-hug-AF
 ri xtän
 DET girl
 'The indicator is above the boy who is hugging the girl'

- (13.5b) Ri retal k'o pa ru-wi' ri ala' ri Ø
 DET sign exist PREP 3SG.POSS-hair DET boy REL 3SG.ABS
 ru-q'ete-n ri xtän
 3SG.ERG-hug- PRF DET girl
 'The indicator is above the boy who has hugged the girl'

Indefinite free relative:

- (13.6a) K'o n-Ø-wux-u ri xkoya'
 exist INCOMPL-3SG.ABS-harvest-AF DET tomatoes
 'Someone is harvesting the tomatoes'

(13.6b) K'o n-Ø-u-wüx ri achin
 exist INCOMPL-3SG.ABS-3SG.ERG-harvest DET man
 'The man is harvesting something'

Negative indefinite:

(13.7a) Man-jun achike ta n-Ø-qum-u ri ya'
 NEG-one WH IRR INCOMPL-3SG.ABS-drink-AF DET water
 'No one is drinking the beverage'

(13.7b) Man-jun achike ta n-Ø-u-qüm ri ala'
 NEG-one WH IRR INCOMPL-3SG.ABS-3SG.ERG-drink DET boy
 'The boy is drinking nothing'

Indefinite agent (cf. Broadwell 2000:3-4):

(13.8a) Jun ak'wal n-Ø-tij-o ri saq'ul
 one child INCOMPL-3SG.ABS-eat-AF DET banana
 'A child is eating the banana'

(13.8b) N-Ø-u-tij jun saq'ul ri ak'wal
 INCOMPL-3SG.ABS-3SG.ERG-eat one banana DET child
 'The child is eating a banana' [picture elicitation]

The final example (13.8a-b) differs from the others in that unlike the agent, which must appear initially when it is indefinite and triggers the use of AF (as in (13.8a)), indefinite patients do not have to appear initially, and in fact they are almost always post-verbal. These six syntactic contexts and their relationship to detransitivization are the topic of this section.

As discussed in Chapter 11, it is generally considered to be the case that transitive subjects in many Mayan languages are unable to undergo A' extraction (e.g., Dayley 1981:13-14 (expressed descriptively), Coon et al. 2014:205), which in this case involves movement from the post-verbal subject argument position to the preverbal focus position. Aissen (2011:10) states with respect to K'ichee' that "It is a general property of K'ichee' that the transitive form is possible (when A is extracted) only when the AF form is impossible.⁸⁸" This same type of generalization, that AF is obligatory in the contexts in which it appears, is also found for Kaqchikel (e.g., García Matzar and Rodríguez Guaján 1997:379).

⁸⁸ There are two contexts which Aissen (2011) describes as an exception to this statement—the reflexive and the extended reflexive—both of which are described with respect to K'ichee' in Chapter 12. However, this information is not relevant to the current discussion since I am only looking at those primary A' extraction contexts where AF/the oblique AP construction are known to be used in K'ichean languages.

However, Stiebels (2006:510-511) notes that Mayan languages vary both in terms of the constructions in (13.3-13.8) which allow AF/detransitivization, and in terms of the obligatoriness of AF/detransitivization. For example, she states that in Poqomam and Poqomchi' AF/detransitivization is optional in all relevant contexts, while in Mam AF is obligatory in *wh* questions but optional with focused and relativized agents. The goal of this section is to investigate how obligatory AF/detransitivization is in Kaqchikel in the contexts in (13.3-13.8) where it can appear. This ties into investigations of syntactic ergativity, and questioning if A' extraction is a unified process with respect to agents of transitive verbs in Mayan, as well as syntactically ergative languages in general. This investigation also addresses descriptive questions about how syntactically ergative Kaqchikel is (with respect to how many contexts and with what frequency), and if we can make any generalizations about the asymmetries we observe.

As discussed in section 12.3, the syntactic distribution of AF is the same as the distribution for the oblique AP construction in Kaqchikel and other K'ichean languages, such that the oblique AP construction only appears when the agent of a transitive verb is focused. Because both AF and the oblique AP construction are used exclusively in the contexts under discussion here, and they are both used in the same way with respect to syntactic ergativity, both constructions will be discussed together here as 'detransitivization' strategies.

13.2.2 THE TASKS: METHODS AND FINDINGS

A series of studies were conducted over three field seasons, from 2014 to 2016, to investigate syntactic ergativity in Kaqchikel in the contexts illustrated in (13.3-13.8) above which were expected to exhibit syntactic ergativity: relativization, *wh* questions, focus words, indefinite free relatives, indefinite subjects, and 'no one' indefinite non-specific subjects. Each study looked at the type of verbs produced in these contexts, and the proportion which were detransitized. All six studies were picture elicitation experiments, where native Kaqchikel speakers were asked to describe pictures in a single sentence in response to a prompt.

The picture elicitation experiments were considered the best approach to see what types of constructions speakers would use when the primary variable was the particular focus context. Pictures were designed to elicit focus responses of the kind which require the use of a focus (AF or oblique AP) verb form. When presented with a picture requiring a response in the format of

one of the above focus contexts, would the speaker use a detransitivized construction like AF or the oblique AP construction, or would they (and could they) use a transitive verb? The possible responses to a sample focused agent/agent relative clause items are given in the following examples.

Expected:
 (13.9a) Ja ri ala' n-Ø-q'et-en ri xtän
 FOC DET boy INCOMPL-3SG.ABS-hug-AF DET girl
 'It's the boy [who is] hugging the girl'

Possible?:
 (13.9b) Ja ri xtän n-Ø-u-q'et-ej ri ala'
 FOC DET girl INCOMPL-3SG.ABS-3SG.ERG-hug-TR DET boy
 (?) 'It's the boy [who is] hugging the girl'
 (But acceptable as: 'It's the girl [who] the boy is hugging')

In cases like the one illustrated in (13.9) where both arguments have the potential to be agents or patients, the regular use of a transitive verb to create a subject relative clause would lead to ambiguity between a subject and an object relative clause interpretation. Although AF and the oblique AP construction can of course appear with non-third person combinations in Kaqchikel, all of the constructions dealt with in these experiments involved singular third persons acting on singular third persons. If AF and the oblique AP construction have disambiguating functions, as Mondloch (1981:187) suggests for K'ichee', we would expect to see the use of detransitivization strategies in 3>3 contexts like these which stand to be ambiguous.

All six tasks also involved the same basic design which manipulated both the animacy of the patient (human vs. inanimate) and the focused argument (the agent vs. the patient). Each test consisted of 20 target items, five from each of the four conditions generated by the combination of the two variables above, illustrated in Table 13.3 below. Arrows stand for 'act on'.

TABLE 13.3. Test conditions for the six picture elicitation tasks

	Matched animacy	Mismatched animacy
Agent focused	Human→Human, Focused Agent	Human→Inanimate, Focused Agent
Patient focused	Human→Human, Focused Patient	Human→Inanimate, Focused Patient

The two conditions which targeted focused patients were essentially control items, where transitive verbs are expected. However, passives were also acceptable in patient focus conditions, and the rate of use for passives is discussed where relevant to the results below.

The five items in each of the four conditions in Table 13.3 above were pseudo-randomly interspersed within their condition, which for the tests of relative clauses and *wh* questions were presented as blocks. In the later tests, the conditions were interspersed with respect to matched vs. mismatched animacy, as animacy of the patient was found not to be a significant factor. In all tests, one block of items with a focused agent was presented first in order to avoid any priming effects from the transitive verbs expected in the patient focus conditions. However, priming turned out not to be a significant issue, since individuals behaved similarly in the initial block of focused agent items and also in those focused agent items which appeared after focused patient items.

The prompts for each of the tasks were likewise designed to avoid any potential priming effects, i.e., they were phrased so as to avoid transitive and antipassive-type constructions. The tasks for indefinite subjects and indefinite free relatives involved the description of a single picture in which a participant in an action was obscured, where the only prompt was ‘what is happening?’, and participants were trained beforehand to respond appropriately with, for example, ‘Someone is pulling the girl’ or ‘A boy is pulling a girl’. The *wh* question items were similar, except that the prompt requested that the speaker ask the researcher about the obscured character to produce a *wh* question, e.g., ‘who is pushing the boy?’.

The relative clause task and the focus word task both involved a contrast, where a target referent was selected from the set of possible referents. In the conditions targeting focused agent relative clauses, two agents were performing the same action on different patients, and the target agent was indicated by an arrow, as shown in Figure 13.2 below. Participants were asked which agent was indicated by the arrow, which prompted them to respond with ‘(the arrow is above) the [AGENT] who is [VERB]ing the [PATIENT]’.



FIGURE 13.3.⁸⁹ ‘The arrow is above the man who is kissing the boy’

The focus word task involved sentence correction, where the prompt included an incorrect statement, and speakers were trained to correct that statement by saying ‘only the [agent/patient]...’. A sample item is given in Figure 13.3, which targeted an agent focus/oblique AP clause which began with the focus word *xa xe* ‘only’.

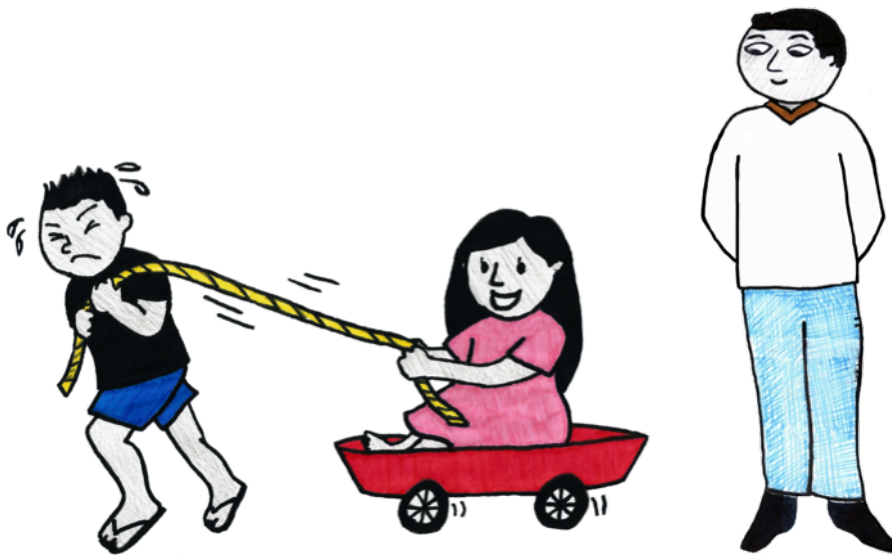


FIGURE 13.4. ‘There are a boy, a girl and a man. In the picture, the boy and the man are pulling the girl.’ [Target: ‘No, only the boy is pulling the girl.’]

⁸⁹ The majority of the pictures used for these tasks were drawn by Ryoko Hattori, which I then modified to apply better to a Mayan setting.

Lastly, the ‘no one’ negative indefinite task involved contrasting two pictures, one of which depicted a transitive action, while the other depicted the same action but lacked either the agent or patient. Participants were trained to expect their utterance to begin with *majun [achike ta]* ‘no one/nothing’ in order to elicit the target structure. A sample item targeting the agent is provided below, along with the prompt, in Figure 13.4. The prompt includes a passive verb in the first sentence to avoid priming a transitive, oblique AP or AF construction.

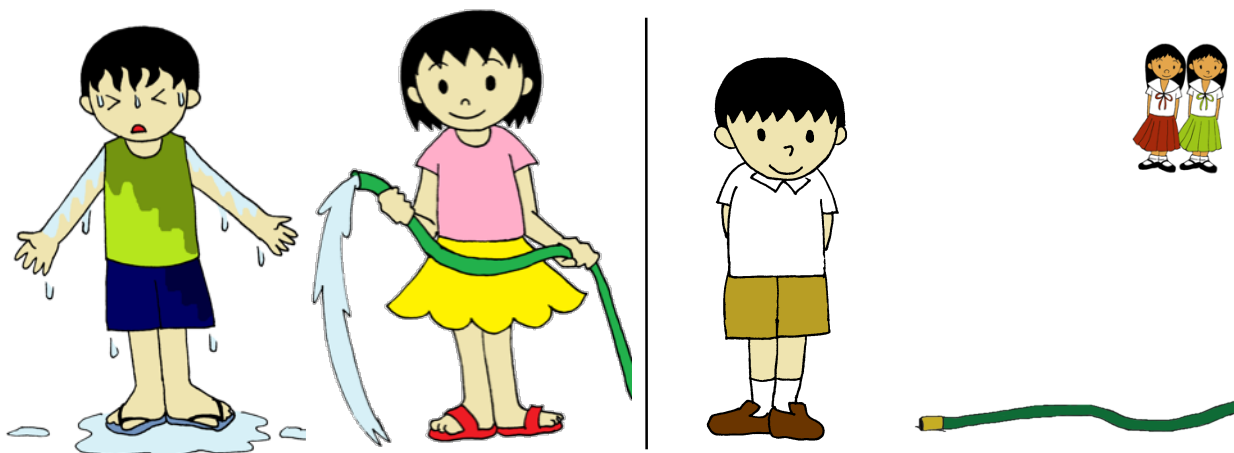


FIGURE 13.5. ‘In this picture, a boy is being soaked by a girl. But in this picture, no one...’
[Target: ... ‘is soaking the boy’].

The results for the tests of *wh* questions and relative clauses are presented in Heaton et al. (2016). Results showed that transitive verbs are increasingly acceptable in subject relative clauses and subject focus constructions, while detransitivization is mandatory for subject *wh* questions. There was also evidence of age grading in subject *wh* questions, such that detransitivization is less common with younger speakers. The remaining four contexts (indefinite subjects, indefinite free relatives, ‘no one’, and focus words) were all tested a year to two years after the first two tests on relative clauses and *wh* questions, and were all tested with the same set of native speakers, almost all of whom were from San Juan Comalapa. 30 native speakers of Kaqchikel were tested, equally distributed across three different age groups: 10 speakers between 20 and 30, 10 speakers between 31 and 50, and 10 speakers over the age of 51. The tasks were presented in the same session, but with small breaks in between. Each individual task took speakers between five and ten minutes to complete.

The results of the six tasks are summarized in Figure 13.5 below. Interestingly, the other contexts in which AF and oblique AP constructions are possible also show the type of variation described by Heaton et al. (2016) between *wh* questions and relative clauses. Three contexts—*wh* questions, indefinite free relatives, and ‘no one’ indefinites—show a majority of speakers using AF or oblique AP constructions quite consistently. Speakers (even those who sometimes produced transitive responses) also consistently judged transitive constructions to be ungrammatical in these contexts, when asked after they had completed all the tasks. Also there was little to no use of passive constructions in focused patient conditions, which suggests that Kaqchikel syntax in these three constructions is ergatively-oriented.

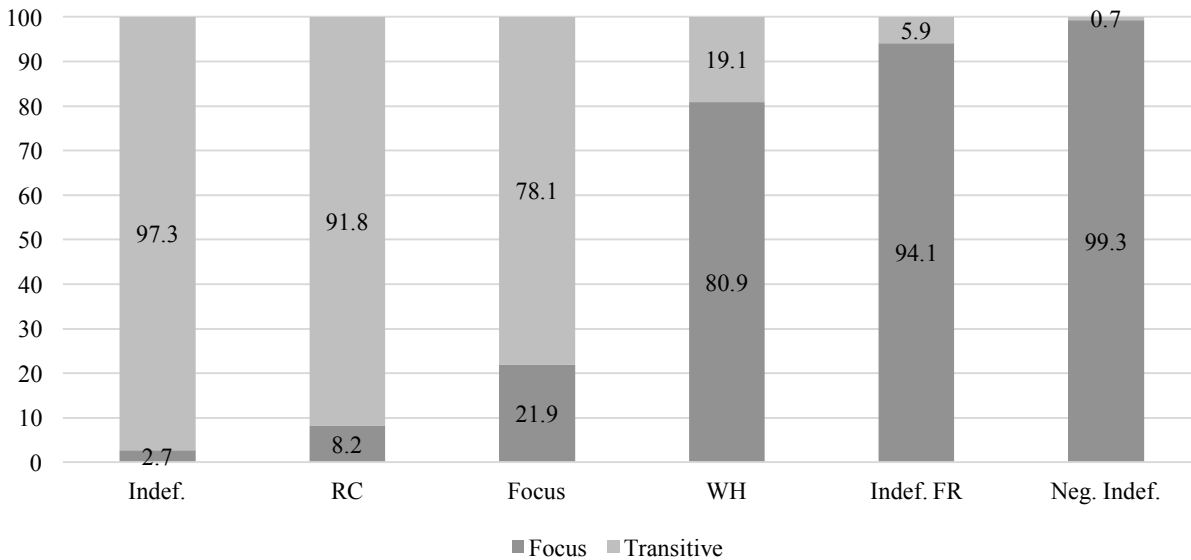


FIGURE 13.6. Summary of use of transitive constructions in agent focus contexts

Those results contrast with the results for the other three contexts—relative clauses, focus word contexts, and indefinite subjects—in which speakers of all ages frequently used transitive constructions when the agent was focused, to the point where transitive constructions appear to be the more common way of expressing those ideas in those contexts. The results for focus word constructions with *xa xe* ‘only’ given here are very similar to the results of a similar study I conducted the previous year using the focus particle *ja*. The lowest rate of detransitivization appears with indefinite subjects, and in fact no one in the youngest group of speakers produced a detransitized construction with an indefinite subject. Additionally, with relative clauses and focus words, passive constructions were quite frequent in the focused patient conditions. There is

therefore a correlation between the use of passives in focused patient conditions and the use of transitive verbs with focused agents. This is suggestive of a shift towards nominative-accusative syntax, as speakers appear to be more likely to use passives with focused objects when they regularly use transitive constructions to describe focused agents. The same tendency does not exist in those contexts where detransitivization is common.

While Kaqchikel can undoubtedly be called a syntactically ergative language, these findings demonstrate that Kaqchikel does not uniformly exhibit syntactic ergativity in all the expected A' extraction environments. While this is unexpected if one treats A' extraction as a uniform phenomenon in Mayan, there are a number of cases which suggest that this is not uncommon in the family, which are discussed in section 13.2.4 below. Moreover, whether or not one considers Kaqchikel syntactically ergative with respect to relativization, focus words, and indefinite subjects depends on one's definition of syntactic ergativity. If syntactic ergativity is a restriction on syntactic processes affecting ergative arguments, then the fact that ergative arguments may be extracted in these contexts and that detransitivization is not obligatory would suggest that those contexts do not exhibit syntactic ergativity. However, if syntactic ergativity is the differential treatment of ergative arguments with respect to absolutive arguments, one could say that these contexts do exhibit syntactic ergativity, since ergative arguments can be focused using a detransitivized construction, while absolutive arguments cannot.

13.2.3 IMPLICATIONS

The next step is to attempt to explain the variation described above in what are typically treated as contexts which behave in the same way with respect to A' extraction. To do this, it is necessary to look at other structural differences between relativization, indefinite subjects, and focus contexts, and *wh* questions, indefinite free relatives, and 'no one' indefinites. Some initial observations can be made to this effect. First, constructions where detransitivization is optional involve two overt NPs, while those where detransitivization is mandatory have an invariant initial element (*k'o*, *majun*, *achike*). A second observation follows from this, namely that in those contexts where detransitivization is mandatory, the only overt argument is always post-verbal (XVS/XVO).

Some additional data suggest that the first of these observations is relevant. Although the following contexts were not tested experimentally, the judgments for the acceptability of the

following detransitivized vs. transitive constructions were consistent across speakers of all ages. While transitive constructions were judged ungrammatical with clauses introduced with only *k'o*, *majun*, and *achike*, if one introduces a lexical NP (a full NP, pronoun, determiner, or numeral), the use of a transitive verb becomes grammatical. The following examples demonstrate the acceptability of transitive verbs when overt agent nominal material is present in focus constructions where transitive verbs were not previously an option.

(13.10a) *K'o n-Ø-u-wüx ri xkoya'
 exist INCOMPL-3SG.ABS-3SG.ERG-harvest DET tomatoes
 Target: 'Someone is harvesting the tomatoes'

(13.10b) K'o **jun** n-Ø-u-wüx ri xkoya'
 exist **one** INCOMPL-3SG.ABS-3SG.ERG-harvest DET tomatoes
 'Someone is harvesting the tomatoes'

(13.11a) *Achike x-Ø-u-nim ri ala'?
 WH COMPL-3SG.ABS-3SG.ERG-push DET boy
 Target: 'Who pushed the boy?' (fine as 'Who did the boy push?')

(13.11b) Achike **winäq** x-Ø-u-nim ri ala'?
 WH **person** COMPL-3SG.ABS-3SG.ERG-push DET boy
 'Which person pushed the boy?' (or 'Which person did the boy push?')

(13.12a) *Man-jun (achike ta) x-Ø-u-chojmi-j ri b'ey
 NEG-one WH IRR COMPL-3SG.ABS-3SG.ERG-fix-TR DET road
 Target: 'No one fixed the road'

(13.12b) Man-jun **chi-ke** (**ri winaq-i'**) x-Ø-u-chojmi-j
 NEG-one PREP-3PL DET **person-PL** COMPL-3SG.ABS-3SG.ERG-fix-TR

ri b'ey⁹⁰
 DET road

'None of the people fixed the road' [elicited]

⁹⁰ Unlike constructions beginning with *k'o* or *achike*, constructions beginning with *majun* cannot take a simple NP or determiner (e.g., *k'o ri...*, *achike ri...*, but **majun (achike ta) ri...*). The only instance I am aware of where an agentive *majun* construction can take a transitive verb is in the partitive, as in (13.12b). It is possible that this fact contributes to the very consistent use of detransitivized constructions with *majun*.

It is important to note that in all of the clauses in (10b-12b) with transitive verbs, detransitivized constructions would still be possible in all these contexts, just optional. This pattern, where detransitivization becomes optional when an overt nominal element is introduced, confirms the viability of the earlier observation that the presence of an overt nominal has something to do with restrictions on A' movement in Kaqchikel.

One possible analysis is that the constructions in (13.10b-13.12b) above are in fact relative clauses, so we would expect them to behave as such. While this is certainly true in the case of (13.10b) and (13.11b) and focus word constructions, it is less viable as an explanation for (13.12b) and indefinite subjects, since positing a null relative marker would result in a different proposition ('none of the people who fixed the road...' vs. 'none of the people fixed the road', and 'a child who ate the banana...' vs. 'a child ate the banana').

Another option, suggested by Polinsky (in press(a)), is that in those cases where detransitivization does not appear, it is because movement is not actually happening. She suggests that in some cases focus structures may be analyzed as biclausal constructions which embed a CP, and therefore do not require movement. A similar argument is made by Henderson and Coon (forthcoming) to explain the apparent optionality in AF when there is an adverbial (see section 12.2). However, it is not clear how that analysis would explain optionality in adverbless relative clauses, focus constructions, and indefinite A constructions.

Polinsky (in press(a)) also notes that in Chukchi, subject *wh* questions do not exhibit syntactic ergativity, even though she provides evidence that they in fact involve movement. As such, she mentions the possibility that the behavior of ergative arguments in A' extraction contexts is not uniform. Although she was discussing relativization as being a more reliable context for syntactic ergativity, Kaqchikel shows the opposite pattern from Chukchi, where detransitivization is optional in relative clauses but required in *wh* questions. Instead, the relevant factor in Kaqchikel seems to be the presence/absence of an overt NP or other nominal element. This idea that the behavior of ergative arguments under A' extraction is syntactically uniform phenomenon is investigated further in section 13.2.4.

Let us return to the observation that the pattern respecting the obligatoriness of AF and oblique AP constructions in certain constructions and not others pertains to the presence of an agent which is a lexical NP. One possible explanation for the observed pattern is that upon encountering a lexical NP which is likely to be an agent (i.e., humans), the tendency is to

interpret that NP as the agent. There would be no similar pressure for non-lexical NPs like *achike* ‘who/what’, *k’o* ‘it exists’, or *majun* ‘no one/nothing’, since they do not inherently provide any information about whether the referent is a possible agent.

This hypothesis is supported by data from other Mayan languages where there is a documented tendency for preverbal lexical NPs to be interpreted as the agent (cf. Can Pixabaj 2007:510 on Uspanteko; Clemens et al. 2015 on Ch’ol and Q’anjob’al). There is some evidence that this is the case in Kaqchikel as well. I presented ambiguous, contextless sentences with a focused argument to five native Kaqchikel speakers, and asked them for their initial reaction as to who performed the action. A sample sentence is given in (13.13), which could have either a focused agent or a focused patient.

- (13.13) Ja ri ala’ x-Ø-u-tzu’ ri xtän
 FOC DET boy COMPL-3SG.ABS-3SG.ERG-see DET girl
 ‘It is the boy [who] saw the girl’
 ‘It is the girl [who] saw the boy’

Responses were about evenly distributed between speakers who said both subject and object interpretation were readily available, and those who said the first interpretation they got was that the girl saw the boy. I then tested unambiguous patient focus, but where the patient was human and therefore could be interpreted as the agent before hearing the rest of the sentence. An example of this type of sentence is given in (13.14).

- (13.14) Ja ri winäq x-Ø-u-ti’ ri wonon
 FOC DET person COMPL-3SG.ABS-3SG.ERG-sting DET bee
 ‘It is the person [whom] the bee stung’

The majority of the speakers responded that their initial reaction was that the sentence was ungrammatical, and it sounded like the person was stinging the bee, and they said it sounded much better to focus the bee. As such, the treatment of ‘boy’ as the subject in (13.13) and the tendency to read ‘person’ as the subject in (13.14) suggests that there is something about a preverbal lexical NP that is likely to be an agent that begs a subject interpretation. This is a likely explanation for the asymmetry in the syntactic patterns in those contexts which involve a preverbal lexical NP versus in those which lack one.

- Relativization (optional):
- (13.16a) Ma-a' w-il-a tii-xiinaq x-Ø-tzaj tzyuu-n
 REC-EMPH 1SG.ERG-see-1SG big-man REC.DEP-3SG.ABS-DIR grab-AP
 ky-e xjaal
 3SG-OBL person
 'I saw the gentleman who had grabbed the people (I saw him later on)'
- (13.16b) Ma-a' w-il-a tii-xiinaq x-chi tzaj
 REC-EMPH 1SG.ERG-see-1SG big-man REC.DEP-3PL.ABS DIR
 t-tzyu-'n xjaal
 3SG.ERG-grab-DIR person
 'I saw the gentleman who was grabbing the people (I saw him at the time he was doing it)' (England 1983:216-217)
- Focus (optional):
- (13.17a) Cheep Ø-Ø-tzyuu-n ky-i'j kab' xiinaq
 José DEP.PST-3SG.ABS-grab-AP 3SG-OBL two man
 'José grabbed the men'
- (13.17b) Cheep o chi tzaj t-tzyu-'n kab' xiinaq
 José PST 3PL.ABS DIR 3SG.ERG-grab-DIR two man
 'José grabbed the men' (England 1983:215)

However, in the optional cases, England claims there is a difference in meaning between the transitive and the antipassive forms, reflected in the glosses of (13.15-13.17) above. Relative clauses with an antipassive involve the action of the relative clause taking place prior to the action of the main clause, while with transitive verbs the action of the relative clause takes place at the same time as action of the main clause (1983:216). In focus clauses, England (1983:215) describes the antipassive clause as focusing the agent, while the transitive clause provides more information about the agent.⁹¹ There is no similar difference in meaning between the transitive and detransitivized structures in Kaqchikel. See section 13.3 for a discussion of detransitivization and information structure.

Relatedly, Ayres (1983:31-33) notes for Ixil that while detransitivization (via AF, which he calls TSI 'transitive subject indexing') is mandatory in *wh* questions and in contrastive focus situations, it is optional in relative clauses. Furthermore, Tsotsil does not require the use of AF in

⁹¹ As such, it is possible that antipassivization is obligatory with focus, and the agent in (13.17b) is instead a topic. More examples would be necessary to clarify this.

any extraction environment, and AF instead appears when the agent is focused and the patient is more animate, definite, or individuated than the agent (Aissen 1999:453, discussed further in section 13.3).

As for other K'ichean languages, as noted above, Aissen (2011:10) claims that “It is a general property of K'ichee’ that the transitive form is possible (when A is extracted) only when the AF form is impossible.” However, Mondloch (1981) describes detransitivization in K'ichee’ as being largely disambiguating, and includes examples such as (13.18b) which shows that detransitivization is not mandatory in subject *wh* questions.

(13.18a) Xačín š-Ø-yoq’-on č-e: ri: išoq
 WH COMPL-3SG.ABS-mock-AP PREP-(3SG)OBL DET woman
 ‘Who mocked the woman?’

(13.18b) Xačín š-Ø-u-yoq’ ri: išoq
 WH COMPL-3SG.ABS-3SG.ERG-mock DET woman
 ‘Who mocked the woman?’ / ‘Who did the woman mock?’ (Mondloch 1981:189)

Mondloch also notes with respect to relativization that “sentences...with relativized ergative subjects, even though they do occur, are often judged unacceptable by reflective Quiché speakers” (1981:228). This suggests that K'ichee’, like Kaqchikel, Ixil, and Mam, allows ergative arguments to be extracted in relative clauses, even if the detransitivized form is often considered the preferred form in elicitation. It is also relevant that the facts for *wh* questions differ between K'ichee’ and Kaqchikel, since they are quite closely related.

The optionality of detransitivization in *wh* questions is not limited to K'ichee’. Du Bois (1981:243) describes the same phenomenon in Sakapulteko, where he states that agents may be questioned without any change to the (transitive) verb. An example of a transitive verb in a subject *wh* question is given in (13.19b).

(13.19a) Ne: wa’ Ø-Ø-č’iy-iw w-e:ŋ?
 WH DEM ASP-3SG.ABS-hit-OAP 1SG-OBL
 ‘Who (was it that) hit me?’ (Du Bois 1981:246)

(13.19b) Ne: wa’ š-in-r-č’iy-aŋ?
 WH DEM COMPL-1SG.ABS-3SG.ERG-hit-TR
 ‘Who hit me?’ (Du Bois 1981:243)

relativized; however, very rarely in texts, active transitive verbs have been recorded when their agents are relativized. (Dayley 1985:348)

Examples demonstrating AF and transitive verbs in subject relative clauses are provided in (13.23).

- (13.23a) Inin x-ee-nuu-tz'et ja k'el ja
 1SG COMPL-3PL.ABS-1SG.ERG-see DET parakeet REL
 x-ee-tz'ilo'-n-i jar awan
 COMPL-3PL.ABS-ruin-AF-INTR DET cornplant
 'I saw the parakeets that ruined the cornplants' (Dayley 1985:352)

- (13.23b) K'o jun wajkax [ja] x-Ø-uu-tij w-awan
 exist one cow REL COMPL-3SG.ABS-3SG.ERG-eat 1SG.POSS-cornplant
 'There's a cow that ate my cornplants' (Dayley 1985:287)

Lastly, Uspanteko appears to pattern similarly to Kaqchikel. Can Pixabaj (2007) provides examples of relative clauses where an ergative argument can be relativized, which she claims is because there is no ambiguity between which argument is the agent and which is the patient. In (13.24a), for example, the bread cannot logically be interpreted as the agent.

- (13.24a) X-øj-j-sik'i-j man chuchu' [man x-Ø-loq'-ow
 COMPL-1PL.ABS-3SG.ERG-call-TR ART woman ART COMPL-3SG.ABS-buy-AF
 kixlinwa li k'eyb'al]
 bread PREP market
 'The woman who bought bread in the market called us'

- (13.24b) X-øj-j-sik'i-j man chuchu' [man
 COMPL-1PL.ABS-3SG.ERG-call-TR ART woman ART
 x-Ø-Ø⁹²-loq'
 COMPL-3SG.ABS-3SG.ERG-buy bread PREP market
 'The woman who bought bread in the market called us' (Can Pixabaj 2007:596) [my translations]

⁹² Can Pixabaj (2007:220) describes the variation in the ergative marker as being null when the absolutive is likewise third person singular, i.e., there is no person marking for 3>3 combinations. However, the ergative appears in all other persons as *j-*.

However, with respect to focus, Can Pixabaj discusses both transitives and detransitives as being available, even when there is the possibility of ambiguity. As shown in (13.25b) below, the transitive clause may be interpreted as having either a focused agent or a focused patient. However, Can Pixabaj (2007:510) notes that there is a tendency for speakers to interpret the preverbal NP as the agent.

(13.25a) Ri' man alq'oom ti-Ø-sek'-**ow** kristyano laq tilmit
 FOC DET robber INCOMPL-3SG.ABS-hit-**AF** person PREP town
 'It is the robber who is hitting people in town'

(13.25b) Ri' man alq'oom ti-Ø-Ø-sek' kristyano laq tilmit
 FOC DET robber INCOMPL-3SG.ABS-**3SG.ERG**-hit person PREP town
 'It is the robber who is hitting people in town'
 'It's the people who are hitting the robber in town' (Can Pixabaj 2007:510) [my translations]

I have found no examples in Uspanteko where questioning the agent does not use focus morphology.

Given the above statements and examples, it seems that it is common in K'ichean, and possibly Eastern Mayan in general, for ergative arguments not to behave uniformly with respect to the primary A' extraction contexts. Additionally, for all of the languages discussed here, detransitivization is not mandatory in relative clauses. There are also significant differences between Kaqchikel and other closely related languages, e.g., while detransitivization is optional in Kaqchikel when the agent is focused with *ja'* or *xa xe*, it is purportedly mandatory in the same context in Tz'utujil. Also, while detransitivization is obligatory in *wh* questions in Kaqchikel and Tz'utujil, detransitivization is optional when questioning ergative arguments in K'ichee' and Sakapulteko. This variation means that the generalizations made in this section for Kaqchikel do not hold for other languages, and that syntactic ergativity and A' extraction are not uniform across Mayan languages.

13.2.5 PRELIMINARY SUMMARY

This section has provided evidence that Kaqchikel is not uniformly ergative with respect to those A' extraction environments in which AF can appear. Findings show that the use of detransitized constructions to circumvent a ban on the extraction of ergative arguments exists in *wh* questions, indefinite free relatives, and 'no one' indefinite constructions. However, relative

clauses, focus word constructions, and indefinite agent clauses do not regularly show an extraction asymmetry between ergative and absolutive arguments, as the use of AF/the oblique AP construction in those contexts is optional.

I suggested that the differences that these two sets of constructions display with respect to extraction could have to do with the presence of a lexical NP element which is available to be interpreted as the agent. I also gave comparative evidence in 13.2.4 which shows that these types of asymmetries with respect to contexts exhibiting syntactic ergativity are not uncommon in Mayan. The comparative results for the Mayan languages discussed here and which contexts exhibit mandatory vs. optional syntactic ergativity (per their primary descriptions) are summarized in Table 13.4. ‘Req.’ is an abbreviation of ‘required’, and question marks (?) indicate uncertainty based on the information available.

TABLE 13.4. Variability in the use of AF/OAP in agent focus contexts in Mayan

Language	Data citation	RCs	WH	Focus
Kaqchikel	Author’s notes	Not req.	Req.	Not req.
K’ichee’	Mondloch 1981:492	Not req.	Not req.	Req.(?)
Tz’utujil	Dayley 1985:348	Not req.	Req.	Req.
Sipacapense	Barrett 1999:244,266	Not req.	Req.(?)	Req.(?)
Sakapulteko	Du Bois 1981:252-3	Not req.	Not req.	Not req.(?)
Uspanteko	Can Pixabaj 2007:510,596	Not req.	Req.(?)	Not req.
Mam	England 1983:214-216	Not req.	Req.	Not req.
Ixil	Ayres 1983:31-33	Not req.	Req.	Req.
Tsotsil	Aissen 1999:453	Not req.	Not req.	Not req.

These data demonstrate the variation in terms of which contexts require detransitivization and which do not. Given how closely related and how structurally similar these languages are, it is likely that these patterns will need to be accounted for on a language-by-language basis. None of the Mayan languages surveyed here consistently use AF or antipassives in subject relative clauses, which is the only context which exhibits syntactic ergativity in Chukchi. *Wh* questions and focus constructions in Mayan are more varied, and all possible patterns appear to be attested: AF/the oblique AP are required for *wh* questions but not focus; they are required for focus but not *wh* questions; they are required for both focus and *wh* questions, or they are required for neither focus nor *wh* questions.

13.3 FUNCTIONAL DISTRIBUTION OF AF, OBLIQUE APs, AND TRANSITIVES

As demonstrated in section 12.3, oblique AP constructions in Kaqchikel are restricted to the same contexts as AF, where the agent is focused, questioned, relativized, etc. Additionally, findings from section 13.2 above showed that transitive verbs are also acceptable in some of these contexts. All three constructions (AF, the oblique AP construction, and transitives) express the same basic dyadic proposition, and speakers reported no significant differences in meaning between these constructions. AF and the oblique AP construction in particular are almost always interchangeable. For a discussion of the morphosyntactic characteristics of AF vs. the oblique AP construction, see sections 12.2 and 12.3. Examples of each of these three competing constructions are given in (13.26) below.

- Transitive:
- (13.26a) Xa xe ri achin n-Ø-u-tz'ub'-aj ri ak'wal
 just only DET man INCOMPL-3SG.ABS-3SG.ERG-kiss-TR DET child
 'Only the man is kissing the child'
- AF:
- (13.26b) Xa xe ri achin n-Ø-tz'ub'a-n ri ti ala'
 just only DET man INCOMPL-3SG.ABS-kiss-AF DET DIM boy
 'Only the man is kissing the little boy'
- Oblique AP construction:
- (13.26c) Xa xe ri achin n-Ø-tz'ub'a-n **r-ichin** ri ala'
 just only DET man INCOMPL-3SG.ABS-kiss-OAP **3SG-OBL** DET boy
 'Only the man is kissing the boy' [picture elicitation]

The task is then to find out what governs the distribution of these three constructions, which mean approximately the same thing and are used in the same syntactic contexts. Native speakers will often describe the detransitivized constructions as 'more specific' or 'clearer' than the corresponding transitive, but generally cannot identify a pragmatic difference between the oblique AP construction and AF.

13.3.1 POSSIBLE 'INVERSE' FUNCTION

One possible factor which has been described for other Mayan languages is the possibility that detransitivized clauses (in particular AF clauses) are 'inverse' in the sense that they are used when the patient is more animate, definite, etc. than the agent. Aissen (1999)

argues that this is the case for AF in Tsotsil, a Mayan language which has AF, but AF is not obligatory under focus. Aissen (1999:454) demonstrates that in Tsotsil, “AF appears only when the object outranks the subject in obviation rank”, i.e., according to prominence, as defined by animacy, definiteness, and individuation in the following hierarchy:

Individuated human

Individuated indefinite human

Definite non-human

Individuated indefinite non-human

Non-individuated human or non-human (Aissen 1999:643)

Essentially, in cases where the agent outranks the patient, transitive verbs are used, and when the reverse is true, AF appears. Although there are important differences between Tsotsil and Kaqchikel (primarily that in Tsotsil the verb in AF always indexes the patient), it is worthwhile to investigate whether the distribution of transitive vs. AF structures in Kaqchikel in those focus contexts which allow both is sensitive to the respective prominence of the agent vs. the patient.

In order to determine if the relative obviation status of the agent vs. the patient as outlined above plays a role in the selection of transitive vs. AF predicates in focus contexts in Kaqchikel, I looked at the set responses from the three picture elicitation tasks in which speakers allowed both transitive and AF verb forms in focused agent conditions (subject relative clauses, subject focus, and indefinite subjects). I then categorized those responses by the relative obviation rank of the agent versus the patient using Aissen’s hierarchy. Since the tasks dealt exclusively with third person arguments and varied the animacy of the patient, in the vast majority of cases the agent outranked the patient or their rank was equal. However, there were still instances where the patient outranked the agent, most commonly when the patient was indefinite. The summary of responses by syntactic context and relative obviation rank is given in Table 13.5 below.

TABLE 13.5. Relative obviation status of A and O in relative clauses, focus, and indefinite argument contexts, and the type of verb used

	A > O		O > A		Equal	
	AF	Trans	AF	Trans	AF	Trans
RCs	12	133	0	0	8	100
Focus	38	114	1	1	25	112
Indef	9	344	1	56	2	111

Results suggest that obviation does not play a role in the section of AF vs. transitive constructions in Kaqchikel. The numbers in bold in Table 13.5 should be either very low or zero if AF were an inverse function. Essentially, transitive verbs would not be expected in cases where the patient outranks the agent, and AF constructions would not be expected when the agent outranks the patient. However, in all three contexts, AF appears most frequently when the agent outranks the patient in obviation status (compare also when obviation status is equal).

13.3.2 ELICITATION TESTS

In order to identify other factors which might influence a speaker's use of one form (AF, oblique APs, or transitives) over another, I developed a set of elicitation questions designed to test possible relevant parameters. The investigation involved systematically manipulating features of the patient, which included animacy, person, number, givenness, referentiality, and definiteness. While these factors necessarily overlap, they were manipulated systematically within those questions targeting that specific factor. The goal was to get a feeling for the types of variables relevant to how speakers choose to express themselves. Generalizations were made based on those contexts in which multiple speakers consistently had the same preferences (i.e., consensus that one construction was better in a particular situation). The questions focused on the differences between AF and the oblique AP construction; for a discussion of AF and the oblique AP construction vs. transitives, see the corpus-based investigation below. Results from the questionnaire are given in Table 13.6.

TABLE 13.6. Number of responses preferring AF vs. the oblique AP construction in different contexts

Patient is:	# OAP preferences	# AF preferences
Human	37	12
Nonhuman	11	12
Inanimate	6	22
1st person	7	2
2nd person	8	0
3rd person	33	47
Singular	30	40
Plural	20	8
Definite	45	31
Indefinite (new)	1	13
Given (absent)	12	2
Non-referential	2	9

First, the preferences speakers professed to have for AF vs. the oblique AP construction were generally not unanimous, which suggests that these are pragmatic and information structure-related tendencies for use, not a distribution based on grammatical rules. However, results do show several tendencies in terms of native speakers' preferences for AF vs. the oblique AP construction. First, there is a strong preference (1 vs. 13 and 2 vs. 9 respectively) for AF in cases where the patient is indefinite, and also when it is non-referential. This is perhaps attributable to the fact that the person and number of the patient must also be marked on the bound relational noun oblique marker in the oblique AP construction, which yields a level of specificity which is not particularly compatible with indefinite and non-referential patients. In contrast, AF does not have any special or additional marking for indefinite or non-referential patients.

There is also a rather strong preference for AF when the patient is inanimate (6 vs. 22), which is a more specific piece of evidence against an obviation analysis of AF in Kaqchikel. The preference for AF vs. the oblique AP construction is approximately equal in contexts where the patient is a non-human animate, while the oblique AP construction is clearly preferred in instances where the patient is animate (37 vs. 12). However, this preference is less pronounced looking only at instances where 3rd persons acted on 3rd persons (17 vs. 12). As the difference between those two contexts suggests, the oblique AP construction was consistently preferred in

cases where the patient was a non-third person (15 vs. 2). The preference for an oblique non-third person patient could be related to the fact that 1st and 2nd persons likely occur somewhat more often in oblique phrases, since the oblique AP construction is one's only (non-transitive) option when focusing the agent in a 1>2 or 2>1 proposition.

Additionally, the oblique AP construction is generally preferred (12 vs. 2) when the patient is not overtly expressed because it is given information within the discourse. However, most of these examples have animate patients, which suggests that the oblique marker is retaining an argument relevant to the discourse, and animate patients are more likely to be relevant than inanimates (this point is further elaborated in section 13.3.3). Finally, there appears to be a preference for the oblique AP construction when the patient is plural, although this is confounded with issues of animacy and givenness; if the patient is animate and overtly expressed, then the split appears to be roughly equal. If the patient is inanimate, AF is preferred, while if the patient is not overtly expressed, the oblique AP construction is preferred.

Some of these generalizations can also be investigated using the data from the six picture elicitation experiments discussed in section 13.2. While the picture elicitation data do not speak to most of the variables in Table 13.6 above, the animacy of the patient was variable. 45% of the instances of AF across all six investigations had animate patients. However, of the instances of the oblique AP construction, 70% had animate patients. So while it is clearly the case that AF is used when the patient is animate, animate patients make up a much greater proportion of the examples of the oblique AP construction. Also, it is important to note that AF is much more frequent than the oblique AP construction in general. In the picture elicitation data, AF is four times more frequent than the oblique AP construction, with 704 attestations vs. 173 attestations for the oblique AP construction.

13.3.3 INFORMATION STRUCTURE

Since discourse factors like givenness, definiteness, and referentiality were found to influence the selection of AF and oblique AP constructions, it was important to also look at the appearance of these constructions in natural contexts. One of the primary methods established in the literature for looking at discourse reference, topicality and focus comes from Givón (1983). His methods have also been used to look at the relationship between antipassive-type structures

and discourse in other languages, including Chamorro (Cooreman 1988b), Warrungu (Tsunoda 1988b), and Akateko (Zavala 1997).

I focused on two of Givón's metrics which seemed most relevant: referential distance and topical persistence. Referential distance refers to the last time a referent was mentioned before it appeared in the clause being examined. Highly topical referents (i.e., what is currently being discussed) were presumably mentioned recently and therefore have low referential distance numbers. However, focused agents would be more likely to have higher referential distance scores, either because a former topic is being contrasted or re-introduced, or because (in Mayan languages like Kaqchikel) newly introduced agents are often treated as focused (indefinite A). In terms of calculation, the numbers given for referential distance represent the number of clauses between the last mention of the NP and the new reference to it in the specific clause under study. Per the method adopted by Cooreman (1988b:563) for Chamorro, 1 was the minimum and 20 was the maximum distance counted, which was automatically assigned to NPs which are being newly introduced to the discourse.

Topical persistence, on the other hand, is concerned with the length of time (number of clauses) a particular referent continually remains in the discourse. Referents which are the subject of the discourse have high topical persistence numbers, while backgrounded elements which are less relevant will have low topical persistence. Also per Cooreman and Givón, topical persistence was calculated here by counting the number of clauses following the referent in the clause under study which persist in including the same referent, regardless of its semantic or syntactic role. The minimum value is 0, i.e., if the referent is not mentioned in the clause following the clause under study. Unlike with referential distance, there is no upper limit to topical persistence. However, there was no example I encountered in the dataset under discussion for Kaqchikel where topical persistence was greater than 18 clauses.

Given these metrics, one would expect certain types of values based on the characteristics of antipassives and focus structures in Kaqchikel. Both the oblique AP construction and AF must have a focused agent, which presumably yields a higher referential distance number than that of the corresponding transitive construction. Additionally, if the oblique marker is functioning to background and otherwise distance the patient from the verb as reported for other antipassive constructions with oblique patients, we might expect it to have a relatively low topical persistence. Indeed, this the pattern Cooreman (1988b) observes for Chamorro antipassives. The

referential distance and topical persistence figures are given for transitives and antipassives in Chamorro in Table 13.7 below, summarized from Cooreman (1988b:569, 572).

TABLE 13.7. Referential distance and topical persistence for agents and patients in transitive and antipassive constructions in Chamorro, from Cooreman (1988b:569, 572)

	Agents		Patients	
	Ref. dist.	Topic persist	Ref. dist.	Topic persist
Transitives	1.8	2.1	9.8	0.7
Antipassives	3.3	2	19.5	0.2

In addition to antipassives in Chamorro having relatively high referential distance for agents and low topical persistence for patients, they also have very high referential distance numbers for the patient, which means it is usually both new to the discourse and relatively unimportant to it.

It is also relevant to compare these results with with the results of these same metrics for another Mayan language, Akateko (Q'anjob'alan branch). Zavala (1997) looked at referential distance and topical persistence for agents and patients in transitive, AF, and patientless antipassive constructions in Akateko. Although I am not looking at patientless antipassive constructions in Kaqchikel, it is useful to have an idea if AF functions similarly with respect to these metrics in multiple Mayan languages. However, note that AF in Akateko is different from AF in Kaqchikel in that like Tsotsil, the verb always cross-references the patient. Zavala (1997) also presents topical persistence and referential distance differently than Cooreman (1988b), giving the percentage of instances where referential distance is 1, 2-3, or more than 3, and topical persistence is 0-2 or greater than 2. These values for Akateko are given in Table 13.8, and bolding is original to Zavala.

TABLE 13.8. Referential distance and topical persistence for agents and patients in transitive and AF constructions in Akateko, from Zavala (1997:463-470)

		Referential distance			Topical persistence	
		1	2-3	>3	0-2	>2
Transitives	Agents	67.2	24.3	8.5	7.8	92.2
	Patients	34.5	20.1	45.4	59	41
AF	Agents	41.7	16.6	14.7	37.5	62.5
	Patients	29.2	20.8	50	62.5	37.5

The data from Akateko show that agents in both AF clauses and transitive clauses tend to have been mentioned recently in the discourse. This is not surprising for transitives, particularly since Zavala (1997) looked at verb-initial clauses. However, it is somewhat surprising for AF clauses, although there are more instances where referential distance is greater than three than for transitive clauses, and is perhaps expected if AF is being used consistently for contrastive focus. The rather high referential distance for patients in AF does however correspond to expectations from the antipassive in Chamorro above. With respect to topical persistence, 92.2% of transitive agents have a topical persistence of two or more, which is consistent with transitive agents being continuing topics. However, while topical persistence was about equal for agents of transitive and antipassive constructions in Chamorro, it appears that fewer agents in AF clauses than in transitive clauses continue to be discussed for more than two clauses.

Given comparable measurements from other languages, I turn now to the data from Kaqchikel. The textual corpora used to compile topical persistence and referential distance values included both texts which I have collected and texts archived in AILLA at UT Austin. I also compared the modern usage to colonial usage through analysis of examples in the Xajil Chronicles (Maxwell and Hill 2006). Sampling was intended to equally represent both the modern and the colonial corpora. However, the oblique AP construction is sufficiently rare that these 21 examples noted in Tables 13.9 and 13.10 below constitute all of the examples of the oblique AP construction in the corpus which were spontaneously produced and had enough context to evaluate referential distance and topical persistence.

To get a general idea if there were any relevant differences between the colonial and the modern corpora, I looked at examples of transitive, oblique AP, and AF constructions and compared them with respect to referential distance and topical persistence for both agents and patients. The results are given in Tables 13.9 and 13.10 below. Bolded values are those which differ between the two datasets by more than one.

TABLE 13.9. Metrics for the target constructions in the Xajil Chronicles (Maxwell and Hill 2006)

	Agents		Patients	
	Ref. dist.	Topic persist	Ref. dist.	Topic persist
Transitive (n=50)	3.48	3.08	10	1.16
AF (n=35)	9.67	1.31	5.17	0.54
Oblique (n=9)	4.33	1.78	2.56	2.22

TABLE 13.10. Metrics for the target constructions in the modern corpus

	Agents		Patients	
	Ref.dist.	Topic persist	Ref. dist.	Topic persist
Transitive (n=50)	3.4	1.92	7.26	1.32
AF (n=35)	10.8	1.86	7.8	0.71
Oblique (n=12)	5.92	1.18	2.25	1.91

With respect to the colonial vs. the modern examples, there are differences in some of the values, e.g., greater referential distance for agents and patients in AF in the modern corpus, and more of a difference in the referential distance of patients of transitive vs. AF constructions in the colonial corpus. However, the differences in values across the three constructions are comparable for the two corpora (perhaps aside from referential distance for transitive patients: 10 vs. 7.26). As such, the data from the two corpora have been combined in the following tables.

Since I am principally concerned with the differences between transitives which show up in cases where the agent is focused and those detransitivized constructions which exist exclusively in focus contexts, I looked in the combined dataset specifically at transitives with overt, preverbal agents in contrast to those which lacked an overt agent or had a post-verbal agent. While in many of these AV constructions the agents were probably topics, dividing transitive examples in this way provides more insight than looking exclusively at verb-initial clauses. I also looked at detransitivized reflexive/reciprocals vs. transitive reflexive/reciprocals (see section 12.5) in the colonial corpus,⁹³ in case differences appeared between those two constructions with respect to referential distance and topical persistence as well.

The combined data set, with distinctions between AV(O) and V(O)(A) transitives and detransitivized vs. transitive reflexives/reciprocals, is given in Table 13.11 below. The numbers of instances for those two additional contexts represent the total number of AV(O) and detransitivized reflexives available in the textual corpora.

⁹³ I only counted examples of reflexives/reciprocals in the colonial corpus because there were too few naturally occurring examples in the other corpora to have a representative count.

TABLE 13.11. Topical persistence and referential distance for the target constructions across all corpora

	Agents		Patients	
	Ref. dist.	Topic persist	Ref. dist.	Topic persist
Transitive (n=100)	3.44	2.5	8.63	1.24
AV(O) transitive (n=22)	6.77	1.23	9.05	1.41
AF (n=70)	10.24	1.56	6.46	0.63
Oblique (n=21)	5.13	1.48	2.41	2.07
Trans refl/recp (n=38)	4.45	2.55	4.45	2.55
Detrans refl/recp (n=38)	5.36	1.79	5.36	1.79

There are several observations to be made about the differences between constructions with respect to information structure. First, as far as topical persistence and referential distance are concerned, transitives with overt preverbal agents appear more often than verb-initial transitive constructions when the agent has not been mentioned for awhile. So while preverbal agents may often be topics, they may not have been overtly mentioned in over six clauses (on average). As for the detransitivized reflexive/reciprocal vs. the transitive reflexive/reciprocal, there are not any overwhelming differences between them with respect to topical persistence and referential distance of their arguments. While this is not any more enlightening with respect to their distribution, it is perhaps not surprising since, as demonstrated in section 12.5, focus is not an integral component of their usage.

In terms of uncovering differences between AV(O) transitives, AF, and the oblique AP construction, each construction does exhibit a different pattern with respect to the topical persistence and referential distance of its arguments. Agents in AF have a very large value for referential distance, as many of the referents were new to the discourse, even if they were definite and known. This appears to contrast somewhat with the data from Akateko, where agents in AF were apparently being used to contrast or focus a referent right after it was brought into the discourse. The Akateko AF pattern more closely describes agents in the oblique AP construction in Kaqchikel, which very often had a referential distance of one,⁹⁴ i.e., a referent was brought into the discourse, and then the following clause focused and provided more information about the new referent.

⁹⁴ The average in Table 3.11 is quite a bit higher than one (5.13) because it averages in a number of instances where the referent of the agent was new within 20 clauses.

The main way in which the oblique AP construction differs from transitives and AF is in relation to the patient. While the Chamorro data and the prediction above indicated that the oblique patients of antipassives should have a low topical persistence and a high referential distance since they are typically given information and are relatively unimportant to the discourse, the oblique AP construction in Kaqchikel exhibits the exact opposite pattern. The patient in the oblique AP construction has a low referential distance with respect to both AF and transitive patients (2.41 vs. 6.46 and 9.05), which indicates that its referent was recently mentioned in the discourse. Oblique patients also have a relatively high topical persistence (2.07 clauses, vs. 0.63 for AF and 1.41 for transitive AV(O) clauses), which suggests that the referent of the patient tends to continue to be relevant to the discourse, apparently to an even greater extent than the agent (2.07 vs. 1.48).

Additionally, while the patient in transitive and AF clauses in the examples compiled here was occasionally new information, not one of the 21 oblique AP examples had a patient for which the referent was not already established relatively recently within the discourse. These findings are compatible with the findings from the elicitation described above, where oblique AP constructions were more likely to be preferred when the patient was given and/or human (regardless of the animacy/definiteness of the agent). While not all of the 21 examples here had animate patients, all of the patients were topical. As such, it is perhaps possible to say that the oblique AP construction has an inverse function with respect to information structure: it is more likely to appear when the patient is the more consistent thread through the conversation, rather than the agent. An illustrative example of this is given below, overheard during a soccer game. Speakers were talking about the ball, who had the ball now, etc., and then a goal was scored while the goalie was on the field (not guarding the goal). When the ball flew unchallenged into the net, a woman stood up and shouted:

(13.27) Pero man-jun n-Ø-k'ol-o **r-ichin!**
 but NEG-one INCOMPL-3SG.ABS-get-OAP **3SG-OBL**
 'But no one got it!' [overheard]

Although the patient in this example is inanimate, it was the topic of conversation rather than the human agents playing the game. Also, since the ball was given information, the lexical patient NP is omitted, but it is still marked as being relevant to the discourse and therefore present in the clause via the 3SG marker on the oblique.

13.4 SUMMARY

In this chapter I have discussed novel data on several aspects of the morphology, syntax, and function of antipassive-type constructions in Kaqchikel. In section 10.1 I attempted to clarify the difference between the two morphemes used with antipassive-type constructions in K'ichean languages, **(V)n* and **(V)w*. I suggested that the difference in Kaqchikel is based on the expression of a specific patient, where **(V)w* appears on those structures which can express a specific patient overtly, while **(V)n* is restricted to the patientless antipassive construction, where no specific patient is expressed or implied. I also suggested one possible pathway for the development of a Kaqchikel-type system from a K'ichee'-type one, and then provided evidence that a number of Kaqchikel dialects have shifted or are in the process of shifting to allow *-on* on verbs in contexts which in the colonial documentation took *-o*.

Section 10.2 presented the results of six picture elicitation tasks designed to gauge how frequently AF and oblique AP constructions appear in syntactic contexts known to exhibit ergativity. While three contexts—*wh* questions, indefinite free relatives, and 'no one' indefinites—require AF/the oblique AP construction in order to extract the A argument, the other three contexts—other relative clauses, simple indefinite agents, and focus word constructions—allow ergative arguments to be extracted, and detransitivization is optional. I suggested that this asymmetry has to do with the presence of an overt lexical agent NP/nominal element, and provided examples demonstrating that this type of non-uniformity with respect to A' extraction is not uncommon in K'ichean and Eastern Mayan more generally.

Section 10.3 was dedicated to looking into possible differences between the oblique AP construction, AF, and transitive clauses with preverbal agents, since all three (but particularly AF and the oblique AP construction) appear interchangeable in some or most contexts. Using both Givón's (1983) metrics for tracking topic and givenness, as well as data collected on preferences for different structures in different contexts, I identified several new facts. First, AF is approximately four times as frequent as the oblique AP construction in Kaqchikel. Also, AF focuses the agent or introduces a new agent referent, and patients tend not to persist as a topic in the discourse. AF is also more likely to be used if the patient is inanimate or non-referential. In contrast, the oblique AP construction behaves in a manner opposite to what is reported for many other antipassive constructions. The patient in the oblique AP construction is highly topical, even more so than the agent, and as such can be said to be 'inverse' in a sense, with respect to relative

topicality of the agent vs. the patient (but not in the sense of obviation, as in Tsotsil (Aissen 1999)). The oblique AP construction also tends to be favored if the patient is human, non-third person, and/or given (and therefore the NP is omitted).

However, it is not necessarily the case that the same pattern which exists in Kaqchikel for oblique AP constructions holds for the cognate oblique AP constructions in other K'ichean languages. Dayley (1985:350) notes for Tz'utujil that the oblique AP construction is most often used when the patient outranks the agent on the animacy hierarchy, which, despite the fact that Tz'utujil is more closely related to Kaqchikel, sounds more like the obviation hierarchy-based system described in Aissen (1999) for Tsotsil. But in either case, it is relevant that the oblique AP construction in at least some K'ichean languages exhibit inverse-type patterns, with respect to topicality or animacy. It is also relevant that AF does not have an inverse function in Kaqchikel (as AF does in Tsotsil), which suggests a greater amount of functional heterogeneity for AF in Mayan languages. It also suggests that similar functions may be spread across different constructions in different parts of the family.

I have also demonstrated here that syntactic restrictions on A' movement for ergative arguments do not appear to be uniform. This applies first within individual languages, where some contexts exhibit true restrictions while in others ergative arguments may be A' extracted, and only optionally make use of AF and other antipassive-type constructions. Non-uniformity of A' extraction also applies cross-linguistically, both between unrelated languages like Chukchi and Dyrbal, and also between closely related languages. While all of the Mayan languages discussed here exhibit syntactic ergativity in the same set of contexts, those context(s) for which detransitivization is mandatory is not consistent among these rather closely-related languages.

CHAPTER 14. CONCLUSION

This dissertation presents the results of a typological study that investigated the global distribution of antipassive constructions, as well as the distribution of relevant antipassive-related features. The sample includes data from 445 languages, which represent 144 language families and isolates. While I looked broadly at the properties and distribution of antipassive constructions, as well as parameters such as alignment which interact with antipassives, I also focused on the various antipassive-type constructions in Mayan. Using primary data from Kaqchikel, I compared the characteristics of the various antipassive-type constructions in K'ichean languages, and also clarified the functional differences between them. While there are many findings involving correlations in the dataset, I focus here only on the broader findings which are particularly relevant to the studies of typology, ergativity, Mayan languages, and the description and identification of antipassives in general.

What is and is not defined as an 'antipassive' from a definitional standpoint varies based on who one is reading and what type of language is being discussed. In fact, an antipassive is a cluster of traits which we commonly associate with the notion of antipassive, and each of these traits individually can be found in antipassive, antipassive-like, and non-antipassive constructions in languages all over the world. As such, the goal here in looking at individual features of antipassives is two-fold: (1) to better discuss the variation in and distribution of antipassive-type structures in relation to other, similar processes, and (2) to create a relatively exhaustive list of relevant criteria to look for if one is trying to identify antipassive constructions and/or comparing antipassive-type structures across different languages. I recorded information on 11 features for each language in the sample, listed and described in Chapter 4.

However, not all features of antipassives are equally critical to their identification. Scholars conceptualize the antipassive in different ways, and rely on different characteristics as definitional, and in Chapter 3 I problematized the common primary aspects of these antipassive definitions. However, it was still necessary to establish a baseline for the comparison of different structures which encompass only the most critical features for identifying antipassives. Which features were most critical were established after careful investigation of antipassive-like constructions in the 445 languages in the sample. The working definition developed for this

dissertation involved designating antipassives as any construction with the following four features:

1. There is an overt marker for the antipassive construction;
2. The antipassive clearly corresponds to an unmarked or less marked bivalent transitive construction;
3. The agent of the transitive construction is preserved, while the patient is either inexpressible or optionally expressed in an oblique phrase;
4. The antipassive construction is intransitive.

This working definition aimed to provide consistent, cross-linguistically applicable criteria for the identification of basic as well as prototypical antipassive constructions in different types of languages. It also provides a base which can be modified by the addition or subtraction of other antipassive-type features, which is discussed further below. It also allows the antipassive to be identified as a phenomenon distinct from other transitivity-decreasing phenomena such as conatives, differential object marking, patient omission, indefinite object constructions, noun incorporation, semitransitives, middles, and reflexives/reciprocals (in those languages where they are in fact distinct).

Under this working definition, of the languages in the sample, about 28% were found to have antipassive constructions based on cross-linguistically applicable criteria. This figure is only slightly higher than that of WALS (~25%) (Polinsky 2013), and as such both figures indicate that approximately one-fourth of languages on the planet have antipassives. The presence of antipassives in a given language correlates with a number of other factors: (a) antipassives are more common in languages of the Americas, (b) languages with antipassives tend to have VOA, OVA, or flexible word orders, and (c) antipassives tend to appear in languages that classify verbs rigidly in terms of their transitivity. There was no significant relationship between the presence of antipassives and locus of grammatical marking (head-marking, dependent-marking, etc.). As reported previously in the literature, the presence of antipassives also correlates strongly with ergative alignment, although antipassives also occur in languages with non-ergative alignments.

These factors which are associated with the presence of antipassives are certainly not independent of each other: nearly half of the ergative languages in the sample are spoken in the Americas, ergativity is negatively correlated with AVO word order (cf. Mahajan 1997), and

Givón (1984:151-164) argues that ergative languages are inherently more sensitive to transitivity. I have suggested that given that there is indeed a correlation between rigid transitivity classes in a language and both antipassivization and ergativity, perhaps antipassives are not directly correlated with ergativity, but rather that rigid transitivity classes are the more relevant factor with respect to the presence or absence of antipassives. But regardless, none of these factors is an absolute predictor. Less than half of ergative languages in the sample have antipassives (~43%), and not all languages with rigid transitivity classes have antipassives (~40%). There is no single factor which predicts the presence of antipassives in a language.

I also argued that the role of antipassives in syntactic ergativity has received disproportionate attention in the literature compared to the variety of other functions which antipassives serve. The so-called ‘syntactic’ antipassives, antipassive constructions that only serve syntactic functions, are quite rare, and in general the use of antipassives in contexts which exhibit syntactic ergativity is due to an existing antipassive construction being co-opted for syntactic functions. In fact, a variety of structures may serve syntactic functions in the same way as antipassives, and approximately 38% of the syntactically ergative languages in this sample lack an antipassive construction. Additionally, only 10 of the syntactically ergative languages in the sample (27%) use the antipassive as the primary means of circumventing restrictions on ergative arguments. So, while antipassives are of course used in some languages primarily in syntactically ergative contexts, that is hardly the whole story with respect to both antipassive function and syntactic ergativity.

With respect to non-ergative alignments, nominative-accusative alignment correlates with a number of other typological parameters. In terms of region, the largest proportion of nominative-accusative languages in the sample are found in Africa. Of the languages in the sample, almost all of those languages which are neither head-marking nor dependent-marking are nominative-accusative. Nominative-accusative languages also tend to have higher numbers of labile verbs, and they make up the majority of languages with AVO basic word order. Several of these features are negatively correlated with the occurrence of antipassives. However, antipassives do exist in nominative-accusative languages, and there are 41 nominative-accusative languages in the sample which have antipassives. Another indication that rigid transitivity classes for verbs is an important correlate for antipassives is that in those nominative-accusative languages which are reported to have rigid transitivity classes, 43% have antipassives (vs. ~18%

for nominative-accusative languages generally). Also, antipassives in nominative-accusative languages appear to exist primarily to remove the patient from discourse, since most of the antipassive constructions in these languages are patientless, i.e., do not permit the patient to be expressed optionally in an oblique phrase (~92%).

Some have claimed that antipassives, and voice phenomena in general, are unexpected in active languages (e.g., where verbal alignment is based on semantic categories and/or thematic roles) (e.g., Dixon 1994:31, Klimov 1979:330, Wichmann 2007). However, others have disputed this idea (e.g., Mithun 2006), arguing that voice is still relevant in these languages as it adds or removes arguments from the expected semantic structure of the predicate. Indeed, antipassive constructions are not particularly rare in active languages, and in this sample antipassives appear more frequently in active languages than in nominative-accusative languages (~36%, vs. ~18%). However, like antipassives in nominative-accusative languages, antipassives in active languages are overwhelmingly patientless. This follows from an analysis of voice in active languages where the primary function is to increase or decrease valency as opposed to increasing or decreasing transitivity.

Although one approach to the investigation of voice phenomena has been to attempt to establish a prototype and look at deviations from that prototype (e.g., Tsunoda 1988), there are at least three different ways to conceive of an antipassive prototype. One option is to adopt as the prototype those features which the construction has in languages widely cited as having antipassives. Another is to consider the prototype a conglomerate of those features ideally present in the target construction, or, alternately, the prototype might be whatever version of the construction is most frequent in the world's languages. I discussed problems with each of these approaches, the first two being too narrow and the last arguably being too broad. I also proposed a fourth option, which combines the second and third approaches in that it looks at a prototype as the most frequent combination of the most antipassive-type features. However, none of these prototypes yields a sample of prototypical antipassives of even 20 constructions, and generally these constructions belong to languages in only a few genetic groups.

In addition to looking at the distribution of antipassives based on my working definition, I also tracked 11 features found in antipassive constructions across all of the languages in the sample. By looking at individual features and clusters of features, not only was I able to examine the ways in which languages vary along those parameters, I was also able to map out how

different antipassive-type features are related to each other, which is outlined in Chapter 9 in the form of three decision trees. The five features related to verbal marking interact with each other, and a change in any one would result in a different set of constructions. The second set of features relate to the patient, where antipassives either cannot express the patient overtly, or the patient may optionally be expressed in an oblique phrase, and some constructions imply a specific patient while others do not. The third set of features refers to productivity, where an antipassive can be almost entirely productive, unproductive, or somewhat productive. These clusters of features, as well as two other features (syntactic uses of the antipassive and semantic/functional correlates of antipassivization), can also vary across languages for any antipassive-type construction.

Another advantage of looking at a variety of individual features which compose an antipassive construction, or a voice alternation in general, is that it is possible to investigate the types of structures which share those features across genetic lines, geographical lines, and outside of traditional linguistic labels to find larger patterns. First, there was a stunning amount of variation in the language sample, with 81 feature patterns in 302 languages. However, there were a number of recurrent patterns, and 8 patterns where 10 or more languages have those same features. The most common pattern involving the greatest number of antipassive-type features had asymmetrical marking, oblique expression of the patient, was quite productive, participated in syntactic ergativity, and was always valency decreasing. This pattern appears in 13 languages in the dataset, and includes Mayan, Pama-Nyungan, and Eskimo-Aleut languages. The most common antipassive pattern involved 40 languages from all regions except Australia. It has asymmetrical marking, the patient cannot appear in an oblique phrase, and it is intransitive. The most common pattern, recorded for 57 languages, was simply an intransitive construction with antipassive-type semantics, which mainly describes ambitransitive/labile verbs.

There are also a number of languages which have more than one antipassive construction or more than one antipassive marker. Chapter 10 focused on the types of distinctions languages make within their antipassive systems. I developed a preliminary typology of typical contrasts which get marked within antipassive constructions, including distinctions based on characteristics of the patient, distinctions based on aspect/mode, and also distinctions which are purely lexical. I also briefly discussed the few attested cases of antipassive stacking. About 30 languages in the sample had multiple antipassive markers and/or constructions.

The final chapters of this dissertation dealt specifically with contrasts in antipassive-type constructions in Mayan languages. Mayan languages have long played a large and visible role in the literature on antipassives, but recent research has altered how some of these constructions are viewed vis-à-vis antipassivization. As such, the discussion of antipassives in Mayan languages is timely as well as relevant to the goals of this dissertation. While most Mayan languages do have antipassive constructions, they are not always particularly prototypical.

In Chapters 12 and 13, I presented new data on the various antipassive-type constructions in Kaqchikel. I identified five morphosyntactically distinct antipassive-like constructions in Kaqchikel, two of which I considered to be antipassives. However, neither of these were as prototypical as some antipassives in other Mayan languages, since one construction is a patientless antipassive (i.e., the patient may not be expressed overtly in an oblique phrase), and the other is limited to contexts where the agent is focused. The characteristics of these constructions in Kaqchikel were compared with the related constructions in other closely related languages, which uncovered a surprising amount of variation.

To create a complete description of these five antipassive-type constructions in Kaqchikel, it was necessary to look at several issues involving the markers for these constructions, the syntactic contexts in which they appear, and how they differ in terms of their function. Findings include that while the distribution of antipassive-type verbal voice morphology (*-(*V*)*w* vs. *-(*V*)*n*) is quite consistent across many of the K'ichean languages, the factor(s) which govern their distribution are different. In Kaqchikel, *-(*V*)*n* appears when a specific patient may not be expressed, and *-(*V*)*w* appears when the patient may be expressed in any way (incorporated, as an oblique, juxtaposed, etc.). Additionally, although Kaqchikel allows agent focus morphology in the usual environments (*A'* extraction), detransitivization is not mandatory in several of those environments. In Kaqchikel, it appears that lexically restricted constructions with an overt agent NP or other nominal element do not require detransitivization. However, this pattern does not hold for all K'ichean languages, as some have optional or mandatory detransitivization in different constructions from Kaqchikel. Lastly, an investigation of information structure found that although the agent focus construction and the oblique antipassive construction both appear exclusively in contexts where the agent is focused, the oblique antipassive construction is used when the patient is highly topical (given information relevant to the discourse).

To date, this dissertation is the farthest-reaching study of antipassives cross-linguistically. Its broad typological approach, coupled with in-depth case studies on Mayan languages, broadens understanding of the distribution, form and function of antipassives in a quantitative sense as well as a descriptive sense. The goals of this study were as follows:

1. To provide a more comprehensive look at antipassives and antipassive-type structures than has previously been attempted;
2. To provide an updated account of antipassives in Mayan languages, based on primary data;
3. To discover which other typological factors relate to the existence of antipassives in a particular language;
4. To discover the types and distribution of features in antipassive-type constructions cross-linguistically;
5. To establish guidelines for the identification and description of antipassive-type constructions in a wide variety of languages.

All of the findings with respect to the typological study can be found in Chapters 5-10, while the data on Mayan languages specifically are the subject of Chapters 11-13. Although the primary findings from this dissertation have already been given above, those considered most relevant to a wide audience are reiterated below.

1. Antipassives are found in approximately a fourth of the world's languages.
2. Although the presence of antipassives correlates with ergativity, antipassives also exist in languages with non-ergative alignment types.
3. Ergativity and antipassives both correlate with the rigid classification of verbs with respect to transitivity. Also non-ergative languages with rigid transitivity classes are more likely to have antipassives. As such, it is possible it is less the case that antipassives correlate directly with ergativity, but rather that both are more likely in languages with rigid transitivity classes.
4. While there is on some level a division between antipassives which serve primarily syntactic functions and those which serve primarily pragmatic functions, the more consistent distinction is between antipassives which allow the patient to be expressed in an oblique phrase and those which do not.
5. Languages may have more than one antipassive marker or antipassive construction.

6. Most languages which are syntactically ergative do not use an antipassive construction as the primary means for circumventing restrictions on ergative arguments.
7. Although there is a substantial amount of variation in the features of antipassive constructions cross-linguistically, there were four antipassive patterns which regularly recurred in the dataset: [ASYMM, MARK, INTRANS, SEMANTICS], [ASYMM, MARK, INTRANS, SEMANTICS, VALDEC], [ASYMM, MARK, INTRANS, SEMANTICS, DEDICATED, VALDEC], and [ASYMM, OBLIQUE, MARK, INTRANS, SEMANTICS, SYNAX, VALDEC]. See section 4.1.3 for descriptions of these features.
8. Different types of antipassives, as well as other structures which are the result of a decrease in transitivity, can be described by schematizing the relationships between the eleven features tracked in this study. See the diagrams in Chapter 9.

The hope is that this study can be expanded upon in future years, and that researchers will add relevant information to the database from the languages that they study. This document and the dataset on which it is based serve as a resource for those interested in antipassives, voice phenomena, transitivity, valency, alignment, and the description of antipassive-type constructions in individual languages and cross-linguistically.

APPENDICES

Appendix A. Geographic, genetic, and antipassive-related information on the languages in the dataset

Appendix B. Typological information on the languages in the dataset

Appendix C. Geographical coordinates used to map the languages in the dataset

Appendix D. Statistical models

Appendix E. Languages in the sample considered to have multiple antipassives

APPENDIX A. LANGUAGES SAMPLED, AND INFORMATION PERTAINING TO ANTIPASSIVES

The data in this spreadsheet are organized alphabetically, first in terms of region, then by family and then by language. See the excel file publicly available on my website (rainaeaton.com) for a layout where all the information in Appendices A-C is given in a single row for each language in the sample. The descriptions here are purposefully brief for considerations of space, so I encourage readers to refer to the references cited for each language for more information. For a guide to what the letters which correspond to antipassive features, see Chapter 3. Question marks in Appendices A-C indicate uncertainty. If you would like to contribute information on a language you research please contact me at heatonr@hawaii.edu.

Region	Genetic affiliation	Language	AP?	Comments	Patient?	Features	Sources
Africa	Afro-Asiatic (Berber)	Tuareg (Mali)	No	both A=S and O=S ambitransitive verbs.	NA	DEF	Heath 2005
Africa	Afro-Asiatic (Chadic)	East Dangla	No	Does non-referential/insignificant/unknown argument lexically, by using variations on 'person' or 'thing'. Reflexive and reciprocal also coded with a lexical word 'body'. switch-reference	NA	DEF	Shay 1999
Africa	Afro-Asiatic (Chadic)	Goemai	No	Have O=S ambitransitives; 'transitive range construction' which is lower in transitivity; no passive; refl/intrans construction where O=S using 'body' which is formally transitive	NA	NA	Hellwig 2011
Africa	Afro-Asiatic (Chadic)	Hausa	No	verbs are generally O=S labile. Also allows object drop. A few 1/2-->1 trans/intrans pairs with an agentive subject, but not clearly voice, or with markedness implications	NA	DEF	Newman 2000
Africa	Afro-Asiatic (Chadic)	Lele	No	obj omission; many verbs can be used transitively or intransitively	NA	DEF	Frajzyngier 2001
Africa	Afro-Asiatic (Chadic)	Mina	No	obj omission; indef. argument gets separate marker	NA	DEF	Frajzyngier and Johnston 2005
Africa	Afro-Asiatic (Chadic)	Sukur	No	obj. omission, esp. backgrounding functions for topical info. Partitive extension indicating object is not completely affected.	NA	CEF	Thomas 2014
Africa	Afro-Asiatic (Cushitic)	Beja	No	AP-like construction using a plurifunctional reciprocal marker (also sociative or passive), which may attach to transitive and intransitive bases. Agent is marked on the verb and the other argument appears in a dative, locative,	NA	BCF	Vanhove 2016 (AP workshop)

				or ablative phrase. Only 4 AP-like examples, and the oblique phrase may not be omitted.			
Africa	Afro-Asiatic (Cushitic)	Iraqw	No	middle marker, but doesn't appear to affect valency (most of the time). Also has overlap with the durative construction, although it sometimes can render verbs intransitive.	NA	EF	Mous 1993
Africa	Afro-Asiatic (Cushitic)	Sidamo	No	passive/reciprocal and middle, which sometimes is auto-benefactive, and is not always valency decreasing. Object marking is for animate objects, and is omissible when the object is present.	NA	NA	Kawachi 2007
Africa	Afro-Asiatic (Omotiic)	Haro	No	transitive and intransitive forms are overwhelmingly related, apparently either by passivization or causativization. Differential case marking based on definiteness.	NA	NA	Wolde-mariam 2009, 2015
Africa	Afro-Asiatic (Semitic)	Arabic (MSA)	No	object omission, at least with some verbs.	NA	DF	Kász 2015
Africa	Afro-Asiatic (Semitic)	Jibbali	No	various semi-productive templates some of which are associated with voice/valency. None serve to derive agentive intransitives from transitives.	NA	DF	Rubin 2014
Africa	Afro-Asiatic (Semitic)	Māsqaṅ	No	has tā-stem which is primarily passive, but also used for the reflexive, reciprocal, be X, derives intransitives from nouns, and 'intransitive', but in these cases all examples have non-agentive subjects (undergoers/experiencers), so more like middle.	NA	NA	Leslau 2004
Africa	Central Sudanic	Kabba	No	no real morphological voice marking. many verbs are ambitransitive.	NA	DEF	Moser 2004
Africa	Central Sudanic	Logo	No	generic object (thing) gives transitive verbs the equivalent of an intransitive reading. Some ambitransitive verbs.	NA	NA	Wright 1995
Africa	Central Sudanic	Ma'di	No	object omission with uninflected verbs, A=P labiality with most inflected verbs, and a few A=S labile verbs.	NA	D	Blackings and Fabb 2003
Africa	Central Sudanic	Mamvu	No	X anticaus/middle	NA	NA	Vorbichler 1971
Africa	Central Sudanic	Mbay	No	a 'substantial' number of verbs are S=O ambitransitives. However, to get an agent	NA	EFI	Keegan 1997

				intransitive reading of a transitive verb use generic lexical items as patients: 'thing', 'person', 'place', 'words'.			
Africa	Eastern Jebel	Gaahmg	Yes	/-án/ morpheme. Pass and AP can appear on the same verb form to yield 0 valency form. Patient semantically absent/non-recoverable, with no other identifiable semantic or discourse functions. Occurs in both erg and nom/acc structures. Doesn't specifically discuss productivity, but appears productive.	Patientless	ACDEFGIJK	Stirtz 2011, 2014
Africa	Isolate	Bangime	No	isolating	NA	NA	Hantgan 2013
Africa	Isolate	Hadza	No	passive/refl valency decreasing morpheme -iya-	NA	NA	Sands 2013
Africa	Isolate	Kunama	No	middle 'passive/reflexive', which can also be reciprocal	NA	NA	Thompson 1989
Africa	Isolate	Sandawe	No	marks objects when present	NA	NA	Steehan 2012
Africa	Khoisan	!Xun (Taa)	No		NA	NA	Heine and König 2013
Africa	Khoisan	Khoekhoe	No		NA	NA	Haacke 2013
Africa	Khoisan	Naro	No	apparent lexical tr/intr variation (2 exs) marked by tone, but not clearly voice.	NA	(A)CD	Visser 2013
Africa	Khoisan (Tuu)	N ng	No	little valency marking. S=A ambitransitive verbs, but most are more naturally intrans or trans. also transitive frame alternation where obj-->obl indicating partitive.	NA	DF	Ernszt et al. 2015
Africa	Kuliak	Ik	No	freely allows the omission of core participants.	NA	NA	König 2010
Africa	Niger-Congo (Adamawa)	Dii	No	are verbs which distinguish trans/intrans on the basis of tone. However, this lacks directionality, and is not clearly asymmetrical or voice. Other trans/intrans pairs are distinguished by tone and/or a suffix on the transitive member, suggesting that maybe the intransitive form is more basic. cf. Shilluk	NA	(C)DF	Bohnhoff 2010
Africa	Niger-Congo (Bantu)	Chichewa	No	reciprocal morpheme does not have object omission interpretation. Objects of activity verbs may be omitted without additional marking.	NA	DEF	Alsina 1993
Africa	Niger-Congo (Bantu)	Cilubà	Yes	same -an-, with recip, AP, and iterative uses. Deletes the goal/recipient, not patient, in	Patientless	AC(D)EF	Bostoen et al. 2015

				ditransitive constructions. AP interpretation is only accessible in the singular, i.e. when a reciprocal reading is inaccessible			
Africa	Niger-Congo (Bantu)	Fula	No	Maybe DOM (via prep e), but conditions are unclear.	NA	NA	Sylla 1979
Africa	Niger-Congo (Bantu)	Gikuyu	Yes(?)	same polysemous bantu -an- morpheme, which in G. can be reciprocal or patient-deleting (although still semantically present), and only attaches to trans. stems. M. argues that it is not intransitivizing, but unlike with true indef. Obj. marking in NA languages, it does not appear in the obj. prefix slot.	Patientless	AC(D)EF(I?)	Mugane 1999
Africa	Niger-Congo (Bantu)	Kinyamwezi	No	/-an/ described as 'associative', i.e. comitative or reciprocal. Can appear on intransitive stems and doesn't necessarily decrease valency.	NA	NA	Maganga and Schadeberg 1992
Africa	Niger-Congo (Bantu)	KinyaRwanda	Yes	homophonous -an- with is reciprocal, comitative (with intransitives?), and 'introversive' patient-suppressing. Lexically constrained.	Patientless	ACDF	Maslova 2007; Kimenyi 1980
Africa	Niger-Congo (Bantu)	Kirundi	Yes	same polyfunctional -an- marker. Unlike in other Bantu languages with -an, -an is freely suffixed to intransitive verbs, and although there can be an oblique, it always gets interpreted as reciprocal. Can also attach to transitive verbs without decreasing valency. some verbs are A=S labile and truly patientless; -an requires a generic human object reading. AP reading is clearest in the singular, but can appear in the plural, along with a reciprocal reading.	NA	CDEFI	Ndayiragije 2003, 2006
Africa	Niger-Congo (Bantu)	Swahili	No	reciprocal function of -an-, no AP function. Lots of lexicalized forms.	NA	NA	Seidl and Dimitriadis 2003
Africa	Niger-Congo (Bantu)	Tswana	No	some patient-demoting uses of the reciprocal, but looks like it has more to do with lexical semantics of a few items than with the morphosyntax. Many items are lexicalized with the reflexive, and derive from intrans and trans stems.	NA	NA	Creissels and Nougier-Voisin 2008; Krüger 2013

Africa	Niger-Congo (Bantu)	Wolof	Yes	limited set of verbs, but productive as val-1 omitting the recipient with ditransitive verbs. C and NV argue that this is an extension of a 'co-participation' marker	Patientless	(A)CDF	Creissels and Nougouier-Voisin 2008
Africa	Niger-Congo (Bantu)	Zulu	No	largely reciprocal, but a few -an- verbs with 'prolonged action' interpretation: sleep, breathe, urinate, which can be transitive, but also seem to require a PP.	NA	CF	Buell 2005
Africa	Niger-Congo (Dogon)	Tiranige	No		NA	NA	Heath 2014b
Africa	Niger-Congo (Edoid)	Emai	No	ambitransitives, also object omission.	NA	DEF	Schaefer and Egbokhare 2015
Africa	Niger-Congo (Gur)	Konni	No	consonantal extensors' which are found in Gur languages generally, and can indicate causative, repetitive, transitive, etc. but in Konni are likely not productive and do not have consistent meaning.	NA	NA	Cahill 2007
Africa	Niger-Congo (Gur)	Lama	No	appears that objects can be omitted. However, no real discussion of voice	NA	NA	Ourso 1989
Africa	Niger-Congo (Heiban)	Otoro	No	cognate affix w/ Tira, but no mention of active intrans uses.	NA	NA	Stevenson 2009
Africa	Niger-Congo (Heiban)	Tira	Yes	middle/passive/reflexive affix -ino which can, at least in some cases/with some verbs form an active intransitive. No mention of productivity.	Patientless	(A)CD(E?)F(I?)	Stevenson 2009
Africa	Niger-Congo (Katla)	Tima	Yes	verbal mark called AP; translated patient as 'something', suggesting patient is unspecified/generic. Unclear if this is productive.	Patientless	ACDEFGI?J	Dimmendaal 2010
Africa	Niger-Congo (Kwa)	Chumburung	No	has two? Tras/intrans pairs that might be lexified which are related, but no affix is known. Few ambivalent/cognate obj verbs	NA	D	Hansford 1990
Africa	Niger-Congo (Kwa)	Logba	No	achieves AP effect by replacing the object NP with iva 'thing'. Could be considered a marker, but since it has lexical content and appears in the obj position, probably still transitive. Also has A=S labile verbs, but somewhat different in that S function is semantically more basic. Also has caus/anticaus lability.	NA	CEFIJ	Dorvlo 2008

Africa	Niger-Congo (Mande)	Bambara	No(?)	has some number of verbs that appear to have A=S correspondence with the reflexive/intensifier, but not clear whether the object can always be omitted, and if it is a derivation applying to the transitive, as opposed to the intransitive, stem. Mostly A->S is done by do+NOMLZ.	NA	C(D)F	Crissels 2007
Africa	Niger-Congo (Mande)	Bobo	Yes	however, synchronically maybe positing an antipassive/middle suffix -i like in Soninke is not useful, since there are only a few forms and Le Bris and Prost just discuss it as a vowel alternation in a handful of forms. May be AP-like or passive in meaning. Other verbs appear to be labile	Patientless	(A)CDFJ	Crissels 2012; Le Bris and Prost 1981
Africa	Niger-Congo (Mande)	Boko, Busa	No	only active voice. Almost all verb roots are S=O labile, and the corresponding transitive use is roughly causative.	NA	DE	Jones 1998
Africa	Niger-Congo (Mande)	Jenaama Bozo	Yes	not productive, few lexical--see Bobo. same -i marker as in Tigemaxo. Some forms appear to be falling out of use. Generally intransitivizing	Patientless	(A)CDFJ	Lauschitzky 2007
Africa	Niger-Congo (Mande)	Kpelle	No	only 'steal' is potentially AP; one of a few denominal verbs that take stative morphology.	NA	NA	Vydrin 2011
Africa	Niger-Congo (Mande)	Looma (Liberian)	No	both A and O lability. Shows a change in the initial consonant (not voice). Passive	NA	DEF	Vydrin 2011; Sadler 2006
Africa	Niger-Congo (Mande)	Mandinka	No	Maybe yes, but only really the verb 'eat'. Patientless, but like Ch'ol in that it only surfaces in non-finite/nominal constructions. -ri verbal marker, cognate with -i AP in Soninke, and nlmzrs in other Manding langs. can be applied to intrans. verbs. also has A and P labile verbs, semi-labile verbs, and A-labile verbs that can take an obl patient, which are of two types: delimitative and applicative; middle.	NA	(A)C(D)EFI	Crissels 2012, 2015
Africa	Niger-Congo (Mande)	Mende	No	same initial consonant alternation as in other SWM languages. No mention of lability, although some verbs may participate in both nom/acc and act/stat constructions, with different meanings	NA	NA	Vydrin 2011; Crissels 2005; Innes 1962

Africa	Niger-Congo (Mande)	Soninke	Yes (2)	one is a dedicated AP marker, and another middle-type marker <i>i-</i> that is generally detransitivizing: passive, anitcausative, autocausative, reflexive. 1st is productive, 2nd is not/less so. Very few A/S labile verbs. One example with oblique patient phrase with <i>-i</i> ; vary rare. <i>-i</i> was originally a reflexive marker, and is also used in noun inc.	Patientless Oblique	[ndi] ACDEFGIJ(K) [-i] ABCDEFJ	Creissels 2012, 2016 (AP workshop)
Africa	Niger-Congo (Mande)	Yalunka	No	only 5 verbs are A=S labile; most are O=S labile.	NA	DF	Lüpke 2005
Africa	Niger-Congo (Senufo)	Supyire	No	Patient can be in an oblique phrase, which yields partitive meaning, either with respect to the patient OR the agent. Can appear with any verb. Oblique patient phrase is obligatory; if it is omitted it yields a passive interpretation	NA	BDEFI	Carlson 2016 (AP workshop)
Africa	Niger-Congo (Ubangi)	Mono	No	Some verbs are ambitransitive (optional object). Only valency operation is a passive, which may be lexically restricted.	NA	DF	Kamanda-Kola 2003; Olson 2001
Africa	Niger-Congo (Yoruboid)	Yoruba	No	some number of S=A ambitransitive labile verbs, as well as A=P. grammatical relations marked via particles and word order.	NA	DEF	Atoyebi 2015
Africa	Nilotic	Anywa	No(?)	productive, results in durative aspect. 'Marker' in that the detransitive and transitive stems are different in regular ways. It is possible that Reh's phonological rules in this particular language could not apply in reverse, but alternations appear to be the same as what are described as stem alternations in other N languages. Detransitive is mandatory in the case that the patient is only partially affected/the action is not yet completed. Argues this language underwent passive-->erg reevaluation. Would have oblique and patientless options, nominal and verbal marking, and it's productive.	NA	(A)B(C)DEF GIJ	Reh 1996
Africa	Nilotic	Burun	Yes	same "detransitive root" vs. "transitive root" like Shilluk, but also has a separate marker <i>-ir</i> . Suggests stem alternation is not considered a marker in itself. No examples with obl patient.	Patientless	ACDEFG?I? J?	Schröder 2006

				Trans/intrans indicated by order. Productivity unclear.			
Africa	Nilotic	Dholuo	No(?)	see Dinka Bor. Same vowel alternation between roots/stems, where one construction is intransitive with an agentive subject and other is a transitive. Would be patientless (or oblique?) with verbal marking.	NA	(A)(C)DEF? G?I?J	Schröder 2006
Africa	Nilotic	Dinka Bor	No(?)	indicated only by a vowel change, similar to Shilluk. No examples with obl patient, and patient is unspecified.	NA	(A)(C)DEF? G?I?J	Schröder 2006
Africa	Nilotic	Päri	No(?)	no AP morpheme, but get tonal and vowel changes with AP stems, but which do not necessarily indicate directionality. Claims there are 3 AP stems based on repetition or directionality. However, same contrast exists for trans. and intrans. stems. Would have oblique and patientless types, nominal and verbal marking, and it's productive.	NA	(A)B(C)DEF G?IJ	Andersen 1988
Africa	Nilotic	Shilluk	No(?)	AP indicated by a separate tonal and phonological features of AP vs. transitive stems. Not apparent that the relationship is not voice, or there is directionality. Patient is indefinite and/or nonspecific. See Adyghe.	NA	(A)B(C)DEF G?I?J	Miller and Gilley 2001
Africa	Nilotic	Toposa	No	lacks TV/AP root distinction found in other Nilotic languages.	NA	NA	Schröder 2006
Africa	Nilotic (Eastern)	Maa	Yes	AP marker -ishC(r), patientless, productive. Emphasizes the action of the verb or imperfective aspect. Some examples with intransitive roots. Possibly comes from 'give'.	Patientless	ACDEFI	Payne 2016 (AP workshop)
Africa	Nubian	Dongolawi	No	interesting 'definite' marker which indicates that the object is specific/known, not generic/unknown. Pro-drop, marks both subj and obj on the verb.	NA	NA	Abdel-Hafiz 1988
Africa	Nubian	Midob	No	most verbs are ambitransitive, although suggests intransitive is more basic, as trans. Is sometimes marked with -r-. Also 'total affectedness' morpheme.	NA	DEF	Werner 1993
Africa	Saharan	Beria	No	apparently same t- morpheme as in Kanuri, which can result in some type of identity between the agent and the patient: reflexive,	NA	NA	Jakobi and Crass 2004; Jakobi 2006

				auto-attributive, reciprocal, resultative, or feasibility(?)			
Africa	Saharan	Central Kanuri	No	participants can be dropped when understood from context. Has passive/reflexive morpheme, which can also function as reciprocal. Also causative, applicative. Subj and obj NP marking can also be omitted in most contexts.	NA	NA	Hutchison 1976
Africa	Songhay	Humburri Senni	Yes	/-a/ resultative passive or unspec. Obj. can't appear on some root types. See KS	Patientless	ACDEFJ	Heath 2014a
Africa	Songhay	Koyra Chiini	No	some verbs are A=S and O=S labile. However, many are either transitivized or detransitivized by -ndi, which is both factive/caus and mediopassive. No mention of use as AP	NA	NA	Heath 1998
Africa	Songhay	Koyraboro Senni	Yes	suffix -a that is unspecified object and mediopassive. Argues these functions are distinct. Object omission where patient is understood. Animacy of the remaining argument appears to condition the AP (w/an) vs. mediopassive reading (w/ inan). Separate mediopassive suffix -andi	Patientless	ACDEFJ	Heath 1999
Africa	Songhay	Zarma	No	has S=O labile ('bidirectional' or 'double entry') verbs. No mention of S=A lability.	NA	NA	Sibomana 2008
Africa	Surmic	Chai	No	looks like reciprocal and 'habitual' marker; appears lexified as continuative on some verbs. All 'habitual' examples have no stated objects, so possibly lexical AP. However also appears on intransitive predicates like 'cough' and 'fall', so unclear.	NA	CDF	Last and Lucassen 1998
Africa	Surmic	Kwegu	Yes	same affix as in Me'en; appears to also indicate passive, and in that case can appear with a non-obl agent. Habitual aspect translation, although no mention of productivity or semantics	Patientless	ACDE?F	Hieda 1998
Africa	Surmic	Majang	No	insufficient evidence. 'middle' marker homophonous with reflexive which can co-occur with the passive. Other examples of intrans. With no valency marker	NA	NA	Unseth 1989

Africa	Surmic	Me'en	No(?)	similar markers as Suri [ine for imperf, iye for perf], but appears to be reciprocal and passive and 'habitual' marker. However, all 'habitual' examples have no objects. But suffix isn't mandatory with a habitual adverb, suggesting the suffix itself isn't necessarily affecting valency.	NA	CDFI	Will 1998
Africa	Surmic	Murle	Yes	Only appears on some high frequency verbs. Not compatible with the perfect. Most verbs are labile	Patientless	ACDEFGJ	Arensen 1982
Africa	Surmic	Tennet	Yes -2 markers	2 markers: one for the incomplete and one for the completive. No internal vowel modification. also has separate patient demotion like English conative. No mention of productivity, but from examples appears at least partially productive.	Patientless	ACDEFG(I?) J	Schröder 2006
Africa	Surmic	Suri/Tirmaga	Yes -2 markers	restricted to habitual/progressive/reciprocal action. -nen for 1/2nd persons, -ne for 3rd and 1st incl. Productivity unclear. also functions as the reciprocal. also object NP omission in past tenses, with no need for this morpheme	Patientless	ACDE?FJ	Bryant 1999
Americas	Algonquian	Blackfoot	Yes -2 markers	transitive/intransitive alternations, based on definiteness of the object. Has 'deriving suffixes' -aki and -imaa which create intransitives from transitive roots. Has AI AP-type examples, but the construction is like Pen. and lacks a verbal marker. Objects not marked on verb are secondary objects.	NA	[AI+O] BDEF	Frantz 1978, 1991; Armoskaite 2011
Americas	Algonquian	Ojibwe	Yes -2 markers	has AI+O and TI. Although people have argued TIs are AIs, there are slight morphological differences. AI constructions with primary objects have detransitivizing markers, -(V)ge and -iwe (animate patients only). Both unspecified obj. same correspondence with ditransitives as in Pen.	Patientless	[gen.objAP] ACDEFGJ [AI+O] BDEF	Valentine 1994; Rhodes and Valentine 2015
Americas	Algonquian	Penobscot	Yes -2 markers	has cognate animate and inanimate detransitivizing theme signs. At least sometimes a secondary object theme or locative is permitted with detrans. TI(+obI) verbs lexicalized sort of antipassive for all	Patientless	[gen.objAP] ACDEFGJ [AI+O] BDEF [TI] BF	Quinn 2006

				inanimate patients; however, maintains transitive marking. AI(+oblO)'s which correspond to trivalent verbs and can take animate or inanimate obl patient. Obl marking corresponds to 'secondary object'. However, lacks an AP marker unlike other Alg. languages.			
Americas	Algonquian	Plains Cree	Yes -2 markers	Has AI+O AP type (Wolvengrey 'pseudo-transitives'), which has corresponding TA structure. However, suggests that this is still transitive, and does not mention that the patient in these constructions is a secondary object (although it is freely omissible). Also -ike: (TA and TI) and -iwe: (TA) 'general object' markers which detransitivize with unspecified obj interpretation. Few TIs lacking objects, but no corresponding construction.	Patientless	[gen.objAP] ACDEFGJ [AI+O] (B?)DEF	Wolvengrey 2011, Dahlstrom 1991
Americas	Araucanian/ Isolate	Mapudungun	No	only get obj agreement with 3 ext. objects; others by juxtaposition. BUT presence/absence of mark matters for specificity. -ye- unproductively makes Dos obliques; no mention of omissibility.	NA	EFI	Zúñiga 2015; Smeets 2008
Americas	Arawakan	Guajiro/Wayuu	No	Apparently at least some verbs are labile and can have intrans, middle, or reflexive senses without any marking.	NA	NA	Zubiri Olza and Jusayú 2012
Americas	Arawakan	Parecís	No	trans obj can be omitted but obj clitic must remain.	NA	NA	Brandão 2014
Americas	Arawakan	Piapoco	No	At least some transitive verbs are ambitransitive, where patient is omitted and there is no obj agr.	NA	DEF	Reinoso Galindo 2002
Americas	Arawakan	Yine	Yes(?)	most verbs are ambitransitive. Has morph -lewa 'characteristic action' which does not co-occur with obj agreement, but can co-occur with appl and attach to intrans. Because verbs are ambitrans, not completely clear that -lewa is truly intransitivizing. described as "AP-like". Patient is optional and demoted to E (not accessible for operations like passivization), but has 3 obl case markers that	Patientless Patient [extended E]	ACDEFI?	Hanson 2010

				do not appear in this construction. see Engdewu			
Americas	Arawan	Kulina	No	Liclan and Marlett (1991) claim that it does, but whether the verb shows agreement with A or O is based on other factors; non-derivational. Has obj omission, where only get A agreement [ambitransitive]. One speaker of Purus dialect used A agreement for indefinite or generic objects (aka antipassive), but not accepted in other dialects.	NA	EF	Dienst 2008, 2014; Liclan and Marlett (1991)
Americas	Athabaskan-Eyak-Tlingit	Apache (San Carlos)	No	indefinite object prefix', but conceptually patientless and cannot have accompanying patient NP. Same prefix combines with 'di-element to form the reflexive. Productive, as transitivity is quite rigid (no labile verbs). Also found on a few intransitive verbs, e.g. sleep, dance, flirt. No aspectual correlates like AP	NA	CEFIJ	de Reuse 2006
Americas	Athabaskan-Eyak-Tlingit	Eyak	Yes	same suppressed object construction 'indefinite object' as in other Ath. languages; (D-element+) indeterminate object 'i-. However, unlike in Apache, suggests the difference b/t the D element AP and indef. Obj. marker is that the ind. obj is referential, in that the speaker has an object in mind, whereas the D-element AP construction is non-referential and non-specific, focus on the verb. About 50/50 presence of D element with indet. obj. marker, no apparent shift in semantics. indefinite marker can be used for subjects or objects.	Patientless	[D+'ida-] ACDEFGJK	Krauss 1965, 2015, Thompson 1989b, 1996
Americas	Athabaskan-Eyak-Tlingit	Koyukon	No	although has same 'indef. Obj' marker as in Tanacross, it gets used in a variety of other environments, i.e. with any other indef. Arguments, as well as attach to nouns and adverbs. can have referential or non-referential patient. Functions to suppress any non-topical information.	NA	CEFI	Thompson 1989a
Americas	Athabaskan-Eyak-Tlingit	Tanacross	No	D element as middle. indefinite object prefix [homophonous with indef. Subj. prefix].	NA	CEFIJ	Holton 2000

				Removes possibility of expressing the object. Only available to transitive predicates. Called obj prefix because takes obj prefix slot; inflectional, and verb remains morphologically transitive.			
Americas	Athabaskan-Eyak-Tlingit	Tlingit	Yes	same suppressed object construction 'indefinite object' as in other Ath. languages; also patient-eliminating function of the D element, extended from the middle voice (but still retains full range of functions). Not clear what the semantic difference in/distribution of the two AP-like constructions is. indef. object AP marker called 'indefinite non-human obj', suggesting it can't be used with verbs with animate patients.	Patientless	[D-element] ACDEFJ	Crippen 2012
Americas	Athabaskan-Eyak-Tlingit	Tolowa	Yes	D element on its own indicates non-promotional passive with a few verbs, 'vestigial' antipassive function with a few others, mutually exclusive with the object prefix. Also gets used with reversative/iterative, recip, refl. Also calls the Ath. 'unspecified object' AP, which is unproductive.	Patientless	(A)CDF	Givón and Brommelyn 2000
Americas	Aymaran	Aymara	No	elaborate discourse indexing. DOM	NA	NA	Coler 2014
Americas	Barbacoan	Awa-Pit	No	DOM [animacy; referentiality]. Only one S=A ambitransitive. Regular agent and patient omission. However, O is recoverable	NA	[1 ambitrans] DF	Curnow 1997
Americas	Boran	Bora	No	inanimate objs Ø-marked, leaving verb physically intrans (DOM). Full obj omission, even if there isn't agreement, although argument always appears to be recoverable. Intransitives tend to be basic. Equipollent caus/anticaus pairs, where both trans and intrans get morphology	NA	DEFI	Thiesen and Weber 2012, Seifart 2015
Americas	Cariban	Akawaio	Yes	See other Cariban langs. ~16% use of detransitivizer as AP. LOC P can also appear in an oblique phrase.	Patientless	ACDEFJ(K)	Gildea et al. 2016 (AP workshop)
Americas	Cariban	Apalaí	Yes(?)	Same construction as other Cariban languages. It is unclear how many verbs may have an AP	Patientless	ACDEFJ(K)	Meira 2000

				meaning, since the 3 examples in Meira could be more middle/reflexive.			
Americas	Cariban	Hixkaryana	Yes	several pseudopassive/middle valency decreasing derivations, like other Cariban langs. Transitivity is very rigid in all these languages. Single detransitive marker with many allomorphs. AP meaning on average accounts for ~25% of use of the detransitivizer. Nominalization very productive. Locative arguments may appear in obl phrase (with different obl markers), but in general patients are semantically absent.	Patientless	ACDEFJ(K)	Derbyshire 1985; Gildea et al. 2016 (AP workshop)
Americas	Cariban	Kari'ña (Carib)	Yes	Same marker and construction as other Cariban langs. Very common; 119 AP uses of 184 detransitive examples.	Patientless	ACDEFJ(K)	Mosonyi 1982; Meira 2000; Courts 2008; Gildea et al. 2016 (AP workshop)
Americas	Cariban	Kuikúro	Yes	same as refl, and meaning can alternate. Second process where get obj agr., but no overt obj, and no erg. Marking for the subject. "de-ergative". Not explicit about productivity vs. lexicalization.	Patientless	ABCDEFJ(K)	Franchetto 1990
Americas	Cariban	Macushi	Yes	Some suggestive examples of detransitivizer with AP uses. Given that AP uses are found in Akawaio (see Gildea et al. 2016), likely also occur in Macushi.	Patientless	ACDEFJ(K)	Carson 1982; Meira 2000
Americas	Cariban	Panare	Yes	Supposedly detransitive more lexicalized than other Cariban langs. Payne lists 3 markers, none of which are fully productive.	Patientless	ACDFJ(K)	Payne 1990; Meira 2000
Americas	Cariban	Tiriyó	Yes	Same multi-functional marker as other Cariban langs. AP appears to be more of a minority use, with 62 AP examples out of 472 detransitive examples, evidenced by only 5 verbs.	Patientless	ACDEFJ(K)	Meira 1999; 2000; Gildea et al. 2016 (AP workshop)
Americas	Cariban	Wayana	Yes(?)	Same marker as other Cariban languages, but discussed as mostly reflexive. 4 examples of possible AP meaning. However, given that the discovery of regular AP use of the detransitive is a new discovery (see Gildea et al.) that it	Patientless	ACD(E)FJ(K)	Tavares 2005, Meira 2000

				exists in Wayana, but was not documented as such.			
Americas	Chibchan	Guatuso/ Maleku	Yes (2)	one is an antipassive use of the middle morpheme, and the other is a dedicated antipassive morpheme [has a null allomorph]. AP morpheme takes the erg verbal slot. It also gets used in noun incorporation. Refl.recip is also middle, pushing out an older middle marker -teki.	Patientless Oblique	faAP: ABCDEFGIJ midAP: ABCDEFJ	Quesada 2007; Constenla 1998
Americas	Chibchan	Guaymí/Ngäbe	No	possibly two middle derivations no mention of object deletion. Verb classes not based on transitivity.	NA	NA	Quesada Pacheco 2008
Americas	Chibchan	Kuna	No	Word order for determining grammatical relations. LV 1987 lists a e- 'detransitivizer', but no accompanying explanation	NA	NA	Forster 2011, Llerena Villalobos 1987
Americas	Chibchan	Rama	No		NA	NA	CIDCA 1990
Americas	Chinookan	Wasco- Wishram	Yes	/-k'i/ AP morpheme. transitivity -1, with ditrans. stems. Used in nominalizations. Productivity not discussed.	Patientless [implied DO]	ACDEFGI?J	Silverstein 1972, 1976/ 1986
Americas	Chumashan	Barbareño	No	core-oblique distinction	NA	NA	Ono 1996
Americas	Eskimo-Aleut	Central Alaskan Yup'ik	Yes -3 markers	OM treats AP that lacks marker as an AP as it shares the same structure, which applies to a specific class of verbs 'agentive monotransitives'. Yields indefinite patient. Marked APs apply to 'patientive monotransitives', where unmarked intransitive yields mediopassive meaning. Unmarked constructions could be considered S=A and S=O ambitransitives, except can take oblique. 2 AP markers also caus/appl markers. Visible on nominals and verb.	Patientless Oblique	AB(C)DEFH I	Mithun 2000; Miyaoka 2015
Americas	Eskimo-Aleut	Inupiaq	Yes -4 markers	calls the AP markers cognate with Greenlandic 'postbases', and also agentive AP structure with lack of postbase. different markers distribution dependent on phonology, 2 of 4 can be adversative, although choice is often specified for each base. Has been unable to identify clear semantic differences like in Greenlandic. 3 are productive. Don't occur with all transitives; some transitive-only and	Patientless Oblique	AB(C)DEF	Nagai 2006, Lanz 2010

				intransitive-only verbs. Visible on nominals and verb.			
Americas	Eskimo-Aleut	Western Greenlandic	Yes -4 markers	Backgrounding APs. 4 AP affixes and intrans+obl obj [i.e. lacks mark]. Obj not limited in definiteness or specificity. Markers differentiated aspectually, not syntactically: -si, -(ss)l, -nnig imperfective; -llir inceptive, -∅ imperfective activity. -si is also inceptive/inchoative and can attach to intransitives. Visible on nominals and verb.	Patientless Oblique	AB(C)DEFH I	Bittner 1987; Johns 2006; Basilico 2012
Americas	Guaicuruan	Mocoví	Yes	suffix -(a)gan which is AP (patientless, oblique, or incorporated), and homophonous with a causative marker, which can stack with the AP, which is common considering transitive predicates cannot be directly causativized.	Patientless Oblique Patient (inc.)	ABCDEF	Juárez and Álvarez-González 2016 (AP workshop)
Americas	Guaicuruan	Pilagá	No	switch of subject prefix to indicate trans vs. refl/middle action. No obl NPs.	NA	NA	Vidal 2001
Americas	Harákmbut-Katukinan	Katukina	Yes (at least one dialect)	Only Bia dialect has obl option, so possible to consider AP only in that dialect. In other dialects sounds more like Mayan AF in that there's no obl and the patient tends to be expressed; patient can be a name, not just indefinite/nonspecific things; primarily functions to serve syntactic pivot and to promote the agent.	Patientless Oblique (Bia dialect) Patient	A(B)CDEFG HIJ	Queixalós 2010
Americas	Iroquoian	Cherokee (Oklahoma)	Yes	AP use of the reflexive used to omit the object.	Patientless	ACDEFIJ	Montgomery-Anderson 2008
Americas	Iroquoian	Mohawk	Yes	Could argue that some middles with agentive subjects are APs, where patient is deleted. Great examples of voice in an active language. Very productive noun inc. Unclear how many verbs may have an AP reading.	Patientless	ACDEFJ	Hopkins 1988, Mithun 2006, 2016 (AP workshop)
Americas	Isolate	Chitimacha	No	/ni/ preverb meaning 'thing' decreases transitivity, among other (non-voice) functions. May still be accompanied by an overt patient; not intransitivizing. "makes a contribution to the overall intransitivity of the clause". Was possibly on its way to becoming a detransitivizer from a lexical item.	NA	(A)CE(F)	Hieber to appear, Hieber p.c. 2015

Americas	Isolate	Haida	Yes	indefinite object' marker ta-, lexically restricted and applies equally to transitive and intransitive bases. With intransitives suggests it denotes a state of the ambient environment. Enrico argues it falls in the realm of morphology, not syntax. patient cannot be expressed as an adjunct. However, Haida uses indefinite pronouns to indicate nonspecific patients, and it does not appear to be an object marker since patients are generally not marked on the verb (although easily could have developed this way, with SOV order).	Patientless	[A]CDF	Enrico 2003
Americas	Isolate	Huave	No	lexical +- aspiration in intrans/trans pairs.	NA	NA	Kim 2008
Americas	Isolate	Kanoê	No	has marker -ro in opposition to some -to marked transitives (equipollent?), but concludes it is not valency-reducing. Also attaches to intransitives.	NA	NA	Bacelar 2004
Americas	Isolate?	Kwaza	No	transitivity is not fixed for many verbs--many ambitransitive semantically transitive verbs; DOM in that there is a case marker for human objects. Switch-reference.	NA	DEF	van der Voort 2004
Americas	Isolate	Movima	Yes	direct/inverse system, and AP can show up in either (though limited in inverse) for syntactic purposes. Both types of transitive are derived, and AP applies on top of that (unlike Ph-type focus/voice); unmarked roots denote states. Has a different marker which has AP features which demotes the patient for pragmatic reasons (morphologically identical to AP constructions in other languages), but it is derived from the stative, not a transitive. AP is purely syntactic in that it does not appear other than to resolve restrictions on proximate arguments. Inverse may do this as well, but dispreferred. also appears on possessed nouns	Patientless Oblique	[AP] ABCDEFHI ['agentive'] BCDEFGIJ	Haude 2012
Americas	Isolate?	Puinave	No	nominalization common; noun incorporation; transitive verbs commonly allow a lack of obj agreement (ambitransitive-esque). Indefinite arg marker.	NA	DF	Girón Higuita 2008

Americas	Isolate	Purepecha (Tarascan)	No	only animate patients can be implied; also can use with ditransitives, where it decreases valency by 1 [no obl]. Has separate obj omission, which can be animate or inanimate, simply by deletion of obj. marker (ambitransitive). Not AP here because marker may be ind. obj., suggesting it is not voice (cf. Athabaskan).	NA	CDEFG	Capistrán 2015; Chamoreau 2008; 2015
Americas	Isolate	Seri	Yes	Productive, marked AP. Also has unspecified subject and object prefixes. has switch-reference. Transitivity is important.	Patientless	ACDEFGIJ	Marlett 1981
Americas	Isolate	Takelma	Yes	/-xa-/ marker which deletes the object, although conceptually it is still present. This is perhaps related to the 'non-agentive' morpheme -x-, which has some semantic overlap with the AP, but creates non-volitional intransitive verbs, and is probably better termed 'anticausative' for its core meaning. Transitivity is rigid; only maybe 3 ambitransitive verbs. also has noun inc, and some verbs which are morphologically transitive but semantically intransitive.	Patientless	ACDEFGIJ	Kendall 1977; Sapir and Golla 1990
Americas	Isolate	Tonkawa	No	transitivity is not consistently marked. Suggests there may be different stems for different obj classes, but not enough evidence. Has switch-reference	NA	NA	Hoijer 1933
Americas	Isolate	Trumai	No	ABS-DAT case frames for every-day action verbs. DAT is also used for canonical inanimate patients. Also can be a lexical choice, when two verbs have the same meaning but different case frame specs. Valency is decreased via argument suppression which can also generate passive and middle/refl meanings.	NA	DEF	Guiardello-Damian 2010; Becquelin and Becquey 2012
Americas	Isolate	Tunica	No	DOM. Very common for transitive verbs to appear without obj agr or an overt NP, particularly if the patient is inanimate.	NA	NA	Haas 1940
Americas	Isolate	Warao	No		NA	NA	Romero-Figeroa 1997

Americas	Isolate	Washo	Yes (3?)	Transitivity plays a large role in the grammar, even though it isn't ergative. <?um-> prefix creates intransitives apparently with same meaning and role relations as the transitive (patientless). w-'Static' prefix derives diffuse agent intransitives with intransitive roots, but diffuse patient (patientless) intransitives with transitive roots. be- 'indefinite object' creates intransitives from intransitives and transitives, and focuses on the action (patient implied). Roles not always clear b/c does not provide contextual examples. Unclear how productive they are, and some meanings seem potentially lexical. Also has a class of 'neutral' equipollent stems which require transitive or intransitive marking to inflect. Also has switch-reference.	Patientless	ACDE?F	Jacobsen 1964
Americas	Isolate	Yuchi	No	DOM, where inanimate patients tend not to be marked on the verb. Also obj cross-reference is omissible when the patient NP is present or understood. Valency in Yuchi has a "fluid nature".	NA	NA	Linn 2000
Americas	Isolate	Zuni	No	object agreement generally only for pl arguments. Acc case marking only for human obj NPs. Indef/nonspec particle appears with subj and obj NPs.	NA	NA	Nichols 1997
Americas	Jê	Apinajé	Yes	series of morphemes with related semantics described as 'middle'. One form results in antipassive semantics; others are anticausative and middle. Also used with nouns, some trans, some descriptive verbs. Others don't have trans counterpart. also has switch-reference	Patientless	ACDF	Cunha de Oliveira 2005
Americas	Jê	Krahô	Yes	aw, like Apinaje. no discussion of productivity, but appears to be fairly productive. switch-reference; extended intransitives, but adds obl argument without being derivational (e.g. 'for you').	Patientless	ACDEF(I?)(J?)	Maxwell Gomez 2014
Americas	Jê	Timbira (Kanela)	Yes	aw-, like Apinaje, and also used on nom roots, at least historically. Appears lexicalized. Switch-reference	Patientless	ACD(E?)F	de Castro Alves 2004

Americas	Jê	Xavánte	Yes (1/2)	has likely cognate a(j)- morpheme with other Je langs, which is middle with some clear AP functions. AP use is marginal; largely lexicalized. Also has another marker ro(b)- 'thing, world, nature' which takes the pronominal object verbal slot, but permits the expression (or omission) of an oblique patient. However, verb maintains erg-marked subject. E2011 suggests it is somewhere between inflection and derivation.	Patientless	[middle] ACDFJ [ro-] (A)BCEFGI	Machado Estevam 2011; Costa de Oliveira 2007
Americas	Kariri	Dzubukua	No	6 ambitransitive verbs. Detransitivization through 'argument prefixing', i.e. agreement, reflexivization, or subject or object incorporation	NA	NA	de Queiroz 2012
Americas	Mascoyan	Sanapaná	No	At least some verbs appear labile. Only masculine arguments get obj marking	NA	NA	Silva Gomez 2013
Americas	Matacoan	Nivaclé	Yes (2)	Two different detransitivizing and valency decreasing suffixes. Both are productive (although wanka- more so), and can be stacked. LC feels one is more inflectional, and the other more derivational. V and P argue wanka- also has middle and causative uses and may attach to intransitive stems.	Patientless	wanka: ACDEF jan: ACDEFGJ	Campbell et al. in prep, Fabre 2014; Vidal and Payne 2016 (AP workshop)
Americas	Mayan	Akateko	Yes (1/4; 3? marks)	absAP [-wi] (or -wa) considered to be the same construction, traditional AP+-obl. Also 'crazy' AP [-o], incAP [-wi], AF [-on]. No mention of any forms other than AF being used in focus contexts, or use with the reflexive.	Patientless Oblique Patient	ABCDEFHIJ	Zavala 1997
Americas	Mayan	Ch'ol	No (0/2; 2 marks)	incAP (-Vyaj, or bare root), "absAP" -oñ, cognate with other Mayan AP suffixes. However, AP surfaces as a predicate with nominal, not verbal properties, so not considered APs for purposes here. absAP is limited lexical set (~12); patientless; only found with root tvs, not derived tvs.	NA	CEFJ	Coon 2013; Vázquez Álvarez 2011
Americas	Mayan	Ch'orti'	Yes (1/2; 1-2 marks)	AbsAP [-Vn/-ma], incAP [-Vn/-ma/-o]. Says patient may be obl or omitted, but no obl examples. Productivity unclear. Further info pending from Robin Quizar.	Patientless Oblique	ABCDE?F(H ?)J	Perez Martinez 1994; Quizar 1994; Storniolo 2008

Americas	Mayan	Chuj	Yes (1/4; 3 marks)	absAP [-waj], +-obl, incAP [-wi], reflAP [-an], and AF [-an]. -w(i) can also attach to nouns and positionals. Hou considers reflAP a type of AF. Not possible to substitute absAP in AF constructions. BUT AF participates in syntactic ergativity.	Patientless Oblique	ABCDEFGIJ	Buenrostro 2002, Hou 2013
Americas	Mayan	Huastec	Yes (1/2; 3 marks)	VI, -Vm, Vsh. Homophonous with some derived nominals. absAP, incAP use same markers. Kondic says form of the AP marker is predictable from the transitive stem class marker. recip formed from Vsh AP by vowel lengthening. No special AF construction; synt. Erg uses absAP. many root transitive verbs have root intransitive (middle voice) counterparts which differ only in having an intransitive thematic suffix rather than a transitive one.	Patientless Oblique	ABCDEFGH IJ	Edmonson 1988; Robertson 1993; Kondic 2016
Americas	Mayan	Itzaj	Yes (1/2; 1 mark)	absAP (patientless, -n); incAP (-n) (no AF).	Patientless	ACDEFIJ	Hofling 2000
Americas	Mayan	Ixil	Yes (1/2; 1 mark)	AbsAP (+-obl); AF (both -on). AF always cross-references patient on the verb. Chajul dialect allows a few incAP for indefinite/nonspecific 3rd person patients, but is not found elsewhere in Ixil.	Patientless Oblique	ABCDEFHIJ	Ayre s 1983
Americas	Mayan	Jakalteko/ Popti'	No (0/4; 3 Marks)	oblAP [-wa], incAP [-wi], 'crazy' AP [-n], AF [-n]. AF is obligatory, at least for WH. in AF pronoun always cross-references the patient. No AF if the agent is 1/2. Craig says oblAP isn't entirely intransitive, as obl is obligatory and verb still receives trans-looking marker -a. See May only have animate patients, and is not entirely productive. No reflAP (although allows AF marking in extended reflexives).	NA	ABCEFGJ	Craig 1979, Ordóñez 1995, Grinevald and Peake 2012
Americas	Mayan	K'ichee'	Yes (2/5; 2 marks)	absAP [-on] is traditional AP+/-obl. oblAP [-ow] in focus only. Inc.AP [-ow], AF [-ow], refl.AP [-ow] not considered AP here, and possibly are the same (type of) construction. AbsAP can have anticausative meaning. According to Mondloch, AF is optional even	Patientless Oblique	[absAP] ABCDEFGH IJ [oblAP] ABCDEFHIJ	Mondloch 1981; Davies and Sam-Colop 1990

				with wh-questions. Also, abs marker is always -on even in focus.			
Americas	Mayan	Kaqchikel	Yes (2/5; 2 marks)	absAP [-on], oblAP [-o]; IncAP [-o], AF [-o], refl.AP [-o] not considered AP here, b/c are syntactically incorporated or transitive. oblAP limited to focus like AF. AbsAP can rarely have patientive subject.	Patientless [absAP]O blique [oblAP]	[absAP] ACDEFGHIJ K [oblAP] ABCDEFHIJ	Matzar and Guaján 1997
Americas	Mayan	Mam	Yes (1/2; 1 mark)	absAP (+-obl), incAP (all -n). No morphologically separate AF construction; uses absAP. Few lexicalized non-voice AP-like items. 2 different obl markers, differ in volitionality. Reflexive is unusual in that it uses AP marker, but uses only an ergative prefix.	Patientless Oblique Patient	ABCDEFHIJ	England 1983
Americas	Mayan	Mocho'	Yes (1/5?; 1 mark)	no RN obl marker. Many given examples could be considered incorporative, but the patient can also be definite/specific, and no overt subject. Only 1 marker -o:n, which appears in all contexts: patientless, 'incorporative', reflexive, nonfinite, and patiented contexts. Also derives intrans verbs from nouns. Mainly represents durative aspect. Called 'middle', but subject isn't typically patientive. no mention of anticaus use.	Patientless Patient	AC(D)EFIJ	Palosaari 2011
Americas	Mayan	Mopan	No	has cognate with Yukatek AP, but loss of tone blurred the trans/intrans distinction. However, active verbs can detransitivize via change in vowel quality, and loses TR marker. Synchronically essentially equipollent.	NA	ACDEFGI?	Danziger 1996
Americas	Mayan	Q'anjob'al	Yes (1/5; 3 marks)	absAP [-waj], +-obl; incAP [-wi]; AF [-on]; trans in non-finite embedded clauses 'crazy AP' [-on]. Also has refl.AP (appears with -waj, not -on or -wi; some consider it to be a type of incorporation) which does not appear in focus contexts. AF only focuses 3rd persons, cross-references the patient. incAP is very productive; absAP is lexical.	Patientless Oblique	ABCDFHJ	Mateo Toledo 2008

Americas	Mayan	Q'eqchi'	No(?) (0/2; 1 mark)	oblAP (-o), incAP (-o). Refls appear to only be transitive. No obl phrases in abs-type syntax, only juxtaposed 3rd person non-referential patients. Obl option seems to only appear in focus contexts. No suggestion of a patientless AP, and no AF.	Oblique	ABCEFHIJ	Berinstein 1985; Tzul and Tzimaj Cacao 1997
Americas	Mayan	Sakapulteko	Yes (2?; 2 marks)	absAP [-n] and oblAP [-Vw], AF [-Vw]. No mention of incAP or reflAP. absAP in focus still marked with [-n], and discusses obl AP as limited to focus.	Patientless Oblique	[absAP] ACDEFGHIJ K [oblAP] ABCDEFHIJ	DuBois 1981
Americas	Mayan	Sipakapense	Yes (1/2?; 2 marks)	absAP [-n] and oblAP [-w]; AF [-w]. Different in that 1 or 2 patients can't appear in obl phrase. no non-AV/SV examples, so unclear if obl AP ever appears outside of focus, or with an -n affix. Says 3rd person patients can be juxtaposed. Possibly incAP or AF, since limited to SVO order.	Patientless Oblique	ABCDEFHIJ (K)	Barrett 1999
Americas	Mayan	Tojolabal	Yes (1/?)	Small number of ambitransitive verbs. FL 1976 lists a large number of intransitivizing morphemes, but only posits middle and passive voice alternations. Many intransitivizers can be applied to multiple word classes. At least one productive absAP -wan. also makes IVs from noun roots.	Patientless	ACDEFI	Furbee-Losee 1976, Grinevald and Peake 2012
Americas	Mayan	Tseltal	Yes (1; 3 marks)	AbsAP /-wan/, productive, implied human patient; -maj and -baj, non-productive, implied inanimate patient. no AF.	Patientless	ACDEFGIJ	Vapnarsky et al 2012, Polian 2013
Americas	Mayan	Tsotsil	Yes (1/2; 2 marks)	AbsAP [-van (implied patient)], +-obl in ditrans. clauses; AF [-on]. AF verbs lack abs agreement. AF use is based on relative topicality/definiteness of the two arguments, NOT an extraction restriction.	Patientless Oblique (ditrans. only)	A(B)CDEFG HJ	Aissen 1987, 1999, Haviland 1981
Americas	Mayan	Tz'utujil	Yes (2?/5; 2 marks)	absAP [-on], oblAP [-o]; IncAP [-o], AF [-o], refl.AP [-o] not considered AP here, b/c are syntactically incorporated or transitive. oblAP limited to focus like AF. AbsAP can rarely have patientive subject.	Oblique Patientless	[absAP] ACDEFGHIJ K [oblAP] ABCDEFHIJ	Dayley 1985

Americas	Mayan	Uspanteko	Yes (1/2; 2 marks)	absAP [-n] and oblAP [-(o)w] considered to be the same construction, traditional AP+/-obl; AF [-(o)w]. However, abs and obl possibly separate constructions --no examples of obl construction outside of focus.	Oblique Patientless	ABCDEFH(I?)J(K)	Tuyuc Sucuc 2001
Americas	Mayan	Yucatec	Yes (1/3; 1 mark)	absAP; inc. and AF are unmarked. Low tone morph and -n 'intrans'. Only patient cross-referenced on the verb in AF; AF maintains transitive status marker.	Patientless	ACDEFGIJ	Bricker 1978; Tonhauser 2007; Gutierrez-Bravo and Monforte 2011; Lehmann 2015
Americas	Misumalpan	Miskito	No	Since many transitive counterparts are marked with -k/b- it is possible they are derived (equipollent). DOM, NP mark for animate objects.	NA	NA	Salamanca 1988
Americas	Miwok-Costanoan	Mutsun	No	at least some labile verbs. strong middle ('mediopassive') and reflexive derivations.	NA	DEF	Okrand 1977
Americas	Mixe-Zoquean	Mixe (Ayutla)	No	inverse. S=O and S=A ambitransitives.	NA	DEF	Romero-Méndez 2009
Americas	Mixe-Zoquean	Sierra Popoluca	Yes	backgrounding and foregrounding functions. Degree of productivity unclear. Some number of S=A and S=O ambitransitives.	Patientless	ACDEFG(I?)J	de Jong Boudreault 2009
Americas	Muran	Pirahã	No	grammatical relations via word order. Transitivity not important. Almost no valency operations	NA	DEFI	Everett 1986
Americas	Muskogean	Choctaw	No	equipollent intr./tr. Alternation with passive or occasionally middle semantics. Also has switch-reference.	NA	NA	Broadwell 2006
Americas	Nadahup	Hup	No	Differential object marking [animacy]	NA	NA	Epps 2008
Americas	Nambikwaran	Sabanê	No	some ambitransitive/labile verbs. Consistant obj case marking	NA	NA	Antunes de Araujo 2004
Americas	Otomanguean	Chatino (Zenzontepec)	No	most verb roots are monovalent, so primarily transitivity language. Number of equipollent verbs, t/s marked transitives, y-marked intransitives with patientive subjects. Only 2 ambitransitive verbs; also has obj. omission and DOM	NA	DEF	Campbell 2015
Americas	Otomanguean	Ixcatec	Yes	An unusual AP, clearly from human person marker. Functions mostly to not mention	Patientless	ACDEFIJ	Adamou 2014

				present discourse participants, and can only omit humans (see Matses, Slavonic). Does not have other aspectual or AP-like correlates. Also removes the only (human) argument of stative predicates. Adamou argues this really is AP because VS order, showing it is intransitive, and it is in the correct position for valency-modifying affixes. Also lacks object agreement.			
Americas	Otomanguean	Mixtec (Chalcatongo)	No	Object omission	NA	NA	MacCaulay 1996
Americas	Otomanguean	Otomí (Queretaro)	Yes	AP has the same marker as the middle and stative, extended to have antipassive uses (6 verbs listed), although argues that middle and AP are synchronically separate. Middle also represents middle domains of Spanish, including reciprocal and reflexive sense. also used to derive nouns. Also has =te indefinite obj marker, also used to describe occupations and habitual aspect. both markers can also be used with intransitive stems, which supports the idea that =te is no longer an object marker, maybe primarily aspectual (since it can't be detransitivizing with an intrans). some labile verbs; some are equipollent. 3rd person obj marker is Ø.	Patientless	ACDF	Palancar 2009, 2006
Americas	Otomanguean	Zapotec (Coatlán-Loxicha)	No	various trans/intrans pairs, some ambitransitive, some distinguished by tone; most examples with AP-esque semantics appear to have caus-derived tv counterparts; 'replacives' largely have passive semantics, as well as #C fortition and palatalization. synchronically equipollent and lexicalized.	NA	DF	Beam de Azcona 2004
Americas	Palaihnihan	Achumawi	No	transitivity does not get discussed as a relevant parameter. Often translations with transitive verbs lack any mention of an object unless it is 1/2 person (object marking via person hierarchy?). Nom/acc case marking on NPs is optional.	NA	NA	de Angulo and Freeland 1931

Americas	Pano-Tacanan	Cavineña	Yes (1/2)	Marker is reduplication, patientless, activity focus; only applies to canonical actions. Also has AP-like strategy where an intrans. aux can be substituted for a trans aux., like Basque. Patient is most often incorporated, although it can be expressed as an oblique or unexpressed. AP visible through verbal and NP marking. switch-reference	Patientless	ACDEF (intrans. Aux:) (B)DEF	Guillaume 2006, 2008
Americas	Pano-Tacanan	Dēmushbo	Yes	See Matses	Patientless (?)	ACDE?FGJ	Fleck 2010
Americas	Pano-Tacanan	Korubo	Yes	See Matses	Patientless (?)	ACDE?FGJ	Fleck 2010
Americas	Pano-Tacanan	Kulina	Yes	See Matses	Patientless (?)	ACDE?FGJ	Fleck 2010
Americas	Pano-Tacanan	Matis	Yes	See Matses	Patientless (?)	ACDE?FGJ	Fleck 2010
Americas	Pano-Tacanan	Matses	Yes	AP marker -an. Also has a set of equipollent trans/intrans pairs. AP=indef OR 1st person patient. No productive noun inc. also has obj omission where erg is still erg-marked. Also has ambitransitive structure placing a tr verb in an nv frame (abs-marked subject). must have animate patient to be -an marked. AP visible through verbal and NP marking. switch-reference	Patientless	ACDEFGJ	Fleck 2006
Americas	Pano-Tacanan	Shipibo-Konibo	No	object omission, and maintains erg marking. Switch-reference.	NA	NA	Valenzuela 2003
Americas	Peba-Yaguan	Yagua	No	DOM based on semantic and syntactic criteria. Ra inanimate argument marker [subj and obj].	NA	EFI	Payne 1985
Americas	Pomoan	Southern Pomo	No	switch-reference. No similar affix to baa= which Mithun (2016) categorizes as AP for Central Pomo.	NA	NA	Walker 2013
Americas	Quechuan	Quechua I (Huallaga)	No	-ta obj marker sometimes omissible.	NA	NA	Weber 1989
Americas	Quechuan	Quechua II (San Martín)	No	argues for separate trans designation 'non-transitive' for verbs where -ta obj marker is optional. However, it doesn't seem to alter argument structure.	NA	NA	Howkins 1977

Americas	Sahaptian	Nez Perce	No	has AP in the way that Mayan incAPs are antipassives; more like noun inc. in that the verb is intransitive, the object NP is (almost?) always expressed. No mark. Generally encodes indefinite inanimate patients. Rude argues that it is not the basic transitive construction, but 30% of predicates quite high for AP. Strange because patient must be a new and topical, can't be given.	NA	[loss of obj case] DEF	Rude 1988; Deal 2010
Americas	Saliban	Mako	No	DOM	NA	NA	Rosés Labrada 2015
Americas	Salishan	Bella Coola	No	Beck argues that -M can be characterized as a single morpheme with middle meaning, but clear examples of AP-type uses, as well as patient-promoting and transitivity, like other langs. Also attaches to nouns, and doesn't always affect valency/transitivity.	NA	BCDEF	Beck 2000; Davis and Saunders 1997; Kroeber 1999
Americas	Salishan	Halkomelem	No (0/2)	essentially lexical: -els most common 90%, middle -m 15%; ~12 verbs high-frequency verbs are labile ("Ø" marked). Arguments also that roots are unaccusative, and these suffixes introduce an external argument, and do not necessarily derive an intransitive from a transitive. see Movima -ele. Galloway 1993 posits that -els = full control, -m = limited/no control. Lists at least some instances where -els and -em can only be attaching to an intransitive root. Doesn't appear with stative and unerg verbs. Both markers can appear together. Can only have 3rd person inanimate demoted patients. Lack of obl marking only mentioned in Wiltschko and in Kroeber for the Chiliwack dialect.	NA	[-els] (B)CDEF(H) I [-m] (B)CDEF(H) I	Gerds 1982, Gerds and Hukari 2005; Galloway 1993; Wiltschko 2006
Americas	Salishan	Kalispel	No	/-M/ has definite AP function in K, +obl, and no real middle function, although still doesn't alternate with a less-marked transitive structure. Thomason and Everett analyze 4 different constructions with -m as instantiations of the same morpheme, with use that varies based on environment. However	NA	(B)CDEFI?	Thomason and Everett 1993; Kroeber 1999

				only one use is AP-like (others: indef. agent/passive, val. increasing, 'transitive continuative'). Also indefinite objs can receive obl marking, but implies that the verb is still transitive. Vogt says obl marker can be dropped.			
Americas	Salishan	Lillooet	No (0/2)	same equipollent/stem problem as Halkomelem. markers -xal and -M; also discusses Ø-marked intransitivizer, but those are middle or passive. M is Salish middle marker, but some M-marked verbs have AP semantics. Oblique-marked patient, but mark is optional (and patient is optional). M can attach to a variety of stems. like Halkomelem some verbs allow M and -xal to stack.	NA	[-xal] (B)CDEF [-m]] (B)CDEF	van Eijk 1997; Kroeber 1999; Roberts 1999
Americas	Salishan	Okanagan	No	Like Kalispel, has -m with three distinct uses: AP, middle ('grooming' only), and passive. Suggests it is productive, but not clear. Transitivity is important to Salishan generally	NA	BCDEFI?	Dilts 2006; Barthmaier 2002; Mattina 1982; Kroeber 1999
Americas	Salishan	Squamish	No (0/2?)	/-M/ marking is middle, with some antipassive-like senses, and is also used in obj, but argued that in Squamish these are also characterizable as middle. Similar morpheme im?- called 'active intransitive'	NA	CDEF	Jacobs 1994; Darnell 1997; Kroeber 1999
Americas	Salishan	Thompson	No (0/2)	/-M/ "control middle", and //-nwéln// "non-control middle". Non-control is less frequent and may be used with a wider variety of stems. both appear to have largely AP uses; some more reflexive/self-interest driven. patient can be oblique or omitted; implied progressive aspect, and patient is generic, but can also be specific. However, T&T note that either middle is really derived from transitive bases, and can be added to a variety of stem types. Also notes that at least some verbs are labile, not requiring a verbal morpheme but which still function as APs. May stack.	NA	BCDEFI?	Thompson and Thompson 1992; Kroeber 1999
Americas	Salishan	Tillamook	No	see other S langs. "it does appear, however, that oblique objects of all sorts are normally	NA	CD(E?)F(I?)	Kroeber 1999

				unmarked" (Kroeber 1999:49). Very limited examples.			
Americas	Salishan	Upper Chehalis	No	see other Salish. m̩ intransitivizer, as well as -l/m middle also with transitivizing and passive senses. "the verb form with the -mL morpheme may in fact be followed by a noun object, either directly or following a preposition" (Kinkade 1963:44). If there is no overt patient, it's presence is implied as indef/nonspec. appear to be some number of labile verbs.	NA	BCDEF	Kinkade 1963; Kroeber 1999
Americas	Siouan	Hidatsa	Yes	'indef obj', but result is intransitive. Says valency decreasing, with the identity of the patient is understood from the context. Marker homophonous with 3pl obj marker, [but does not occupy the same slot], 1active prefix, and does not attach exclusively to verbs. Productive; some lexicalized forms. switch-reference	Patientless	ACDEF	Park 2012
Americas	Siouan	Hocak	Yes	calls wa- a 'dummy obj argument', but descriptions of the same morpheme in related languages suggest it not actually in the object slot. Not productive; found with only a handful of verbs.	Patientless	(A)CDF	Hartmann 2015
Americas	Siouan	Osage	Yes	valency-reducer wa. Not an object marker, as it occupies a different slot. Very frequent; preferred to transitives when agent isn't focused (interestingly the opposite of Maya. Suggests separation of agent-promoting and object-demoting functions). Some wa forms grammaticalized and now used as TVs.	Patientless	ACDEFGIJ	Quintero 2004
Americas	Tequistlatecan	Lowland Chontal	No	2 intransitivizers, said to possibly be 'middle.' described as "absence of causer".	NA	NA	O'Connor 2007
Americas	Totonacan	Tepehua (Huehuetla)	No	indefinite object suffix', but verb retains its transitivity value. Habitual or patient-demoting; also can be added to intransitive. refl+indef.obj. yields antipassive meaning. Non-humans are optionally indexed on the verb.	NA	CEFI	Kung 2007

Americas	Totonacan	Totonac (Misantla)	No	indefinite object'. Like Tepehua; habitual meaning, but can co-occur with object marker. Also used on intransitives. Object does not have to be formally indefinite, although often semantically generic.	NA	CEFI	MacKay 1999
Americas	Tsimshianic	Coast Tsimshian	No	unproductive noun inc. which has AP-type function	NA	NA	Mulder 1994
Americas	Tucanoan	Desano	No	little info on argument structure. Most transitive verbs appear to be labile	NA	DE?F	Silva 2012
Americas	Tucanoan	Siona	No	obj NP doesn't take case marking if non-specific/generic, but still cross-referenced on the verb. Switch-reference.	NA	NA	Bruil 2014
Americas	Tucanoan	Wanano	No	Presence of obj. case marking conditioned by word order and definiteness: preverbal and indef: no mark. 2 lexical S-OBL frames; not voice. Type of switch-reference based on overlapping or successive events	NA	BD	Stenzel 2013
Americas	Tupían	Akuntsú	No	oblique marker pe= with reduced effect on the patient. but patient NP cannot be deleted and cannot be applied to 1/2 person arguments. Further research will be conducted to evaluate traits A and J, which may affect this evaluation. person-based agreement hierarchy.	NA	BEF(G, referring to obl marker)	Aragon 2015, p.c. 2015
Americas	Tupían	Guaraní	No	Agreement based on a person hierarchy.	NA	NA	Velázquez Castillo 2008; Jensen 1990
Americas	Tupían	Karo	No	class of non-inflecting/deriving ideophones which can replace transitive verbs and optionally express the patient in obl phrase. But also co-occur with transitives.	NA	BEF	Gabas 1999
Americas	Tupían	Kayabí	No		NA	NA	Dobson 2005
Americas	Uto-Aztecan	Comanche	No	has human and non-human indefinite object prefixes, which appear in the object prefix position and are therefore considered true object markers, not voice morphology. Has switch-reference.	NA	DEFGIJ	Charney 1993
Americas	Uto-Aztecan	Cora	No	distributive -tyi'- that has indefinite/non-specific semantics, and maybe historically was valency-decreasing, but currently is not. Can	NA	CEF	Casad 1984

				refer to subjects or objects, and can be applied to different word classes.			
Americas	Uto-Aztecan	Hopi	No	no explicit examples. Number agr with obj. Also has switch-reference	NA	NA?	Jeanne 1978, Hill 2003
Americas	Uto-Aztecan	Nahuatl	No(?)	inanimate object markers, 2 types: markers for human and non-human obj. dialectal variation on what may or may not be omitted. However, marker is in the object slot, so appears to be inflectional, not voice. In some dialects some objects may be expressed obliquely, which is more like an AP construction.	NA	(B)CEFGI	Peralta Ramírez 2003, Flores Nájera 2009
Americas	Uto-Aztecan	Northern Paiute	No(?)	indefinite obj': overt marker indicating loss of the patient, but appears in obj position, and NP object is suppressed. also homophonous with the refl. However, obj. and refl are clitics and T discusses AP as an affix. Valency -1 bc can be used in appl constructions where benefactive obj appears, or w/ middle dtr. Sporadic alternation of i/a intrans/trans stems; suggests this is from UA caus. *ina. Has switch-reference.	NA	CEFGIJ	Thornes 2003
Americas	Uto-Aztecan	Ute	No	called AP, but not marked morphologically. intransitive in that the single agentive argument controls agreement (labile). Indefinite patient marked via suffix on the noun. Has switch-reference.	NA	DEFI	Givón 2011
Americas	Uto-Aztecan	Yaqui	No	largely equipollent alternations involving te/ta. Some labile verbs. Possible switch-reference	NA	CDEFI	Estrada-Fernández et al. 2015
Americas	Wintuan	Wintu	No	generic aspect' suffix -s. Has switch-reference.	NA	NA	Piktin 1984
Americas	Yanomaman	Sanumá	No	'semitransitives': intransitive verbs with sometimes optional instr-marked obj. However, not clear if 'semitransitive' is a productive derivation or a lexical class. Most examples are not semantically bivalent, so more like extended intrans.	NA	(A?)BD(E?)F	Borgman 1990
Americas	Yokutsan	Yokuts (Yowlumne)	No	Middle includes self-benefactive. Has switch-reference.	NA	NA	Weigel 2005
Americas	Yukian/ Isolate	Wappo	No	2 prefixes, i- and o-, i- marks indefinite objects and o- unspecified objects. O- appears	NA	[i-] CF	Thompson et al. 2006

				only one 3 verbs, and the vast majority of instances are with 'eat'. Also can co-exist with an object pronoun, so not intransitive. i- is not productive, and forms part of question words, although are 2 examples outside of info questions. Would need some proof that this is intransitivizing.			
Americas	Zaparoan	Iquito	No	no constituent marking on V	NA	NA	Lai 2009
Asia	Andamanese	Great Andamanese (koine)	No	Has a neat system of body clitics which can affect valency, but no ex.s to suggest AP. non-specific patients generally aren't abs-marked.	NA	EF	Abbi 2013
Asia	Austroasiatic (Aslian)	Semelai	No	a few ambitransitive verbs; DOM.	NA	NA	Kruspe 2004
Asia	Austroasiatic (Bahnaric)	Sre	No		NA	NA	Olsen 2014
Asia	Austroasiatic (Khasian)	Pnar	No	object omission for all trans. roles determined by word order	NA	NA	Ring 2015
Asia	Austroasiatic (Munda)	Ho	No	DOM; has an emergent acc obj marker. Has dedicated tr/intr makers, also their use is tied to aspect. Same for middle and reflexive morphemes	NA	NA	Pucilowski 2013
Asia	Austroasiatic (Nicobaric)	Car Nicobarese	Yes(?)	has so-called 'incorporated object' construction with an affix that indicates the action of a transitive verb is carried over an unstated object. Need clearer examples to be sure. Apparently also can be used with quantifier stems. Has 'thematic suffix' indicating partial accomplishment or accidentalness. pairs of 'agentive transitive' and 'non-agentive intransitive' stems. not clear if it is productive, but appears at least partially productive.	Patientless	ACD(E?)F(I?)	Braine 1970
Asia	Austroasiatic (Vietic)	Vietnamese	No	Generally does not do voice, although has a passive. Relations are specified by word order. Radical argument drop.	NA	NA	Thompson 1987
Asia	Chukotko-Kamchatkan	Chukchi	Yes -2/3 markers	3 AP markers, ine- and -tku- +obl, possibly =et= patientless, unproductive from refl. ~15% of verbs are ambitransitive, and some suppletive tr/itr pairs. Like in Halkomelem, some instances exist of AP stacking (ine- and	Patientless Oblique	ABCDEFHI	Kozinsky et al. 1988; Polinsky and Nedjalkov 1987

				tku-). Choice of marker appears to be lexical, although tku- has additional iterative or refl/ recip sense. Tku- (and –et-)can also attach to nominal roots. Ine- and tku- are also agreement markers. Some AP-marked verbs cannot drop the oblique argument. patient is typically given info. All also participate in noun inc.			
Asia	Chukotko-Kamchatkan	Itelmen	Yes -2? markers	in- (and variations thereof? Georg lists 5), cognate with Chukchi ine-, and -?l markers, which often occur together. Georg says they are very rare, and suggests they are borrowed from other C-K languages. Interacts with the causative system.	Patientless Oblique	ABCDFJ	Fortescue 2003, Bobaljik and Wurmbrand 2002; Georg and Volodin 1999
Asia	Dravidian	Brahui	No	has suffix which forms reflexives/middles(?) from transitive stems. No mention of productivity.	NA	NA	Andronov 2001
Asia	Dravidian	Duruwa/Parji	No	fossilized transitivity alternations. NPP now trans/caus.	NA	NA	Burrow and Bhattacharya 1953
Asia	Dravidian	Kannada	No	some labile verbs. lexicalized NP/NPP	NA	NA	Sridhar 1990
Asia	Dravidian	Koraga	No		NA	NA	Šetti 2008
Asia	Dravidian	Maria	No	/-ta/: lexicalized causative causing trans/intrans stem alternations.	NA	NA	Natarajan 1985
Asia	Dravidian	Tamil	No	synchronically a subgroup of South Dravidian has a symmetrical/equipollent transitivity marking system {NP:NPP}; trans are marked with the geminate version of the intrans suffix	NA		Krishnamurti 1997, 2003
Asia	Dravidian	Telugu	No	kon self-benefactive and reciprocal aux. refl anticaus/ middle for small set; can also attach to intrans. NPP now trans/caus	NA	NA	Krishnamurti and Gwynn 1985; Kissock 1995
Asia	Hmong-Mien	lu Mien	No		NA	NA	Court 1985
Asia	Isolate	Ainu	Yes	i- prefix which developed from the still-productive i- indefinite object. However, the ind. obj. i- appears with A prefixes, while the AP i- is intransitivizing as A marking change to S marking. some i- forms have been lexicalized as intransitives. Applies to verbs in middle of transitivity spectrum	Patientless	ACDEFGJK	Refsing 1986; Bugaeva 2010, 2015

Asia	Isolate	Burushaski	No	d- marker appears largely lexicalized, and has several functions Yoshioka unites under 'telic', but which includes anticausative. Marks indefiniteness/non-specificity on nouns.	NA	NA	Yoshioka 2012; Munshi 2006
Asia	Isolate	Nihali	No	Seems like allows obj omission from examples. Indefiniteness is part of the demonst. system. No verbal cross-reference	NA	NA	Nagaraja 2014
Asia	Isolate	Nivkh	No		NA	DF	Mattissen 2003
Asia	Japonic	Japanese	No	number of lexical suffixes which participate in trans/intrans pairs, mostly caus/anticaus; tr/middle-type correspondences. Some are equipollent.	NA	DF	Iwasaki 2013; Kishimoto et al. 2015
Asia	Japonic	Miyako (Tamara)	No		NA	NA	Aoi 2015
Asia	Japonic	Yonaguni (Dunan)	No	some intr/caus lexicalized pairs	NA	NA	Yamada et al. 2015
Asia	Koreanic	Korean	No	Object drop; S=O labile verbs.	NA	DEFI	Yeon 2001
Asia	Mongolic	Monguor	No	No verbal agreement. All recoverable arguments can be dropped.	NA	NA	Slater 2003
Asia	Sinitic	Mandarin	No	Some number of ambitransitive verbs.	NA	NA	Lu et al. 2015
Asia	Sinitic	Xiang	No		NA	NA	Wu 2005
Asia	Tai-Kadai	Lao	No	isolating, some ambitransitive verbs, pro-drop.	NA	NA	Enfield 2007
Asia	Tai-Kadai	Sanjiang Kam	No	pro-drop; grammatical relations are coded by ordering. Some ambitransitive verbs.	NA	NA	Wu 2015
Asia	Tai-Kadai	Zoulei (Gelao)	No	S=O ambitransitive verbs, and all NPs can be dropped if recoverable from context.	NA	NA	Li et al. 2014
Asia	Tibeto-Burman (Bodic)	Bunan	No	productive recip/pass/anticaus detransitivizing morpheme. Also has middle and stative, and lexicalized trans/intrans (mostly trans/middle) pairs with initial voicing contrast.	NA	NA	Widmer 2014
Asia	Tibeto-Burman (Bodic)	Kurtöp	No	most verb stems are invariant, valency is lexically specified. But lots of argument omission. DOM	NA	NA	Hyslop 2010
Asia	Tibeto-Burman (Brahmaputran)	Atong	No	DOM with respect to animacy, definiteness, referentiality, and affectedness. Trans/intrans pairs explainable as formed via unproductive causative morphemes. Case in general is pragmatically conditioned.	NA	NA	van Breugel 2014

Asia	Tibeto-Burman (Burmish)	Zaiwa	No	has pairs of verbs differentiated by creak or aspiration. Those pairs which are trans/intrans variants, trans has creak/aspiration and is generally causative while intrans is anticaus/has patientive subject. Has DOM [animacy]	NA	NA	Lustig 2010
Asia	Tibeto-Burman (Dhimal)	Dhimal	No	middle, which covers a variety of functions and may be applied to intrans and trans stems., passive, and caus.	NA	NA	King 2008
Asia	Tibeto-Burman (Karenic)	Eastern Kayah	No	no verbal marking for voice.	NA	NA	Solnit 1997
Asia	Tibeto-Burman (Kiranti)	Athpare	No	nominalizations; labile + obj looks more like quasi-noun inc. bc no examples provided where noun is omitted. also has actor demotion; infrequent. Maybe labile also.	NA	DEFI	Ebert 1997
Asia	Tibeto-Burman (Kiranti)	Bantawa	No?	many verbs are labile. Has an additional marker -kha, which appears before the verb stem, not in the obj slot, and there is no verbal obj agreement and gives obj omission meaning, BUT A is still erg-marked. Labile +/- obj construction also appears to still be transitive, w/ erg-marked A and the object is 'no less relevant to the speech situation'.	NA	kha: (A)CEFGIK	Doornenbal 2009
Asia	Tibeto-Burman (Kiranti)	Belhare	No	labile + (/ -?) object. P not only must be nonspecific, but also unmodified, except by focus/topic clitics. Argues that P is still argument-like in that it can be relativized in this construction. See also Nez Perce.	NA	(A)DEFI	Bickel 2003
Asia	Tibeto-Burman (Kiranti)	Chiling	No	only a little data, but has same labile +obj pattern. No mention of obj omissibility. Apparently productive.	NA	DEFI(J?)	Schikowski 2013
Asia	Tibeto-Burman (Kiranti)	Chintang	No	interesting case because it has everything but actual morphological markers. Essentially S=A labile +/- object, even though the object is usually there. But bc has both case and A, S & P agreement morphology, so see that A-->S, loss of obj agreement. But bc there's no marking, neither pattern is more basic than the other. See Adyhe and Nez Perce. All verbs	NA	(A)DEFI	Schikowski 2013; Schikowski et al. 2015

				participate; erg-marked pattern=specific patient, nom-marked pattern=nonspecific patient.			
Asia	Tibeto-Burman (Kiranti)	Kulung	No	some number of labile roots	NA	DF	Tolsma 2006
Asia	Tibeto-Burman (Kiranti)	Limbu	No	Labile + object. See Chintang, except that the patient may not be omitted. Van Driem suggests a lot of labilty.	NA	DEF(I?)	Van Driem 1987; Angdembe 1998
Asia	Tibeto-Burman (Kiranti)	Puma	Yes	/-kh/a marker like in Bantawa, but the subject is not erg-marked. Implied nonspecific human patient. P argument can optionally be marked dat in regular transitives (DOM). Labile + obj looks more AP-ish here because dat marker is banned, but obj is obligatory, and is accessible e.g. for relativization. Difference marked verbally and nominally; productive.	Patientless	ACDEFGIJ	Bickel et al. 2007
Asia	Tibeto-Burman (Kiranti)	Sunwar	No	3 labile verbs. Also has equipollent verbs differing only in the initial consonant, appear to be caus/inchoative pairs.	NA	DF	Borchers 2008
Asia	Tibeto-Burman (Kiranti)	Thulung	No	same initial stop caus/noncaus transitivity pairs as in many Tibeto-Burman languages. DOM	NA	NA	Lahaussois 2002
Asia	Tibeto-Burman (Kiranti)	Yakkha	No(?)	Labile +/- object, but again no clear markedness relation. S contrasts this construction with labile and middle. 3/3 person combos w/ matched features are ambiguous as to an AP-like or passive-like reading. Inchoative/caus labile and reflexive labile verbs; 1 verb allows obj omission.	NA	(A)DEFI	Schacklow 2014
Asia	Tibeto-Burman (Kuki-Chin(?))	Manipuri/Meit hei	No	usual AP meanings are largely taken care of by other verbal morphology, e.g. 'totally affected' vs. 'partially affected'.	NA	NA	Chelliah 1997
Asia	Tibeto-Burman (Kuki-Chin)	Falam Chin	No	like some of the Kiranti languages, where there A lacks ERG marking, but P is not oblique, and is generally there although it may be omitted. Detransitivized, but not necessarily intransitive. No change in the	NA	(A)EF(I?)	King 2010

				verb. However, unlike Puma in that patient can't be relativized. Perhaps more parallels with noun inc than AP.			
Asia	Tibeto-Burman (Kuki-Chin)	Haka Lai	No	has same alternation as Falam Chin where the verb stays the same but A loses ERG marking. However, patient is not omissible; but 'syntactically more inert'. Has same sorts of discourse functions as AP.	NA	EF(I?)	Peterson 1998, 2003
Asia	Tibeto-Burman (Kuki-Chin)	Mizo	No	no mention of detransitive pattern as closely related langs, although likely exists.	NA	(NA)	Chhangte 1993
Asia	Tibeto-Burman (Nungish)	Dulong/Rawang	No	no passive or antipassive. both A=S and O=S ambivalent verbs. O omission for nonspecific arguments. Has intransitivizing prefix that participates in non-volitional predicates (also reciprocal; maybe also anticaus?). middle/reflexive has a self-benefactive meaning when accompanied by an overt patient. See Balinese. Marks transitivity, but minimal verbal or nominal indexing	NA	DEFI	LaPolla 2000, 2008
Asia	Tibeto-Burman (rGalrong)	Horpa	No	X- anticaus/middle/non-volitional 1st person.	NA	NA	Sun 2005
Asia	Tibeto-Burman (Rgyalrong)	Japhug	Yes -2 markers	one implying a animate patient, the other an inanimate patient. Not productive. Small class of S=A labile verbs. Objects can't be suppressed/omitted. analyzes the 'stative' use of the AP (see Tsobdun) as a homophonous 'de-experiencer' affix. AP visible on NPs and the verb. Presence of features G and J depend on one's analysis of stative/de-experiencer.	Patientless	ACDF(J)(G)	Jacques 2012
Asia	Tibeto-Burman (Rgyalrong)	Lavrung	No	X- anticaus/middle/non-volitional 1st person/generic human patient [but not detransitivizing]	NA	NA	Sun 2005
Asia	Tibeto-Burman (Rgyalrong)	Tsobdun	Yes -2 markers	one implying a animate patient, the other an inanimate patient. Detransitivization indicated by case marking. Objects can't be suppressed. Also produces some stative verbs. AP visible on NPs and the verb.	Patientless	ACDF(J)(G)	Sun 2005

Asia	Tibeto-Burman (Tani)	Galo	No		NA	NA	Post 2007
Asia	Tungusic	Even	No	cognate and indefinite object deletion. Lexicalized trans/intrans pairs, some of which are anticaus or equipollent.	NA	DF	Malchukov and Nedjalkov 2015
Asia	Tungusic	Manchu	No	DOM	NA	NA	Gorelova 2002
Asia	Tungusic	Udihe	No	/-ktA/ptA/ unproductive decausative/middle.	NA	NA	Nikolaeva and Tolskaya 2001
Asia	Yeniseian	Ket	No	no morphological voice alternations at all. Also, no labile verbs. Limited obj inc.	NA	NA	Vajda 2015
Asia	Yukaghir	Kolyma Yukaghir	Yes -3 markers	Y 3 AP suffixes, each applying to a different lexical set. Dispersive suffix also detransitivizes the verb (objectless). has DOM and switch-reference	Patientless	ACDFGJ	Maslova 2003a
Asia	Yukaghir	Tundra Yukaghir	Yes -? markers	small group of verbs', suffix(es) -de/-did'/din/d/die/d'e; unclear how much variation is phonological. Very small number of labile verbs. Switch-reference	Patientless	ACDFGJ	Maslova 2003b
Australia	Arnhem	Mara	No		NA	NA	Heath 1981
Australia	Bunuban	Gooniyandi	No	erg-abs trans --> (erg)-dat derivation with appropriate semantics, but no AP mark and OBL argument is cross-referenced on the verb, same as benefactives, so the result is not intransitive. Calls this 'middle'	NA	BEF	McGregor 1990; 1997
Australia	Daly	Ngan'gityemerr i	No	detransitivizing auxs, but are refl/recip in that the action is executed upon the actor. Also has DOM.	NA	DEF	Reid 2011
Australia	Garrwan	Garrwa	No	some semi-transitive verbs with nom/dat case frame, but come from intransitive roots. Switch-reference	NA	BD	Mushin 2012
Australia	Gunwinguan	Gunwinggu (Bininj Gun-Wok)	No	often has Ø obj marking based on animacy; reflexive also can have middle and passive-like interpretations. Common incorporation of S and O	NA	NA	Evans 2004
Australia	Isolate	Gaagudju	No(?)	Claims that the two detransitivizing morphemes ("conjugation 1 vs. conjugation 2") serve all detransitivizing functions. However, the only sentence-level examples provided give passive, reflexive, middle, and	NA	CDJ	Harvey 2002/2011

				reciprocal uses, not antipassive, even though he calls it 'backgrounding antipassive'. Synchronically unproductive. At least one marker looks vary similar to the Worrorra detransitive marker. AP-type semantics can also be achieved by aux or lexical substitution.			
Australia	Isolate	Tiwi	No	"semi-transitive" verbs, which appear to be a lexical class. Mostly used with inanimate objects. No object pronominal prefix, but argument can appear (or not appear) outside the verbal complex, or incorporated. juxtaposition also used for inanimate argument of a ditransitive verb. lots of noun incorporation, no case. becoming analytic under influence from English.	NA	DF	Lee 1987
Australia	Iwaidjan	Maung	No	many labile verbs; semitrans verb class w/optional OBL goal (like extended: listen --> listen to X). OBL marker is rare if patient is non-human, and cannot be expressed only by OBL pronoun. Reflexive is formed by replacing trans pronom prefix with an intrans pronom prefix.	NA	BDEF	Singer 2006
Australia	Limilingan	Limilingan	No	largely lexical detransitive verb morphology.	NA	NA	Harvey 2001
Australia	Maningrida	Nakkara	No	reflexive and reciprocal detrans morphemes with consistent meanings. Can attach to a few intransitive roots (8%). Root valency relatively fixed. More intransitive roots than other AUS languages. Some cognate object verbs	NA	NA	Eather 2011
Australia	Mirndi	Jaminjung	No	valency mostly coded by complex predicates--different combinations of inflecting and un-inflecting verbs.	NA	DEF	Schultze-Berndt 2015
Australia	Mirndi	Jingulu	No	only few case frame verbs	NA	NA	Pensalfini 2003
Australia	Nyulnyulan	Yawuru	No	unlike other Aus. langs, verb roots may have no fixed transitivity value. 'semi-transitive' case frame: lexical set of verbs. OBL is mandatory, subject is ERG-marked and verb always has transitive morph. some ambitransitive verbs. Reports erg marking on embedded non-predicative preverbs to be	NA	[semitrans] B	Hosokawa 2011

				syntactic ergativity. However, A=S identity; no coordination/extraction restriction. Also has DOM where particularly inanimate patients can lack acc agreement and overt mention			
Australia	Pama-Nyungan	Diyari	Yes	but only 8 verbs, and only has semantic effect in 1 [also adversative passive. Separate reciprocal. AP affix also refl, trans to mean incompl and verb-oriented, passive; always durative]. Meaning based on verb root class. Better to say antipassive meaning with some verbs. Visible on both V and NPs. Also has switch-reference. Presence of features A and D assumes the oblique patient may be omitted, since there were no patientless examples.	Oblique Patientless (?)	ABCDF	Austin 1981a
Australia	Pama-Nyungan	Dyirbal	Yes (2)	reflexive and reciprocal morphemes both have additional antipassive uses. Also has -ŋa(y) AP morpheme. Difference is in the meaning: -ŋay indicates an actual action; refl/recip indicates potential action. Visible on both V and NPs.	Patientless Oblique	ABCDEFHI	Dixon 1972
Australia	Pama-Nyungan	Kalaw Lagaw Ya	Yes	inst-marked patient; AP visible on both V and NPs.	Patientless Oblique	ABCDEF(G?)(I?)(J?)	Comrie 1981, Ford and Ober 1991
Australia	Pama-Nyungan	Kuku Yalanji	Yes	passive same marker as antipassive and reflexive. Reduplicated verb stem indicates non-individuated patient. Cares a lot about transitivity. AP visible on both V and NPs; productive.	Patientless Oblique	ABCDEFIJ	Patz 2002
Australia	Pama-Nyungan	Martuthunira	No	formerly had semantic antipassive	NA	NA	Dench 1982
Australia	Pama-Nyungan	Ngarla	Yes	AP visible on both V and NPs; partially productive.	Patientless	ACDEFGJ	Westerlund 2013
Australia	Pama-Nyungan	Ngarluma	No	formerly had semantic antipassive	NA	NA	Dench 1982
Australia	Pama-Nyungan	Nhanda	No	argument omission common, even when there is no cross-reference. Some evidence of transitive verbs having the ability to appear in an intransitive case frame, but not clear how often this happens.	NA	DF	Blevins 2001

Australia	Pama-Nyungan	Panyjima	No	formerly had semantic antipassive	NA	NA	Dench 1982
Australia	Pama-Nyungan	Warlpiri	No	verbal info marked on auxs. nominal case marking isn't a good indicator of grammatical relations, since dat patients regularly get obj agreement. Suggests no AP because even dative arguments get cross-referenced. Also has 'conative' construction with AP semantics, but not structure. also has switch-reference/'s-control vs. o-control'	NA	BEFI	Simpson 1991, Campana 1993
Australia	Pama-Nyungan	Warrgamay	No	modernly no mark. historically had mark. Pivot is now achieved by placing transitive root in intransitive frame, with optional INST patient. Most roots then effectively labile, but with option to OBL express patient, which does not indicate a markedness relationship	NA	BDEFHI [historically: ABCDEFGH IJ]	Dixon 1981a, 1981b
Australia	Pama-Nyungan	Warrungu	Yes	Same verbal affix, different patientive case markers. Primarily syntactic function; Pivot function is really only present with purposive subordination. AP morph also marks middle, refl, and anticaus. Very productive; appears with nearly all verbs.	Oblique Patientless	ABCDEFHIJ	Tsunoda 2011
Australia	Pama-Nyungan	Yidj	Yes	Productive; AP visible from verbal marking and NP marking. verbs strongly classed for transitivity. Also used with intrans stems, doesn't always affect transitivity. Also used for refl, non-volition, incomplete	Oblique Patientless	ABCDEFHI	Dixon 1977
Australia	Pama-Nyungan	Yinjibarndi	No	formerly had semantic antipassive	NA	NA	Dench 1982
Australia	Tangkic	Kayardild	No	"detransitivized case frames". Says transitivity is relatively unimportant to the grammar	NA	BEF(some)	Evans 1995
Australia	Tangkic	Lardil	No	formerly had antipassive. passive/reflexive marker homonymy.	NA	NA	Klokeid 1976, 1978
Australia	Tangkic	Yukulta	No	"detransitivized case frames" (3). Claims there is no voice change, and no verbal mark. Doesn't talk about argument omission. Class of middle verbs too. "semi-transitive" as well	NA	BEF(some)(I ?)	Keen 1983, Evans 1995
Australia	Worrorran	Worrorra	No	Middle morpheme which has passive, reflexive, and reciprocal/AP uses. Difficulty here is that a separate AP function cannot be	NA	CDEFJ	Clendon 2014

				distinguished, since all potential examples have plural subjects, which are also at least partially undergoers (holding hands, fighting, traveling). Clendon suggests this is best characterized as a 'mutual action' marker, although examples are infrequent. Some deponent middle verbs.			
Australia	Yangmanic	Wardaman	No	same -yi-type middle and reflexive/reciprocal-type marker as in Worrorra and Gaagadju. Can detransitivize predicates by using different combinations of aux verbs with particles, but the forms/meanings are not consistent, they are not reliably detransitivizing, and are equipollent in that both members of transitive-intransitive pairs receive a transitive or intransitive auxiliary.	NA	BCDEF	Merlan 1994
Europe	Abkhaz-Adyghean	Abkhaz	No	same labile and abs+dat constructions as Lezgi. Detransitivizing operations are more like passives.	NA	BDF	Chirikba 2003
Europe	Abkhaz-Adyghean	Adyghe	No(?)	like Kabardian, "AP marker" is a vowel opposition. small number of verbs can take obl. But because of this, it's hard to tell which form is derived from which. Peter Arkadiev (p.c. 2016) notes that bivalent verbs participating in the antipassive alternation in Circassian may have stems ending in schwa or in /e/, while antipassives invariably end in /e/, suggesting AP forms are less basic. However, verbs with /e/ in both patterns could simply be considered labile. Patient is often generic or indefinite. Few verbs can appear with intrans form but grammatically linked object. Applies to verbs in the middle of the transitivity scale, mostly manner verbs	NA	BCDFGJ	Letuchiy 2012; Arkadiev and Letuchiy 2016 (AP workshop)
Europe	Abkhaz-Adyghean	Kabardian	No	Not clear that the transitive structure is any more basic than the intransitive structure-verbs are labile, or indicated by vowel change. can be argued to be AP (see Adyghe), since it has the markers (obl, erg-->abs, can call vowel change AP marker), and has semantic	NA	BCDFGJ	Matasovic 2010

				correlates, but it is not significantly different than lability.			
Europe	Indo-European (Baltic)	Latvian	Yes	see Lithuanian	Patientless [implied human obj]	ACDF	Geniusiene 1987; Nau and Holvoet 2015
Europe	Indo-European (Baltic)	Lithuanian	Yes	no real labile verbs. -si- refl, recip, anticaus, self-interest middle. Also has lexical AP type with designated object. Also has 'deaccusative', like Germanic conative (also see use in Romance). Reduces patient prominence without necessarily affecting transitivity, but morphologically identical to AP, with se-mark, and a patient in an oblique case. only a small lexical set of verbs.	Patientless [implied human obj]	ACDF	Geniusiene 1987; Nau and Holvoet 2015
Europe	Indo-European (Celtic)	Scottish Gaelic	No		NA	NA	Lamb 2003
Europe	Indo-European (Germanic)	English	No	conative alternation, indicating uncompleted action, lack of affectedness. Labile verbs; transitivity not marked.	NA	BF	Guerrero Medina 2011
Europe	Indo-European (Germanic)	Icelandic	No	various case-marking patterns, including oblique ambitransitive, where the subject case of the intransitive corresponds to the object case of the transitive, and a conative like English. obj. omission	NA	BF	Barðdal 2015
Europe	Indo-European (Germanic)	Norwegian	No	s- 'middle-passive-reflexive' marker, which lacks te object demotion/absolute functions which Russian -sja has. Also self-benefactive-type refl use, but not considered AP for the same reasons as Romance	NA	NA	Enger and Nettet 2011
Europe	Indo-European (Hellenic)	Greek (modern)	No	anticaus results from not specifying the subject of a set of transitive verbs. Intransitives also formed by obj omission (no mark).	NA	DF	Joseph and Philippaki-Warburton 1987
Europe	Indo-European (Indic)	Hindi	No	some trans/intrans pairs contrasted by umlaut, but claims the transitive is the derived form. Intrans typically has patientive subject. Also, unacc perf structure is still transitive, just case	NA	BEF	Montaut 2004; Mahajan 2012

				deficient. Has type of DOM where non-canonical patients are dat-marked			
Europe	Indo-European (Indic)	Kashmiri	No	no morphological valency-decreasing processes. Productive intrans to trans/caus derivation. No or limited DOM	NA	NA	Wali and Koul 2006
Europe	Indo-European (Indic)	Marathi	No	causative, passive, capability passive, reflexive, reciprocal. Type of DOM, where animate Os are marked by la, 'dat' and inanimate Os aren't.	NA	BEF	Dhongde and Wali 2009
Europe	Indo-European (Indic)	Punjabi	No	DOM correlating with animacy and definiteness. Objects may be freely omitted when understood, or otherwise assumed to be generic masc. sg. Some caus/anticaus equipollent pairs, although same sets for Kashmiri described as trans derived from intrans roots. Also some number of ambitransitive verbs.	NA	EFI	Tej 1993
Europe	Indo-European (Iranian)	Balochi	No	DOM	NA	NA	Axenov 2006; Jahani and Korn 2009
Europe	Indo-European (Iranian)	Farsi	No	DOM, where definite patients get marking and indefinite patients are bare. Object can be dropped without marking if understood. Anticaus/middle alternation where patient becomes subject of an intransitive with no additional morphology.	NA	BEF	Mahootian 1997
Europe	Indo-European (Iranian)	Kurdish (Northern)	No	arguments are freely omissible when their referents are recoverable from context	NA	NA	Haig 2008
Europe	Indo-European (Iranian)	Pashto	No	Interesting lexical middle-esque construction. Arguments are freely omitted when understood. dependent-marking.	NA	NA	David 2014
Europe	Indo-European (Romance)	French	No	middle verbs, sometimes agent-preserving, but still self-benefactive or refl/reciprocal, so not considered AP.	NA	NA	Postal 1977
Europe	Indo-European (Romance)	Romanian	No	DOM (pe marking for more definite/animate patients); same refl/recip/middle/passive se as in other Romance languages.	NA	NA	Cojocaru 2003

Europe	Indo-European (Romance)	Spanish	No	DOM; middle verbs, sometimes AP-like plus oblique with psych verbs, which has been called AP, but S is not entirely agentive and most if not all examples could still fall under middle/self-benefactive	NA	NA	Masullo 1992
Europe	Indo-European (Slavic)	Czech	Yes	same refl/ recip/ middle/ passive/ imp morpheme, with same conditions as Polish and Slovene. Only AP with maybe 2 verbs, but can combine with all intrans. as well. Also has effort construction, but obl patient is mandatory (not intransitivizing)	Patientless [implied human obj]	ACDF	Medová 2009
Europe	Indo-European (Slavic)	Polish	Yes	same lexical AP class as Russian, AP meaning with a few verbs. some claim 'de-accusative' structures as AP, which have a gen-marked patient, however the conditions around this are not clear, and contrast with the implied human patient use of sie, which I will record here. May also maintain acc-marked patient	Patientless [implied human obj]	ACDF	Rivero and Sheppard 2003; Wiemer 2007
Europe	Indo-European (Slavic)	Russian	Yes	middle/reflexive/passive/reciprocal/anticaus marker, which can be read as a habitual object demoting antipassive. Patient is frequently inanimate, but doesn't decrease semantic valency because patient is still implied/backgrounded. Contrasts productive AP with lexical AP, where a few verbs have lexically specified implied patients. only verbs of action. Also may create impersonals with intransitives, and with some intransitives creates a similar verb with non-generalizable differences in meaning.	Patientless	ACDEF	Comrie 1985; Say 2005; Enger and Nessel 2011
Europe	Indo-European (Slavic)	Slovene	Yes	more common than in Polish, but still only appears with a small number of verbs. Also has English-type conative (e.g. shoot/shoot at). May also appear with acc-marked obj	Patientless [implied human obj]	ACDF	Rivero and Sheppard 2003
Europe	Isolate	Basque	No	like Kabardian and Adyghe: neither trans nor intrans is more basic, so can't talk about voice alternations. In this way, has both AP-like and passive-like constructions, based on form of the aux. patient may remain expressed in what	NA	BDEF	Laka 2006; Etxepare 2003; Bossong 1984

				is arguably a biclausal construction. Also not restricted to transitive verbs.			
Europe	Kartvelian	Georgian	Yes	i- voice marker, called reflexive, deponent, or 'medioactive', but more middle-esque since has self-benefactive reading and co-occurs with other refl markers. i- also used in ditransitive verbs, passives, mediopassives; some clearly patient-deleting (unerg), where in some cases i- alternates with preverb a-. Applies to a lexical class of about 80 verbs. not always intransitive or valency-decreasing. case marking system developed in part from the reanalysis of an obl antipassive construction.	Patientless	AC(D)EF	Harris 1981, 1985, 2008; Tuite 2003; Amiridze 2006
Europe	Kartvelian	Laz	No	i- 'subjective version' marker, contrasting with a- 'neutral version' marker. Passive, reflexive, self-benefactive, anticaus, reciprocal, impersonal, subject/object coreference readings. Argued to be middle marker. Rarely detransitivizing. some AP-like intransitives, but still self-benefactive, so considered to still be middle. Can also attach to intransitive stems.	NA	NA	Lacroix 2012
Europe	Nakh-Daghestanian	Avar	Yes	same -aR marker, durative sense. At least some verbs with variable valence. Mostly appears with 'to write'; lexicalized.	Patientless	ACDF	Authier 2016 (AP workshop), 2012; Charachidzé 1981
Europe	Nakh-Daghestanian	Bezhta	Yes	gives 3 AP markers ya/a, da, la/a, but calls it 'the antipassive suffix' in ValPal, suggesting these are allomorphs (although ya often appears as an infix, not a suffix). AP is applied to transitive, ditransitive, and intransitives with durative/iterative meaning. Only val. Decreasing with trans. and ditrans. One verb 'wash' has both AP and refl meanings. AP evident from nominal and verbal marking.	Patientless Oblique (some)	ABCDEF	Comrie et al. 2015
Europe	Nakh-Daghestanian	Chechen	No(?)	AP construction in Nichols called 'adjective complementation' in Hewitt, an aux agrees	NA	DEF	Nichols 1980; Hewitt 1982

				with the agent and both NPs are absolutive/nominative. But serves AP-type function			
Europe	Nakh-Daghestanian	Dargwa	No	no marker; ambitransitive +- obl patient. Habitual semantics. Patient is almost always present. only applies to transitive verbs that can have a resultative reading, and with 3rd person patients, and the animacy of the arguments must be mismatched to get an AP reading. Usually not allowed in the perfective. A says this is not a voice-like phenomenon	NA	BD?F	Forker in press; Authier 2016 (AP workshop)
Europe	Nakh-Daghestanian	Hinuq	Yes -2 markers	2 markers, distribution is lexically restricted. do:- can only be added to caus and anticaus stems. Also intrans and ditrans aspect only, non-valency decreasing. Iterative meaning. At least partially lexicalized, as meaning is not always predictable. AP evident from nominal and verbal marking.	Patientless	AC(D)F	Forker 2013
Europe	Nakh-Daghestanian	Ingush	No	almost no valence alternations; erg/nom and dat/nom labile verbs. Intransitive counterpart has patientive subject.	NA	BDEF	Nichols 2011
Europe	Nakh-Daghestanian	Kryz	Yes	largely passive, some anticausative, 5 verbs AP interpretation (but can also have passive meaning). -aR marker. No labile verbs. However appears that passive interpretation is newer. Linked to imperfect aspect; unproductive. AP evident from nominal and verbal marking.	Patientless	ACDF	Authier 2012; 2016 (AP workshop)
Europe	Nakh-Daghestanian	Lezgi	No	labile/ambitransitives; some abs+dat structures, but appears lexical as dat is goal or experiencer.	NA	BDF	Haspelmath 1993
Europe	Nakh-Daghestanian	Tsez	Yes(?)	no labile verbs. Comrie 2000 has anticausative -na/-no, listed in Authier 2012 as antipassive and discussed as being lexically reflexive when added to some intransitive verbs in Comrie and Polinsky 2003. Also 'biabsolutive' construction	Patientless	ACDF	Comrie 2000, Polinsky and Comrie 2003
Europe	Turkic	Turkish	No	uses dat/abl cases to indicate partitive, lack of affectedness, etc., but is part of lexical	NA	BEF	Dede 1981

				structure and do not yield an intransitive. DOM			
Europe	Turkic	Yakut	No	unacc/caus relationship, and unerg/adj relationship. caus/anticaus alternations (argues that caus is basic)	NA	NA	Vinokurova 2005
Europe	Uralic	Estonian	No	Total vs. partial object, marked by case, and does not intransitivize.	NA	BEF	Erelt 2009
Europe	Uralic	Finnish	No	uses partitive with plural indefinite or indefinite mass patients, negative predicates, and progressive actions.	NA	BEF	Sands and Campbell 2001; Kittilä 2002
Europe	Uralic	Hungarian	No	subjective' and 'objective' conjugations; subjective is used for intransitives and when the patient is indefinite, and 'objective' when it is definite. Like AP in that you could consider it intrans morphologically, but still has ACC-marked obj. intrans. construction is less marked. Also has middle voice (kVzik, kVdik) with semantics including refl, recip, autocaus, anticaus, and mediopassive.	NA	EFI	Kiss 2002; Hartenstein 2012
Europe	Uralic	Pite Saami	No		NA	NA	Wilbur 2014
Europe	Uralic	Tundra Nenets	Yes -2 markers	at least 2 affixes, -ŋko/-nc'o- and -ŋkur-, no stated difference. Some 'passive' affix(es) (maybe middle, since some appear reflexive?) yield intransitives with agentive subjects. Eastern dialects don't allow a patient, but Western dialects allow an obl plural patient. Some number of labile verbs, seem mostly S=O, although maybe one S=A (eat). Also has DOM. However, this construction is apparently 'unstable' and infrequent in speech. AP evident from nominal and verbal marking.	Patientless Oblique (Western dialects only)	[Western -nc'o-] ABCDFGJ	Nikolaeva 2014; Leisiö and Kozlov 2016 (AP workshop)
Europe	Uralic	Udmurt	Yes	middle expansion. apparently frequent use of the reflexive/middle as a patient-deleting, yielding habitual or durative meaning. Also can be reflexive, anticausative, stative. DOM where definite objects are ACC but indefinite objects are NOM (null-marked).	Patientless	ACDEFJ	Geniusiene 1987; Suihkonen 1995; Winkler 2001, 2011
Pacific	Angan	Menya	No	detransitive morpheme is more 'middle'.	NA	NA	Whitehead 2004

Pacific	Asmat-Kamoro	(Central) Asmat	No	unclear what valency-changing operations there might be. Multiple series of object markers.	NA	NA	Voorhoeve 1965
Pacific	Austronesian (Atayalic)	Atayal	No	AV and other voice/focus constructions as in other Formosan langs. However, patient has ACC (cu) marker, not OBL (na'). Also as in other langs AV gets used with intransitive predicates as well.	NA	CEGHI	Wu 2013
Pacific	Austronesian (Atayalic)	Seediq	No	only has 'gen/obl' non-AV case marker, while 'nom' case marker is not consistently present. The patient need not be indefinite. C and F argue against the erg analysis saying that lexical obl case is actually structural acc case.	NA	CEGHI	Chen and Fukuda 2015; Holmer 1996
Pacific	Austronesian (Bali-Sasak-Sumbawa)	Balinese	No(?)	discuss antipassive uses of the middle morpheme, but only offer 2 verbs [one 'eat', the other an appl form], and don't include it in their functional typology. Also can sometimes occur with a non-obl patient; looks more like Spanish use of middle as self-benefactive.	NA	ABC(D)EF	Shibatani and Artawa 2015, 2007
Pacific	Austronesian (Malayic)	Malay (Sri Lanka) (Dravidian-Malay)	No	acc case marking is optional. All transitive verbs may be realized intransitively, and depending on the semantics the single argument may be read as an agent or a patient.	NA	EFI	Nordhoff 2015
Pacific	Austronesian (Celebic)	Balantak	No	Both agent and patient voices are marked. reduplication signals continuous action.	NA	NA	van den Berg and Busenitz 2012
Pacific	Austronesian (Central Luzon)	Kapampangan	No(?)	mismatch between apparent alignment in case marking, cross-reference, and verb marking. Case is symmetrical, pivot vs. non-pivot (different from oblique). Cross-reference marks agent and pivot, which is only one argument in AV. So AV only has 1 cross-reference whereas PV has two, so could be considered intrans, although mismatches with case marking. Verb marking is lexical: some verbs overt have AV and PV marking, some AV only, some PV only. Arguments may always be omitted. Could consider verbs for which AV is marked and PV not to be AP, but	NA	(C)EFGHI(J)	Mithun 1994; Baetscher p.c. 2016

				it doesn't seem to capture the nature of the system.			
Pacific	Austronesian (Central Pacific)	Fijian	No	most roots are grammatically intransitive with either P or A subjects, therefore transitivity is very common. Reduplication produces an AP effect, but applies to P intransitive roots, so not valency-altering. Omission of patient NP and obj marker causes the remaining argument to be interpreted as a patient.	NA	CDEF	Schütz 2014
Pacific	Austronesian (Central Philippine)	Tagalog	No	AV has an ng-marked patient which gets interpreted as indefinite/non-specific, like AP in some languages, and has frequently been argued as AP. However, based on frequency, AV does not have the distributional properties of AP, and is not considered AP here as it is part of a symmetrical voice system.	NA	(B)CEFGHI	Latrouite 2011
Pacific	Austronesian (Central Vanuatu)	Daakaka	No	transitive vs. semitransitive verbs, but transitive verbs are almost always morphologically complex, suggesting intransitive forms are more basic, even when the current forms are fossilized. Trans. indicates definite/specific patient; semitrans. indicates indefinite/nonspecific patient which can take certain modifiers or be omitted. semitransitives described as if they are a lexical class.	NA	EF	von Prince 2012
Pacific	Austronesian (Central Vanuatu)	Neverver	Yes	valency decrease signaled by reduplication. However, reduplication has a large number of other functions, including incorporated object, reflexive/reciprocal, stativization, iterative, habitual, diminutive, durative, inability, prohibition, non-individuated patient, negative condition.	Patientless	ACDEF	Barbour 2012
Pacific	Austronesian (Central Vanuatu)	Unua	No	the activity focus, agentive subject intransitive is basic, with transitive forms derived with -i.	NA	NA	Pearce 2015
Pacific	Austronesian (Chamic)	Eastern Cham	No	lost almost all morphology due to contact with SE Asian language groups	NA	NA	Thurgood 1999; author's notes

Pacific	Austronesian (Chamorro)	Chamorro	Yes (2)	discusses it as two constructions, 'demoting' and 'indefinite', but there is at least some crossover between the categories and they share a marker. It seems possible to unite them by saying that the obl marker is omitted when the patient is indefinite. Markers homophonous with pl. number agreement. Patientless use more common than presence of an oblique patient, but all forms are productive. AP structure visible on the verb and NPs. Different markers indicate realis vs. irrealis.	Oblique Patient Patientless	A(B)CDEFG (I)J	Cooreman 1988
Pacific	Austronesian (CMP)	Tetun (Dili)	No	only the causative is remotely productive; also has related periphrastic causative. Patients can be freely omitted. Reduplication is not detransitivizing.	NA	NA	Williams-van Klinken et al 2002; Heaton 2013 ms.
Pacific	Austronesian (East Formosan)	Amis	No	Wu describes it as ergative, but states that AV and PV are two basic voice forms, and AV nominals as having nom-dat case. Patient need not be indefinite. However, C and F argue against the erg analysis saying that lexical obl case is actually structural acc case.	NA	(B)CEGHI	Chen and Fukuda 2015; Wu 2006
Pacific	Austronesian (East Formosan)	Kavalan	No	Lin treats PV as abs/erg structure, and AV as abs/obl, while Chang and Tsai treat AV as nom/acc and PV as gen/nom. Obl/acc marker is tu. Not clear how grammatically linked the patient is.	NA	(B)CEGHI	Lin 2014; Liao2002; Chang and Tsai 2001
Pacific	Austronesian (Eastern Admiralty)	Paluai	Yes (1/2?)	detransitivization via reduplication. All examples accompanied by 'finish', but presumably that is not necessary. Also has extended intransitive constructions, one of which 'to know' might be considered AP: ma+pwa[i] +/-OBL with unproductive detransitivizing prefix.	Patientless	ACDEFI?	Schokkin 2014
Pacific	Austronesian (Barito)	Malagasy	No	AV/actor-topic voice is similar to antipassive, like other Ph.-type voice systems, although there is no case marking. Patient in this construction need not be indefinite/nonspecific.	NA	CEGHI	Keenan and Manorohanta 2001; Pearson 2005

Pacific	Austronesian (Minahasan)	Tondano	No	use of AV vs. PV correlates with definiteness/specificity/referentiality of the arguments. AV often used for the introduction of new discourse participants.	NA	NA	Brickell 2014
Pacific	Austronesian (New Caledonian)	Nyâlayu (Belep)	Yes	Productive patientless AP marked by -u for obvious or irrelevant patients of TVs. specificity of the object is marked on the verb root (-e). Many trans/intrans pairs which are unpredictable/lexical, but forms suggest transitivization. Also has DOM	Patientless	ACDEFGIJK	McCracken 2013
Pacific	Austronesian (New Caledonian)	Xârâcùù	No	Lost most of POC morphology. S=O and middle labile verbs. Conative alternation with verbs of consumption.	NA	NA	Moyse-Faurie 2015, 2016 (AP workshop)
Pacific	Austronesian (Kenyah)	Western Penan	No		NA	NA	Soriente 2010
Pacific	Austronesian (Northern Vanuatu)	Tamambo	Yes (2)	detransitivization via reduplication, which is the most common and productive function of reduplication in the language, although there are many other functions as well. Also has productive detransitivizing prefix vari- from the POC reciprocal for habitual actions. Very small number of ambivalent verbs.	Patientless	vari: ACDEFGIJK redup: ACDEFI	Jauncey 2011
Pacific	Austronesian (Nuclear Micronesian)	Pohnpeian	Yes	some number of roots have detransitivizing reduplication, but these forms are 'uncommon'. Transitivity is rigid, and most trans/intrans pairs appear to be equipollent, either due to vowel change or insertion/deletion of final segments where it is difficult to establish directionality. Reduplication more prototypically functions to create durative or ongoing action.	Patientless	ACD(E?)F	Rehg 1981
Pacific	Austronesian (Paiwan)	Paiwan	No	identifies AV construction as intransitive/antipassive since patient is OBL-marked and syntactically demoted. However, there is no corresponding less-marked transitive structure whence AV is derived, so not considered AP here.	NA	BCEGHI	Wu 2013; Jiang ms.
Pacific	Austronesian (Polynesian)	Hawaiian	No	2 'middle' constructions, derived and inherent, indicating low degree of affectedness of the patient. No marker.	NA	BDEFI	Otsuka 2011; Elbert and Pukui 1979

Pacific	Austronesian (Polynesian)	Maori	No	2 'middle' constructions, derived and inherent, indicating low degree of affectedness of the patient. No marker.	NA	BDEFI	Otsuka 2011; Ota 1999
Pacific	Austronesian (Polynesian)	Rapanui	No	2 'middle' constructions, derived and inherent, indicating low degree of affectedness of the patient. No marker. Some verbs are S=O ambitransitives, where non-expression of the agent yields an anticausative	NA	BDEFI	Otsuka 2011; Du Feu 1996
Pacific	Austronesian (Polynesian)	Samoan	No	class of 'middle' verbs [also called 'semi-transitive'], no mark.	NA	BD	Otsuka 2011; Mosel and Hovdhaugen 1992
Pacific	Austronesian (Polynesian)	Tongan	No	'middle' construction which has AP-like morphology, but several issues: trans. is marked (-i), middle verb is not; middle is a limited class; middle does not have AP pragmatic function	NA	BD	Otsuka 2011, forthcoming; Ball 2009
Pacific	Austronesian (Puyuma)	Puyuma	No	AV structure with patient labeled as obl, and that obl is optional. AV patient is indefinite (use PV to get definite interpretation), with a few exceptions. Reciprocal is indicated primarily by reduplication, which has many functions. However, C and F argue against the erg analysis saying that lexical obl case is actually structural acc case.	NA	(B)CEFGHI	Chen and Fukuda 2015; Teng 2007
Pacific	Austronesian (SHWNG)	Irarutu	Yes	/-fe/ morpheme which prohibits the expression of a transitive patient. Jackson suggests there are two post-verbal slots, one for objects and one for valency morphology. /-fe/ and /-i/ 'verbalizer' occupy valency slot, while /-i/ 3rd person object and /-nya/ 'non-specific patient', both of which can co-occur with an NP, take the second slot. So it is possible that /-fe/ is like Athabaskan 'indefinite object' marking', but it is treated here as voice in line with Jackson's analysis.	Patientless	ACDEFGJ	Jackson 2014, p.c. 2016
Pacific	Austronesian (South Sulawesi)	Embaloh	Yes(?)	marker possibly cognate with Makassarese, also attaches to dynamic intrans. But unlike Makassarese, the patient may be omitted, it need not be indefinite, and when expressed	Patientless Oblique Patient	A(B)CEF(I?)	Adelaar 1995

				there is sometimes an oblique marker. Need more information to make a better valuation.			
Pacific	Austronesian (South Sulawesi)	Makassarese	No	semi-transitive' construction, has a marker which can apply to a variety of word classes (transitives, intransitives, nouns(?)) to make an abs-only marked construction with a non-obl, indefinite patient which cannot be omitted. Cf. Nez Perce; somewhat akin to pseudo noun inc; interacts with the focus system but is not AV.	NA	CEFI	Jukes 2013
Pacific	Austronesian (Temotu)	Äiwoo	No	See Engdewu, but no mark. More like Mayan AF in that patient does not have to be indefinite/non-specific/generic, can be modified, and order is obligatorily A-initial. But also like symmetrical voice, since there is no syntactic pivot.	NA	DEFI	Næss 2013
Pacific	Austronesian (Temotu)	Engdewu	No(?)	intransitive S verb + marker + non-obl generic patient, although the language has OBL markers, so looks akin to Mayan 'inc. AP' BUT patient can be omitted if recoverable. Marked is not necessary for trans/intrans suppletive pairs. Argues it is likely the remnant of actor focus construction, and OVS is grammaticalization of patient focus. Either can be considered pass-as-erg plus AP counterpart, or symm. voice. Vaa suggests more work needs to be done to clarify this. Although the verb marking is not symmetrical, the lack of oblique patient marking has caused this not to be treated here as antipassive.	NA	C[D]EFGIJ	Vaa 2013
Pacific	Austronesian (Tsouic)	Saaroa	No	AV + na-marked obl patient. See Tagalog.	NA	BCEFGHI	Li 2009; Pan 2012
Pacific	Austronesian (Tsouic)	Tsou	No	based on frequency, AV does not have the distributional properties of AP. No valency construction is necessarily more basic. Both AV and PV are marked. Also has 'reference focus' (benefactive/instrument/locative etc. focus) and 'location focus'. Not every verb can occur in every focus form.	NA	ACDEFI	Chang 2011; Lin 2010

Pacific	Austronesian (Western Oceanic linkage)	Kove	No	has extended intransitives, intr + OBL obj. unproductive middle marker -i. reduplication indicates continuousness.	NA	NA	Sato 2013
Pacific	Austronesian (Western Oceanic linkage)	Roviana	No	Ross considers ta- 'passive' and -ni- 'antipassive', but more like pseudo-noun inc. because even though the subj is abs-marked, the patient cannot be omitted. verbal agreement is with the object.	NA	AEFGIJ	Shuelke p.c.
Pacific	Austronesian (Western Oceanic linkage)	Sinaugoro	Yes	via reduplication of the verb root. Loss of ERG marking.	Patientless	ACDEFI	Tauberschmidt 1999
Pacific	Awyu-Ok	Kombai	No	no real discussion of valency. Appears that objects are optional. Habitual expressed by reduplication, durative is expressed periphrastically. Switch-reference.	NA	NA	de Vries 1993
Pacific	Awyu-Ok	Korowai	No	no verbalizer/caus morpheme forms pairs with anticaus ('stative/resultative') -fo. Appears to freely allow object omission. Subj agreement; discourse dep marking. Switch reference	NA	DEFI	de Vries and van Enk 1997
Pacific	Awyu-Ok	Mian	No	most transitive verbs do not cross-reference the object, and can omit it when it is irrelevant. basically S=A ambitransitive, but patient remains recoverable. A few S=O ambitransitives. About 15 verbs require obj marking, either by obj. prefix or classificatory prefix. switch-reference.	NA	(D)EF	Fedden 2007
Pacific	Border	Waris	No	example cited in Foley and elsewhere as AP does not appear to be a true AP; mostly does not appear when patient is dative-marked, and also applies to intransitive roots. alternation between null and goal-marked inanimate patients [all animate are goal-marked] indicating +/- completely affected, but not intransitive.	NA	BEF	Brown 1981, 1990; Foley 1986
Pacific	Dani	Lower Grand Valley Dani	No	approximately 30 known S=O ambitransitive roots. DOM [animacy]. Reflexive voice is also self-benefactive and can take an object.	NA	NA	Bromley 1981

Pacific	Engan	Kewa (Kewapi)	No	Also has serial verbs and switch-reference.	NA	NA4	Yarapea 2006
Pacific	Inanwatan	Inanwatan	No(?)	has 'intransitivizing' prefix ide-, but only appears in two examples of phrasal verbs.	NA	NA	de Vries 2004
Pacific	Isolate	Kuot	No(?)	c.f. Nahuatl: has 'dummy obj' prefix in object slot that removes the patient, which makes it look inflectional, but also appears when the patient is in an oblique phrase, which suggests detransitivization. Reciprocal, reflexive, pluractional also occupy that spot.	NA	(B)CEFGIJ	Lindström 2002
Pacific	Isolate	Yéli Dnye	No(?)	verbs encode transitivity. Different, maybe related, trans and intrans forms for at least some verbs (see 'wash'), but no apparent morpheme, so perhaps equipollent. Some intransitive verbs take nom-dat case frame.	NA	DF	Henderson 1995; Levinson 2011
Pacific	Koiarian	Koiari	No		NA	NA	Dutton 1996
Pacific	Lower Sepik-Ramu	Yimas	No	alternation between A/O marked transitive and S marked intransitive + OBL, but no AP marker. Essentially the English conative in an ergative language; ambitransitive +/- obl; see Warrgamay. 'ambitransitive' verbs, but O marking [and A marking] is optional based on pragmatic/discourse factors. Argues this is zero-realization not a change in transitivity. No switch-reference.	NA	BDEF(I?)	Foley 1991
Pacific	Morehead-Wasur	Nen	No	language is sensitive to transitivity, but most marked valency operations are concerned with a middle-type construction and a transitive-type construction. ERG:OBL semi-transitive lexical frame.	NA	B	Evans 2015
Pacific	Ndu	Iatmul	No	no object cross-reference, and DOM for case, making most transitive verbs look like S=A ambitransitives. About 14 S=O ambitransitives. switch-reference.	NA	(D)EF	Jendraschek 2012
Pacific	North Halmahera	Ternate	No	reflexive appears to have some middle-like functions. Optional subject clitics.	NA	DEFI	Hayami-Allen 2001
Pacific	Nuclear Goroka	Yagaria (Hua)	No	has a number of S=O ambitransitive verbs, whose use can be disambiguated by case marking. Productive valency increase using an	NA	NA	Haiman 1980

				auxiliary construction. DOM sensitive to animacy.			
Pacific	Rai Coast	Tauya	No	S=O ambitransitives; DOM sensitive to animacy and switch-reference.	NA	NA	Macdonald 1990
Pacific	Sentani	Sentani	No(?)	affix -ko- called 'objective' which is translated with the logical object in parentheses, and can also be reciprocal. Insufficient information.	NA	CD?	Cowan 1965
Pacific	Simbu	Kuman	No	switch-reference.	NA	NA	Piau 1985; Pfantz 2007
Pacific	Sko	Skou	No	strict transitivity values for verbs, but little in the way of morphologically realized voice. Same effects achieved by other means, e.g. 'thing' obj. yields patientless meaning. Serial constructions and switch-reference.	NA	EFI	Donohue 2004
Pacific	Timbe-Selepet-Komba	Komba	No	trans/intrans differ only in presence/absence of the object marker. Repl, recip, and sometimes passive indicated by obj marking.	NA	DEFI	Southwell 1979
Pacific	Timor-Alor-Pantar	Abui	No	interesting way of encoding the relationship between arguments. All active/passive/antipassive/middle valency-type relations are coded by different sets of agreement markers indicating different levels of volitionality, definiteness, control, and affectedness. most verbs can appear with multiple marking patterns, making them sort of labile. no case or switch-reference.	NA	EF	Kratochvil 2007
Pacific	Timor-Alor-Pantar	Fataluku	Yes	2 known examples of Oceanic-like detransitivizing reduplication, 'cook' and 'speak', possibly also 'read'. Reduplication serves many other functions more productively. Possibly borrowed from Oceanic. Switch-reference.	Patientless	(A)CDF	Heston 2015
Pacific	Timor-Alor-Pantar	Makalero	No(?)	An excellent example of the transition of a causative-type marker/word 'do' into an AP. Whether this should be considered an AP at its current point is a matter of opinion (cf. Sansò 2016 called this AP). It occurs with both nouns and verbs of various types with causative-type meanings, as well as literal 'do/make' meanings (e.g. make a house), and	NA	CEF	Huber 2011

				with transitive verbs it means 'do clean(ing)' in general, and the expression of the patient is not permitted. However, Huber states syntactically there is no change in valency, and that this is a bound verb + verbal complement construction, so it has not been called AP here.		
Pacific	Timor-Alor-Pantar	Teiwa	No	some patientless meaning of the 'middle', but it is not morphologically marked in any way. Also has intransitive/comitative ambitransitives and DOM sensitive to animacy.	NA	DEF Klamer 2010

APPENDIX B. TYPOLOGICAL FEATURES OF THE LANGUAGES IN THE DATASET

The organization of the information here is the same as in Appendix A. This appendix provides typological information for the languages in the sample, which are discussed in Chapters 4-9, as well as a comparison with WALS (Polinsky 2013), which is discussed in Chapter 4. Some of the classificatory information is duplicated from Appendix A for clarity. See the excel file publicly available on my website (rainaeaton.com) for a layout where all the information in Appendices A-C is given in a single row for each language in the sample. Again, if you would like to contribute information on a language you research please contact me at heatonr@hawaii.edu.

Region	Genetic affiliation	Language	Ergative?	Type	Basic word order	Locus of marking	Other marked valency change?	Sources	WALS:
Africa	Afro-Asiatic (Berber)	Tuareg (Mali)	No	NA	VAO	Head	Passive, causative, mediopassive, reciprocal derivations/markers.	Heath 2005	NA
Africa	Afro-Asiatic (Chadic)	East Dangla	No	NA	AVO	Head		Shay 1999	NA
Africa	Afro-Asiatic (Chadic)	Goemai	No	NA	AVO	Neither	NA	Hellwig 2011	NA
Africa	Afro-Asiatic (Chadic)	Hausa	No	NA	AVO	Head [endo-centric]	causative pattern	Newman 2000	No
Africa	Afro-Asiatic (Chadic)	Lele	No	NA	AVO	Head [objects]		Frajzyngier 2001	NA
Africa	Afro-Asiatic (Chadic)	Mina	No	NA	AVO	Neither	reflexive/reciprocal	Frajzyngier 2005	NA
Africa	Afro-Asiatic (Chadic)	Sukur	No	NA	VOA	Neither [optional]	Passive, recip/refl constructions.	Thomas 2014	NA
Africa	Afro-Asiatic (Cushitic)	Beja	No	NA	AOV	Both	also passive; two middles	Vanhove 2016 (AP workshop)	No
Africa	Afro-Asiatic (Cushitic)	Iraqw	No	NA	AOV	Both	reflexive/reciprocal; instrumental; causative. Root	Mous 1993	No

							reduplicaiton to form habitual		
Africa	Afro-Asiatic (Cushitic)	Sidamo	No	NA	AOV	Both	Causative, double-causative.	Kawachi 2007	NA
Africa	Afro-Asiatic (Omotiic)	Haro	No [Nom/abs case marking]	NA	AOV	Both	reflexive, causative, passive	Wolde-mariam 2009, 2015	NA
Africa	Afro-Asiatic (Semitic)	Arabic (MSA)	No	NA	VAO/AVO	Both	passive, anticausative, causative, reflexive and reciprocal patterns.	Kász 2015	No (Egyptian)
Africa	Afro-Asiatic (Semitic)	Jibbali	No	NA	AVO (?)	Head	Roughly middle, reciprocal, reflexive, causative, passive templates. internal passive.	Rubin 2014	NA
Africa	Afro-Asiatic (Semitic)	Mäsqañ	No	NA	AOV (?)	Head	causative	Leslau 2004	NA
Africa	Central Sudanic	Kabba	No	NA	AVO	Head [DO pronoun suffixes]	NA [Passive sense is achieved by word order, causative via a grammaticalized caus word]	Moser 2004	NA
Africa	Central Sudanic	Logo	No	NA	AVO	Neither	NA [see Kabba]	Wright 1995	
Africa	Central Sudanic	Ma'di	No	NA	AVO/AOV	Head	passive/recip, refl, causative	Blackings and Fabb 2003	NA
Africa	Central Sudanic	Mamvu	No	NA	AVO	Head (?)	anticaus/middle; passive/reflexive; comitative/reciprocal	Vorbichler 1971	NA

Africa	Central Sudanic	Mbay	No	NA	AVO	Head	instrumental applicative ['venitive']	Keegan 1997	NA
Africa	Eastern Jebel	Gaahmg	Yes [but only in assertive obj focus pattern]	(Syntactic)	AVO	Both	2 passives, middle, causative	Stirtz 2011, 2014	NA
Africa	Isolate	Bangime	No	NA	AOV	Neither	transitivizers, causative, reflexive, efferential and afferential (not valency modifying), passive.	Hantgan 2013	NA
Africa	Isolate	Hadza	No	NA	VOA	Head	passive/reflexive; comitative	Sands 2013	NA
Africa	Isolate	Kunama	No	NA	AOV	Dependent	rmiddle, causative	Thompson 1989	NA
Africa	Isolate	Sandawe	No	NA	AOV	Head	2 middles, 2 causatives, factive, benefactive, comitative, applicative.	Steeman 2012	NA
Africa	Khoisan	!Xun (Taa)	No	NA	AVO	minor Head: number agreement with the object	passive, causative, transitive-a, recip, benefactive, comitative	Heine and König 2013	NA
Africa	Khoisan	Khoekhoe	No	NA	AOV	Dependent	applicative, reciprocal, reflexive, passive	Haacke 2013	No
Africa	Khoisan	Naro	No	NA	AOV	Neither	Caus, passive, reflexive (sometimes with intransitive)	Visser 2013	NA

							meaning, more passive-esque)		
Africa	Khoisan (Tuu)	N ng	No	NA	AVO	Neither	NA [causative, benefactive, directional serial verb valenc increasing constructions]	Ernszt et al. 2015	NA
Africa	Kuliak	Ik	No [split nom/acc]	NA	VAO	Dependent	2 passives, causative	König 2010	NA
Africa	Niger-Congo (Adamawa)	Dii	No	NA	AVO	Neither	has stative/passive, reciprocal [also dative construction, accompaniment construction. no causative.]	Bohnhoff 2010	NA
Africa	Niger-Congo (Bantu)	Chichewa	No	NA	AVO	Head	causative, benefactive applicative, instrumental applicative, passive, reciprocal, reflexive	Alsina 1993	No
Africa	Niger-Congo (Bantu)	Cilubà	No	NA	AVO	Head	reciprocal, applicative, causative,	Bostoen et al. 2015	NA
Africa	Niger-Congo (Bantu)	Fula	No	NA	AVO	Dependent	middle, passive	Sylla 1979	NA
Africa	Niger-Congo (Bantu)	Gikuyu	No	NA	AVO	Head	causative, reciprocal, passive	Mugane 1999	NA
Africa	Niger-Congo (Bantu)	Kinyamwezi	No	NA	AVO	Head	Also has two causative morphemes, two applicative morphemes, and two passive	Maganga and Schadeberg 1992	NA

							morphemes. Use is conditioned by phonological environment		
Africa	Niger-Congo (Bantu)	KinyaRwanda	No	NA	AVO	Head	applicative, 2 inst/caus, reciprocal, passive	Maslova 2007; Kimenyi 1980	NA
Africa	Niger-Congo (Bantu)	Kirundi	No	NA	AVO	Head	applicative, causative, reciprocal, reflexive, passive	Ndayiragije 2003, 2006	NA
Africa	Niger-Congo (Bantu)	Swahili	No	NA	AVO	Head	Also has passive, caus, appl, refl.	Seidl and Dimitriadis 2003	No
Africa	Niger-Congo (Bantu)	Tswana	No	NA	AVO	Head	Applicative, causative, reciprocal	Creissels and Nougier-Voisin 2008; Krüger 2013	NA
Africa	Niger-Congo (Bantu)	Wolof	No	NA	AVO	Head [endocentric]	middle; unproductive causative; 2 applicatives; no passive.	Creissels and Nougier-Voisin 2008	NA
Africa	Niger-Congo (Bantu)	Zulu	No	NA	AVO	Head	also has passive, causative, middle/inchoative, reflexive, applicative valency changing relations	Buell 2005	NA
Africa	Niger-Congo (Dogon)	Tiranige	No	NA	AOV	Both	internally experienced 'medio-passive'(/reflexive) only; productive causative. Trans also marked.	Heath 2014b	NA

Africa	Niger-Congo (Edoid)	Emai	No	NA	AVO	Dependent	NA [periphrastic valency-increasing operations. No passive.]	Schaefer and Egbokhare 2015	NA
Africa	Niger-Congo (Gur)	Konni	No	NA	AVO	Neither	NA	Cahill 2007	NA
Africa	Niger-Congo (Gur)	Lama	No	NA	AVO	Neither	unknown	Ourso 1989	NA
Africa	Niger-Congo (Heiban)	Otoro	No	NA	AVO	Dependent		Stevenson 2009	NA
Africa	Niger-Congo (Heiban)	Tira	No	NA	AVO	Dependent		Stevenson 2009	NA
Africa	Niger-Congo (Katla)	Tima	Yes [split, discourse prominence]	Morphological	AVO	Head	passive	Dimmendaal 2010	NA
Africa	Niger-Congo (Kwa)	Chumburung	No	NA	AVO	some Head?	NA?	Hansford 1990	NA
Africa	Niger-Congo (Kwa)	Logba	No	NA	AVO	Head	reflexive, reciprocal	Dorvlo 2008	NA
Africa	Niger-Congo (Mande)	Bambara	No	NA	AOV	Neither	also has caus, recip [passive is the default interpretation of detrans. verb; noun inc. does not affect valency.]	Crissels 2007	NA
Africa	Niger-Congo (Mande)	Bobo	No	NA	AOV	Neither	causative	Creissels 2012; Le Bris and Prost 1981	NA
Africa	Niger-Congo (Mande)	Boko, Busa	No	NA	AOV	Neither	NA	Jones 1998	NA
Africa	Niger-Congo (Mande)	Jenaama Bozo	No	NA	AOV?	Neither (?)	Causative	Lauschitzky 2007	
Africa	Niger-Congo (Mande)	Kpelle	Yes [split]	Morphological	AOV	Head	stative	Vydrin 2011	NA
Africa	Niger-Congo (Mande)	Looma (Liberian)	No [active]	NA	AOV	Head	NA [passive indicated by	Vydrin 2011; Sadler 2006	NA

							alternation in initial consonant]		
Africa	Niger-Congo (Mande)	Mandinka	No	NA	AOV	Neither	middle	Creissels 2012, 2015	NA
Africa	Niger-Congo (Mande)	Mende	No [active]	NA	AOV	Neither		Vydrin 2011; Creissels 2005; Innes 1962	NA
Africa	Niger-Congo (Mande)	Soninke	No	NA	AOV	Neither	causative	Creissels 2012, 2016 (AP workshop)	NA
Africa	Niger-Congo (Mande)	Yalunka	No	NA	AOV	Neither	NA [passive construction, no marker]	Lüpke 2005	NA
Africa	Niger-Congo (Senufo)	Supyire	No	NA	AOV	Neither	NA	Carlson 2016 (AP workshop)	No
Africa	Niger-Congo (Ubangi)	Mono	No	NA	AVO	Neither	passive	Kamanda-Kola 2003; Olson 2001	NA
Africa	Niger-Congo (Yoruboid)	Yoruba	No	NA	AVO	Neither	NA	Atoyebi 2015	No
Africa	Nilotic	Anywa	Yes [split, NP-initial vs. V-initial]	Morphological	AOV	Head	causative; benefactive	Reh 1996	NA
Africa	Nilotic	Burun	Yes (some)	Morphological (word order could be considered morphological or syntactic)	OVA	Head	passive'	Schröder 2006	NA
Africa	Nilotic	Dholuo	No	NA	AVO	Head		Schröder 2006	NA
Africa	Nilotic	Dinka Bor	No	NA	AVO/OVA	Head	'passive'	Schröder 2006	NA
Africa	Nilotic	Päri	Yes [split, clause type]	Morphological (Nilotic OVA has SV order,	OVA	Head	passive stem, causative stem, 3 benefactives	Andersen 1988	oblique patient

				which could be considered syntactic ergativity)					
Africa	Nilotic	Shilluk	Yes [split]	Morphological	OVA	Dependent		Miller and Gilley 2001	NA
Africa	Nilotic	Toposa	No (Passive only? Could be patient)	NA	VAO	Both [tonal distinctions for case]	passive, reflexive, causative	Schröder 2006	NA
Africa	Nilotic (Eastern)	Maa	No [nom/acc]	NA	VAO/VOA	Both [tonal distinctions for case]	middle, impersonal passive	Payne 2016 (AP workshop)	NA
Africa	Nubian	Dongolawi	No	NA	AOV	Both	Has personal and impersonal passive, causative, transitivizer, bene/malefactive, stative	Abdel-Hafiz 1988	NA
Africa	Nubian	Midob	No	NA	AOV	Dependent	Also reflexive, stative, causative, 2 applicatives, no passive.	Werner 1993	NA
Africa	Saharan	Beria	No [active]	NA	AOV	Head	reflexive/reciprocal; middle; causative; applicative	Jakobi and Crass 2004; Jakobi 2006	NA
Africa	Saharan	Central Kanuri	No	NA	AOV	Both	reflexive, causative, middle, applicative	Hutchison 1976	No
Africa	Songhay	Humburri Senni	No	NA	AOV (?)	Neither (?)	factive/caus/middle	Heath 2014a	NA
Africa	Songhay	Koyra Chiini	No	NA	AVO	Neither	factive/caus/middle	Heath 1998	NA
Africa	Songhay	Koyraboro Senni	No	NA	AOV	Neither	factive/caus/middle	Heath 1999	implicit patient; productive
Africa	Songhay	Zarma	No	NA	AOV	Neither	NA [No morphological	Sibomana 2008	NA

							voice morphology]		
Africa	Surmic	Chai	No	NA	AVO/AOV	Both (?)	possible passive morpheme(s)	Last and Lucassen 1998	NA
Africa	Surmic	Kwegu	No	NA	AVO	Neither		Hieda 1998	NA
Africa	Surmic	Majang	No	NA	VAO	Head	passive, middle	Unseth 1989	NA
Africa	Surmic	Me'en	No	NA	AVO	Head	passive/reciprocal/'habitual'	Will 1998	NA
Africa	Surmic	Murle	No	NA	VAO	Both	reciprocal, passive	Arensen 1982	No
Africa	Surmic	Tennet	No (traces)	NA	VAO	Both	passive	Schröder 2006	NA
Africa	Surmic	Tirmaga/Suri	No	NA	AVO	Head	passive	Bryant 1999	NA
Americas	Algonquian	Blackfoot	No [direct/inverse]	NA	Flexible	Head	caus, benefactive, accompaniment, refl, recip, noun inc.	Frantz 1978, 1991; Armoskaite 2011	NA
Americas	Algonquian	Ojibwe	No [direct/inverse]	NA	Flexible [VOA]	Head	2 passive morphemes, lexical middle, reflexive, reciprocal, noun inc. [external], applicative, 3 ausatives.	Valentine 1994; Rhodes and Valentine 2015	NA
Americas	Algonquian	Penobscot	No [direct/inverse]	NA	Flexible	Head	noun inc, caus, recip, refl, medioreflexive	Quinn 2006	NA
Americas	Algonquian	Plains Cree	No [direct/inverse]	NA	Flexible	Head	also passive, refl, recip, benefactive.	Wolvengrey 2011, Dahlstrom 1991	Implicit patient; productive
Americas	Araucanian/Isolate	Mapudungun	No [inverse]	NA	AVO	Head	benefactive, transitivizer, causative. Also passive and recip/refl, noun inc.	Zúñiga 2015; Smeets 2008	No

Americas	Arawakan	Guajiro/ Wayuu	No	NA	VAO	Head	causative; 5 passives	Zubiri Olza and Jusayú 2012	NA
Americas	Arawakan	Parecís	No [active]	NA	AOV [very flexible]	Head	middle, refl, recip; 2 caus.	Brandão 2014	NA
Americas	Arawakan	Piapoco	No [active]	NA	AVO	Head	middle voice, attaches to nominalized and intransitive verbs; causative.	Reinoso Galindo 2002	NA
Americas	Arawakan	Yine	No	NA	Free	Head	2 passives, 2 reflexives, reciprocal, 2 causatives, 2 applicatives, noun inc. [doesn't necessarily alter valency]	Hanson 2010	NA
Americas	Arawakan	Kulina	No [active]	NA	AOV	Head	Also has caus, appl, and recip	Dienst 2008, 2014	NA
Americas	Athabaskan- Eyak-Tlingit	Apache (San Carlos)	No	NA	AOV	Head	middle, causative	de Reuse 2006	NA
Americas	Athabaskan- Eyak-Tlingit	Eyak	No	NA	AOV	Head	middle, causative	Krauss 1965, 2015, Thompson 1989b, 1996	NA
Americas	Athabaskan- Eyak-Tlingit	Koyukon	No	NA	AOV	Head	middle, causative, noun inc.	Thompson 1989a	NA
Americas	Athabaskan- Eyak-Tlingit	Tanacross	No	NA	AOV	Head	middle, causative, noun inc.	Holton 2000	NA
Americas	Athabaskan- Eyak-Tlingit	Tlingit	No [primarily active]	NA	AOV	Head	No true passive, some noun inc.; middle voice is productive but not necessarily valency- decreasing.	Crippen 2012	NA

Americas	Athabaskan-Eyak-Tlingit	Tolowa	No	NA	AOV	Head	also causative (largely lexicalized)	Givón and Brommelyn 2000	NA
Americas	Aymaran	Aymara	No	NA	AOV	Head	5 valency-increasing derivations	Coler 2014	NA
Americas	Barbacoan	Awa-Pit	No	NA	AOV	Dependent	caus, 'auxilitative', unproductive transitivity suffix; 4 'valency-preserving' affixes. No passive.	Curnow 1997	No
Americas	Boran	Bora	No	NA	AOV	Both	causative, refl/passive, recip, noun inc.	Thiesen and Weber 2012, Seifart 2015	NA
Americas	Cariban	Akawaio	Yes [split, clause type]	Morphological	AOV	Head	causative; middle/refl/recip/AP	Gildea et al. 2016 (AP workshop)	NA
Americas	Cariban	Apalaí	Yes [split, clause type]	Morphological	OVA	Head	causative; middle/refl/recip/AP	Meira 2000	NA
Americas	Cariban	Hixkaryana	No (subj/obj portman-teau)	No	OVA	Head	several pseudopassive/middle; caus, benefactive, malefactive	Derbyshire 1985; Gildea et al. 2016 (AP workshop)	No
Americas	Cariban	Kari'ña (Carib)	Yes [split, clause type]	Morphological	AOV	Head	causative; middle/refl/recip/AP	Mosonyi 1982; Meira 2000; Courtz 2008; Gildea et al. 2016 (AP workshop)	NA
Americas	Cariban	Kuikúro	Yes [non-erg in 'de-ergative in	Morphological [nom-acc syntax: de-	OVA	Both		Franchetto 1990	NA

			interactive modes']	ergative generally needed to relativize, question, cleft OBJ]					
Americas	Cariban	Macushi	Yes [split, clause type]	Morphological	OVA	Head	causative; middle/refl/recip/AP	Carson 1982; Meira 2000	No
Americas	Cariban	Panare	Yes [split, clause type]	Morphological	OVA	Head	causative; middle/refl/recip/AP	Payne 1990; Meira 2000	NA
Americas	Cariban	Tiriyó	Yes [split, clause type]	Morphological	OVA	Head	causative; middle/refl/recip/AP	Meira 1999; 2000; Gildea et al. 2016 (AP workshop)	NA
Americas	Cariban	Wayana	Yes [split, clause type]	Morphological	OVA	Head	reflexive/middle; causative. Minimal noun inc.	Tavares 2005, Meira 2000	NA
Americas	Chibchan	Guatuso/ Maleku	Yes [1 and 3 free pronouns don't distinguish erg and abs]	Morphological	AOV	Head	middle; refl/recip	Quesada 2007; Constenla 1998	NA
Americas	Chibchan	Guaymí/ Ngäbe	Yes [split, aspect. But erg also used for agentive in transitives, so maybe more rightly active]	Morphological	AOV	Dependent	passive; 2 middles (?)	Quesada Pacheco 2008	NA
Americas	Chibchan	Kuna	No	NA	AOV	Neither	passive(s), causative, refl, recip.	Forster 2011, Llerena	NA

								Villalobos 1987	
Americas	Chibchan	Rama	No	NA	AOV	Neither [optional subj prefix]	al- unproductive passive, potentially middle prefix.	CIDCA 1990	No
Americas	Chinookan	Wasco- Wishram	Yes [acc/erg lexical split in the direct system; inverse is nom-dat]	Morphological	VOA	mostly head	Also caus, refl.	Silverstein 1972, 1976/ 1986	NA
Americas	Chumashan	Barbareño	No	NA	VOA	Head	2 appl morphemes.	Ono 1996	NA
Americas	Eskimo-Aleut	Central Alaskan Yup'ik	Yes [reflexive pronouns don't distinguish erg and abs]	Morphological Syntactic [coordination, RCs]	Free	Both	causative, 3 applicatives, adversative, necessitative; pseudo-passive, stative	Mithun 2000; Miyaoka 2015	Oblique patient; productive
Americas	Eskimo-Aleut	Inupiaq	Yes [nonpos. pl NPs lack erg marking]	Morphological	AOV/AVO	Both	passive (no significant role in the grammar), naq 'should/can be Xed', resultative, refl, recip, 4 causatives	Nagai 2006, Lanz 2010	NA
Americas	Eskimo-Aleut	Western Greenlandic	Yes [plural 'who' and 'what' lack erg case]	Morphological Syntactic [RCs]	AOV	Both	detransitivizing noun inc., refl, passive	Bittner 1987; Johns 2006; Basilico 2012;	Oblique patient; productive
Americas	Guaicuruan	Mocoví	No [mixed: 1/2 persons nom/acc, 3rd person tripartite]	NA	AOV	Head	3 causatives	Juárez and Álvarez- González 2016 (AP workshop)	NA
Americas	Guaicuruan	Pilagá	No [active]	NA	AVO	Head	Transitivizer, 4 applicatives,	Vidal 2001	NA

							reflexive, reciprocal.		
Americas	Harákmbut- Katukinan	Katukina	Yes	Morphological Syntactic	AVO	Both	noun inc; applicative;	Queixalós 2010	NA
Americas	Iroquoian	Cherokee (Oklahoma)	No [active]	NA	AOV	Head	Also middle, refl, recip, and obj focus decreasing, caus and appl increasing.	Montgomer y-Anderson 2008	NA
Americas	Iroquoian	Mohawk	No [active]	NA	Flexible	Head	[middle], refl, recip, caus, and appl; noun inc.	Hopkins 1988, Mithun 2006, 2016 (AP workshop)	NA
Americas	Isolate	Chitimacha	No [active]	NA	AOV	Head	transitivizer -t, causative, reflexive/reciprocal preverb [no passive]	Hieber to appear, Hieber p.c. 2015	NA
Americas	Isolate	Haida	No [active]	NA	AOV	Dependent	middle; causative	Enrico 2003	NA
Americas	Isolate	Huave	No [active]	NA	VOA/AVO	Head	causative, reflexive/reciprocal/self- benefactive; 2 unproductive passives, 2 equipotent passive patterns, 1 productive passive combining passive infix with plural marker	Kim 2008	NA
Americas	Isolate	Kanoê	No	NA	AOV	Head	noun, classifier, and verb inc.; -to transitivizer, no passive, reflexive/middle,	Bacelar 2004	NA

							caus constructions		
Americas	Isolate?	Kwaza	No	NA	AOV/AVO	Head	5 transitivizers, causative, benefactive, detrimental, comitative; valency decreasing: reflexive/middle, reciprocal, no passive.	van der Voort 2004	NA
Americas	Isolate	Movima	Yes [direct=erg, inverse=Acc]	Morphological Syntactic	VAO	Head	middle; noun inc.; caus; refl/recip	Haude 2012	NA
Americas	Isolate?	Puinave	Yes [split, case/agr]	Morphological	Free	Both	causative, object inc, middle, reciprocal	Girón Higuita 2008	NA
Americas	Isolate	Purepecha (Tarascan)	No	NA	AVO	Both	causative, middle/refl, 2 appl, recip, passive	Capistrán 2015; Chamoreau 2008; 2015	NA
Americas	Isolate	Seri	No	NA	AOV	Head	passive, causative	Marlett 1981	NA
Americas	Isolate	Takelma	No	NA	AOV	Head	noun inc, passive, caus, refl, recip, instrumental applic, comitative applic, and 2 other applicative affixes.	Kendall 1977; Sapir and Golla 1990	NA
Americas	Isolate	Tonkawa	No [active]	NA	AOV/AVO	Head	2 caus, refl (he-marker sometimes also participates in 'mediopassive')	Hoijer 1933	NA

							construction), recip.		
Americas	Isolate	Trumai	Yes [split; erg/abs vs. nom/dat]	Morphological Syntactic [RC +- relativizer; maybe in raising?]	AOV	Dependent		Guiardello- Damian 2010; Becquelin and Becquey 2012	NA
Americas	Isolate	Tunica	No [active]	NA	AOV	Head	No passive or middle; productive caus.	Haas 1940	NA
Americas	Isolate	Warao	No	NA	OAV	Head	Refl/recip, caus. [Pass and other valency increasing lack verbal morphology]	Romero- Figueroa 1997	No
Americas	Isolate	Washo	No	NA	AOV	Head	Also reflexive, causative, lexical affixes, some of which are intransitivizing (body parts), like noun inc.	Jacobsen 1964	NA
Americas	Isolate	Yuchi	No [active]	NA	AOV	Head	Lexicalized valency- increasing prefix *yo-, also accompaniment appl., refl, recip (valency decreasing).	Linn 2000	NA
Americas	Isolate	Zuni	Yes [erg agreement, nom/acc NP marking]	Morphological Syntactic? "If an argument bears -ya', it can undergo movement to the front of the clause. Bare	AOV	Both	noun inc, refl, caus, directive, passive.	Nichols 1997	NA

				arguments normally cannot undergo such movement" (21)					
Americas	Jê	Apinajé	Yes [subord. clauses only; active]	Morphological	AOV	some head	reflexive; anticaus; middle; caus	Cunha de Oliveira 2005	NA
Americas	Jê	Krahô	Yes [split]	Morphological	AOV	Head	middle	Maxwell Gomez 2014	NA
Americas	Jê	Timbira (Kanela)	Yes [split; primarily active, but acc w/ post-verbal TAM and erg in the simple past]	Morphological	AOV	Dependent	reflexive; reciprocal; middle	de Castro Alves 2004	NA
Americas	Jê	Xavánte	Yes [split]	Morphological	AOV	Head	middle, noun inc.	Machado Estevam 2011; Costa de Oliveira 2007	NA
Americas	Kariri	Dzubukua	Yes [split]	Morphological	VOA/VAO	Dependent	refl, caus, noun inc	de Queiroz 2012	NA
Americas	Mascoyan	Sanapaná	No ['inverse']	NA	AVO	Head	reflexive, causative, noun inc.	Silva Gomez 2013	NA
Americas	Matacoan	Nivaclé	No [active]	NA	VAO [very free]	Head	also refl/recip, no passive, caus and 2 applicative derivations	Campbell et al. in prep, Fabre 2014; Vidal and Payne 2016 (AP workshop)	NA
Americas	Mayan	Akateko	Yes	Morphological Syntactic [at least FOC and WH]	VAO	Head	2 passives	Zavala 1997	NA

Americas	Mayan	Ch'ol	Yes [split, but also sometimes analyzed as active]	Morphological	VOA	Head	passive, causative, applicative	Coon 2013; Vázquez Álvarez 2011	NA
Americas	Mayan	Ch'orti'	Yes [split]	Morphological Syntactic? [Sterniolo p. 28 yes, but trans. RC/WH examples in PM. If so voice doesn't serve this function]	AVO	Head	also passive, mediopassive, instrumental, causative	Perez Martinez 1994; Quizar 1994; Storniolo 2008	NA
Americas	Mayan	Chuj	Yes [split]	Morphological Syntactic [appears mandatory for WH, FOC, REL except when both arguments are 1st or 2nd, or both are 3rd]	VOA	Head	3 passives, caus, inst. Appl.	Buenrostro 2002, Hou 2013	NA
Americas	Mayan	Huastec	Yes	Morphological Syntactic [RC only]	AVO	Head	passive, causative, reciprocal (length), middle	Edmonson 1988; Robertson 1993; Kondic 2016	NA
Americas	Mayan	Itzaj	Yes [split]	Morphological	VOA/AVO	Head	causative, passive, agentless passive, middle, celerative	Hofling 2000	NA
Americas	Mayan	Ixil	Yes [split]	Morphological Syntactic [wh mandatory, RC optional]	VAO	Head	passive, instrumental appl	Ayre s 1983	NA

Americas	Mayan	Jakalteko/ Popti'	Yes	Morphological Syntactic	VAO	Head	2 passives	Craig 1979, Ordóñez 1995, Grinevald and Peake 2012	implicit patient; productive
Americas	Mayan	K'ichee'	Yes	Morphological Syntactic [optional]	VOA	Head	causative, 2 passives, inst. Appl.	Mondloch 1981; Davies and Sam -Colop 1990	NA
Americas	Mayan	Kaqchikel	Yes	Morphological Syntactic [wh mandatory, RC FOC optional]	VOA [AVO]	Head	causative, 2 passives [+ki passive in Patzicía], unproductive inst. Appl.	Matzar and Guaján 1997	Implicit patient; author's fieldwork
Americas	Mayan	Mam	Yes [some non-erg with focused adverbials and some subordinate construction s like other Mayan langs]	Morphological Syntactic [wh mandatory, RC non-neg FOC optional]	VAO	Head	3 unproductive causatives, processive transitivizer, 4 passives	England 1983	Oblique patient; productive
Americas	Mayan	Mocho'	Yes [split, 3rd person only]	Morphological	VOA	Head	passive, causative	Palosaari 2011	NA
Americas	Mayan	Mopan	No [active. aspect plays minor role ("mutatives"), unlike other Yucatecan languages]	NA	VOA	Head	3 transitivizers, passive	Danziger 1996	NA
Americas	Mayan	Q'anjob'al	Yes	Morphological Syntactic	VAO	Head	passive	Mateo Toledo 2008	NA

Americas	Mayan	Q'eqchi'	Yes	Morphological Syntactic [WH, FOC, RC All appear mandatory]	VOA	Head	causative, passive(s)	Berinstein 1985; Tzul and Tzimaj Cacao 1997	NA
Americas	Mayan	Sakapulteko	Yes	Morphological Syntactic [optional]	VOA	Head	causative, 2 passives, inst. Appl.	DuBois 1981	NA
Americas	Mayan	Sipakapense	Yes	Morphological Syntactic [wh mandatory, RC optional]	VAO	Head	causative, 2 passives, inst. Appl.	Barrett 1999	NA
Americas	Mayan	Tojolabal	Yes	Morphological	VOA/AVO	Head	middle; passive; transitivizer, caus.	Furbee-Losee 1976, Grinevald and Peake 2012	NA
Americas	Mayan	Tzeltal	Yes [raising is optional as in K'ichean]	Morphological	VOA	Head	1 morphological, val. Decreasing passive [other periphrastic passives that are formally transitive], 'passive-anticausative' [middle-esque], caus, refl/recip.	Vapnarsky et al 2012, Polian 2013	NA
Americas	Mayan	Tsotsil	Yes [see Tzeltal?]	Morphological Syntactic [optional]	VOA	Head	benefactive applicative, passive, mediopassive, causative	Aissen 1987, 1999, Haviland 1981	NA
Americas	Mayan	Tz'utujil	Yes	Morphological Syntactic [wh mandatory, RC frequent but likely optional]	VOA	Head	causative, 2 passives, inst. Appl.	Dayley 1985	Oblique patient; productive

Americas	Mayan	Uspanteko	Yes	Morphological Syntactic [RC anf FOC optional]	AVO/VOA	Head	causative, 2 passives, inst. Appl. (?)	Tuyuc Sucuc 2001	NA
Americas	Mayan	Yucatec	Yes [split]	Morphological Syntactic [clefts only]	VOA	Head	causative, transitivizer t, passive, 'deagentive', noun inc.	Bricker 1978; Tonhauser 2007; Gutierrez-Bravo and Monforte 2011; Lehmann 2015	NA
Americas	Misumalpan	Miskito	No	NA	AOV	Head	-w- marks passive-like functions (O-->S) and ai- marks reflexive/reciprocal	Salamanca 1988	NA
Americas	Miwok-Costanoan	Mutsun	No [active]	NA	AVO	Head	middle, reflexive, 3 caus, benefactive, recip, and 3 passives.	Okrand 1977	NA
Americas	Mixe-Zoquean	Mixe (Ayutla)	Yes [historically more so; inverse/agr hierarchy; mixed, with some persons exhibiting erg. minimal]	Morphological	Flexible	Head	middle/reflexive/reciprocal, 2 caus (one also creates a passive), noun inc	Romero-Méndez 2009	NA
Americas	Mixe-Zoquean	Sierra Popoluca	Yes [split, sub.	Morphological	VOA/VAO	Head	valency decreasing: passive, type I	de Jong Boudreault 2009	NA

			Inverse/agr hierarchy]				noun inc, refl/recip. Increasing: 2 causatives, 3 applicatives.		
Americas	Muran	Pirahã	No	NA	AOV	Neither	NA	Everett 1986	No
Americas	Muskogean	Choctaw	No [active]	NA	AOV	Head	Also caus, appl, refl, recip derivations.	Broadwell 2006	Oblique patient
Americas	Nadahup	Hup	No	NA	AOV	largely Dependent	applic, caus, factive increasing.	Epps 2008	NA
Americas	Nambikwaran	Sabanê	No [active]	NA	AOV	Dependent		Antunes de Araujo 2004	NA
Americas	Oto-Manguean	Chatino (Zenzontepec)	No	NA	VAO	Head	causative, applicative, limited instrumental inc.	Campbell 2015	
Americas	Oto-Manguean	Ixcatec	No [nom/acc]	NA	AVO [VS]	Both	applicative, comitative, causative	Adamou 2014	NA
Americas	Oto-Manguean	Mixtec (Chalcatongo)	No	NA	VAO	Head	Causative, lexical transitive (chV-), No passive.	MacCaulay 1996	No
Americas	Oto-Manguean	Otomí (Queretaro)	No [active]	NA	VOA	Head	type 1 noun inc., causative, middle	Palancar 2009, 2006	No
Americas	Oto-Manguean	Zapotec (Coatlán-Loxicha)	No	NA	VAO	Head	NA	Beam de Azcona 2004	NA
Americas	Palaihnihan	Achumawi	No	NA	AVO	primarily Head	Has causative, benefactive, refl, recip, and 'medio-passive-continuative' (more like unaccusative).	de Angulo and Freeland 1931	NA
Americas	Pano-Tacanan	Cavineña	Yes [often called split, but see	Morphological	Free	Dependent	passive, refl/recip, noun inc.; causative	Guillaume 2006, 2008	NA

			Guillaume 2006]						
Americas	Pano-Tacanan	Dēmushbo	Yes	Morphological	Free	mainly Dependent	refl/anticaus/pass, recip, appl, caus.	Fleck 2010	NA
Americas	Pano-Tacanan	Korubo	Yes	Morphological	Free	mainly Dependent	refl/anticaus/pass, recip, appl, caus.	Fleck 2010	NA
Americas	Pano-Tacanan	Kulina	Yes	Morphological	Free	mainly Dependent	refl/anticaus/pass, recip, appl, caus.	Fleck 2010	NA
Americas	Pano-Tacanan	Matis	Yes	Morphological	Free	mainly Dependent	refl/anticaus/pass, recip, appl, caus.	Fleck 2010	NA
Americas	Pano-Tacanan	Matses	Yes [3 pronouns don't vary for erg case]	Morphological	Free	mainly Dependent	refl/anticaus/pass, recip, appl, caus.	Fleck 2006	NA
Americas	Pano-Tacanan	Shipibo-Konibo	Yes [erg case, mostly tripartite agreement]	Morphological Syntactic (RC)	AOV	Both	causative, 3 applicatives; middle, reciprocal. No passive	Valenzuela 2003	No
Americas	Peba-Yaguan	Yagua	No [active]	NA	VAO	Head	Caus, anti-caus, refl/recip morpheme, no passive, some noun inc.	Payne 1985	No
Americas	Pomoan	Southern Pomo	No [active and nom/acc]	NA	AOV	Dependent	'defocus' (passive-like), refl, recip, caus	Walker 2013	No
Americas	Quechuan	Quechua I (Huallaga)	No	NA	AOV	Both	indef obj inc, passive, recip, refl valency decreasing. Caus, benefactive increasing.	Weber 1989	No
Americas	Quechuan	Quechua II (San Martín)	No	NA	AOV	Both	indef obj inc, passive, recip, refl valency	Howkins 1977	No

							decreasing. Caus, benefactive increasing.		
Americas	Sahaptian	Nez Perce	Yes ["3-way ergative": minimally erg on NPs (3rd person only), close to split erg agreement, nom/acc verbal number marking]	Morphological	Flexible	Both	passive, refl, applicative	Rude 1988; Deal 2010	Oblique patient
Americas	Saliban	Mako	No	NA	AOV	some of both	middle -aw and reciprocal valency-decreasing	Rosés Labrada 2015	NA
Americas	Salishan	Bella Coola	Minimal [only 3rd person in main clauses]	morphological	VAO	Head	Also detrans via body part lexical suffixes, Refl. Causative, applicative	Beck 2000; Davis and Saunders 1997; Kroeber 1999	NA
Americas	Salishan	Halkomelem	Minimal [only 3rd person in main clauses]	Morphological Syntactic [possessor extraction, 'all' quantification. Unerg can be involved, and other valency operations]	VAO	Head	2 benefactive appls, caus, transitive -t, middle, refl, recip, passive.	Gerds 1982, Gerds and Hukari 2005; Galloway 1993; Wiltschko 2006	Oblique patient; productive
Americas	Salishan	Kalispel	Yes [erg case only, but for all persons]	Morphological	VAO	Head	Reflexive, reciprocal, noun inc, detransitivization via lexical suffixes (also in	Thomason and Everett 1993; Kroeber 1999	NA

							other S langs; often considered instances of noun inc).		
Americas	Salishan	Lillooet	Minimal [only 3rd person in main clauses]	Morphological Syntactic [RCs, but no extraction restriction, does not involve voice; differential treatment of A vs. S/O]	VAO	Head	also recip, refl, passive. 4 transitivizers.	van Eijk 1997; Kroeber 1999; Roberts 1999	NA
Americas	Salishan	Okanagan	Yes [erg case only, but for all persons]	morphological	VAO	Head	also refl, recip, 4 transitive/ditransi tive suffixes, and dertansitivization via lexical suffixes.	Dilts 2006; Barthmaier 2002; Mattina 1982; Kroeber 1999	NA
Americas	Salishan	Squamish	Minimal [only 3rd person in main clauses]	Morphological [unknown; possibly in the same way as Lillooet]	VAO	Head	passive, reflexive, reciprocal, at least 3 transitivizers, body part inc	Jacobs 1994; Darnell 1997; Kroeber 1999	NA
Americas	Salishan	Thompson	Minimal [only 3rd person in main clauses]	Morphological	VAO/VOA	Head	recip, refl, caus, appl	Thompson and Thompson 1992; Kroeber 1999	Implicit patient; partially productive
Americas	Salishan	Tillamook	Minimal [only 3rd person in main clauses]	Morphological	VAO	Head	3 applicatives	Kroeber 1999	NA

Americas	Salishan	Upper Chehalis	Minimal [only 3rd person in main clauses]	Morphological	VAO	Head	Also recip, refl (2), and middle, 3 appl	Kinkade 1963; Kroeber 1999	NA
Americas	Siouan	Hidatsa	Yes [erg case marking, but active agreement]	Morphological	AOV	Both	Also 2refl, recip, limited noun inc, class of middle verbs, caus [direct and indirect]. No morphological passive.	Park 2012	NA
Americas	Siouan	Hocak	No [active]	NA	AOV	Head	4 applicatives, resultative, facilitative (rare)	Hartmann 2015	NA
Americas	Siouan	Osage	No [active]	NA	AOV	Head	causative, 3 applicatives	Quintero 2004	NA
Americas	Tequistlatecan	Lowland Chontal	No [active]	NA	VAO/VOA	Head	caus, benefactive, appl, loc, comitative, goal, transitivizer, 2 middles?	O'Connor 2007	NA
Americas	Totonacan	Tepehua (Huehuetla)	No [active. 3rd person sometimes shows erg pattern]	NA	Flexible; tend toward VAO	Head	valency decreasing: refl, recip. Increasing: caus, appl, benefactive, inst, comitative, body part inc.	Kung 2007	NA
Americas	Totonacan	Totonac (Misantla)	No	NA	Flexible	Head	caus, comitative, loc, appl, inchoative, inst, transitivizer. Also body part inc.	MacKay 1999	NA
Americas	Tsimshianic	Coast Tsimshian	Yes [split; mood, tense/aspect, relative	Morphological Syntactic [but NOT in terms of extraction	VAO	Both	non-productive obj. inc., no passive, 2 refls, caus, benefactive.	Mulder 1994	NA

			semantics. Related to transitivity]	restrictions: RC and topic markers]					
Americas	Tucanoan	Desano	No	NA	AOV	Both	noun inc.	Silva 2012	NA
Americas	Tucanoan	Siona	No	NA	AOV	Both	Caus and transitivizer valency inc. derivations; possible middle	Bruil 2014	NA
Americas	Tucanoan	Wanano	No	NA	AOV	Both	reciprocal; benefactive; noun inc.	Stenzel 2013	NA
Americas	Tupían	Akuntsú	Yes [described as erg, although not clear if just hierarchical agr, lacking agr for inanimate arguments]	Morphological	AOV	Dependent [clitics]	refl/recip, caus, and middle	Aragon 2015, p.c. 2015	NA
Americas	Tupían	Guaraní	No [active]	NA	AVO	Head	middle voice, also caus.	Velázquez Castillo 2008; Jensen 1990	No
Americas	Tupían	Karo	Yes [erg unmarked; only 1 set of agr markers]	Morphological Syntactic (focus, yes/no questions. BUT not based on restrictions or voice)	AOV	Head	2 caus, refl, recip, impersonal pass, and optative voice operations.	Gabas 1999	NA
Americas	Tupían	Kayabí	No	NA	AOV	Head	2 caus, comitative, refl, recip.	Dobson 2005	NA
Americas	Uto-Aztecan	Comanche	No	NA	AOV	Both	benefactive/causa tive, reflexive/recipro cal, various	Charney 1993	NA

							instrumental prefixes, noun inc.		
Americas	Uto-Aztecan	Cora	No	NA	VAO	Head	passive, 4refl/recip prefixes, inst/body part inc.,	Casad 1984	NA
Americas	Uto-Aztecan	Hopi	No	NA	AOV	mostly Dependent	obj inc, appl, transitivizer	Jeanne 1978, Hill 2003	NA
Americas	Uto-Aztecan	Nahuatl	No	NA	VAO/AVO	Head	noun inc, caus, appl	Peralta Ramírez 2003, Flores Nájera 2009	NA
Americas	Uto-Aztecan	Northern Paiute	No	NA	AOV	Dependent	middle, applicative	Thornes 2003	NA
Americas	Uto-Aztecan	Ute	No	NA	AOV	mostly Dependent	passive, noun inc, caus	Givón 2011	NA
Americas	Uto-Aztecan	Yaqui	No	NA	AOV	Dependent	passive, resultative, inchoative, 2 causatives, applicative, directive, desiderative.	Estrada- Fernández et al. 2015	No
Americas	Wintuan	Wintu	No	NA	very flexible	Both	refl, recip, passive, caus, benefactive, comitative (2), special suffix 'to/for me'.	Piktin 1984	NA
Americas	Yanomaman	Sanumá	Yes [erg case marking]	Morphological	AOV	mostly Dependent	2 reflexives, reciprocal, 2 passive-like constructions, causative.	Borgman 1990	Oblique patient
Americas	Yokutsan	Yokuts (Yowlumne)	No	NA	VAO [rather free]	Dependent	passive, middle, refl/recip, caus, 2 applic.	Weigel 2005	NA

Americas	Yukian/ Isolate	Wappo	No	NA	AOV	Dependent	2 caus, passive.	Thompson et al. 2006	NA
Americas	Zaparoan	Iquito	No	NA	AVO	Neither	causative and middle. Little noun inc.	Lai 2009	NA
Asia	Andamanese	Great Andamanese (koine)	Yes [erg optional; abs marked, but omissible when object is non- specific; pronouns not marked for S or A]	Morphological	AOV	Both	caus, recip/refl, appl, noun inc.	Abbi 2013	NA
Asia	Austroasiatic (Aslian)	Semelai	No	NA	AVO	some of Both	middle, caus, applicative derivations.	Kruspe 2004	NA
Asia	Austroasiatic (Bahnaric)	Sre	No	NA	AVO	Neither	passive, 2 caus, transitivizer for stative verbs.	Olsen 2014	NA
Asia	Austroasiatic (Khasian)	Pnar	No	NA	VAO	Neither	caus, pluractional (val. Increasing), noun inc, passive.	Ring 2015	NA
Asia	Austroasiatic (Munda)	Ho	No	NA	AOV	Mostly Head	reciprocal, middle, reflexive	Pucilowski 2013	NA
Asia	Austroasiatic (Nicobaric)	Car Nicobarese	No	NA	VOA	Neither	passive, reflexive, causative, reciprocal	Braine 1970	NA
Asia	Austroasiatic (Vietic)	Vietnamese	No	NA	AVO	Neither	passive	Thompson 1987	No
Asia	Chukotko- Kamchatkan	Chukchi	Yes [split case/agr]	Morphological Syntactic [RCs]	AOV	Both	anticausative, reflexive, noun inc.	Kozinsky et al. 1988; Polinsky and Nedjalkov 1987	Oblique patient; productive

Asia	Chukotko-Kamchatkan	Itelmen	No ("subject vs. object")	NA	AOV	Both	reciprocal, 2 productive causatives.	Fortescue 2003, Bobaljik and Wurmbrand 2002; Georg and Volodin 1999	NA
Asia	Dravidian	Brahui	No	NA	AOV	mainly Dependent	separate passive suffix, caus.	Andronov 2001	No
Asia	Dravidian	Duruwa/Parji	No	NA	AOV	mainly Dependent	causative	Burrow and Bhattacharya 1953	NA
Asia	Dravidian	Kannada	No	NA	AOV	mainly Dependent	/(i)su/ caus transitivity; refl/anticaus	Sridhar 1990	No
Asia	Dravidian	Koraga	No	NA	AOV	mainly Dependent	6 val. Inc. morphemes, 5 intrans-->trans, 1 caus, also reflexive.	Šetti 2008	NA
Asia	Dravidian	Maria	No	NA	AOV	mainly Dependent	additional productive causative.	Natarajan 1985	NA
Asia	Dravidian	Tamil	No	NA	AOV	mainly Dependent	[causative], other valency operations accomplished by auxiliaries	Krishnamurti 1997a, 2003	No
Asia	Dravidian	Telugu	No	NA	AOV	mainly Dependent	causative	Krishnamurti and Gwynn 1985; Kissonck 1995	NA
Asia	Hmong-Mien	lu Mien	No	NA	AVO	Neither	NA [all trans verbs can omit the agent and topicalize the patient to produce a	Court 1985	NA

							passive-like construction.]		
Asia	Isolate	Ainu	No [mixed]	NA	AOV	Head	3 appl, 5 caus, refl, recip, 2 anticaus, and noun inc.	Refsing 1986; Bugaeva 2010, 2015	No
Asia	Isolate	Burushaski	Yes [split case/agr]	Morphological	AOV	Both	causative	Yoshioka 2012; Munshi 2006	No
Asia	Isolate	Nihali	No	NA	AOV	Dependent	2 transitivizing suffixes	Nagaraja 2014	NA
Asia	Isolate	Nivkh	No	NA	AOV	Head	noun inc and body part inc.	Mattissen 2003	No
Asia	Japonic	Japanese	No	NA	AOV	Dependent	caus, pass, recip.	Iwasaki 2013; Kishimoto et al. 2015	No
Asia	Japonic	Miyako (Tamara)	No	NA	AOV	Dependent	passive and causative only. Middle?	Aoi 2015	NA
Asia	Japonic	Yonaguni (Dunan)	No	NA	AOV	Dependent	caus, passive/malefactive, benefactive, reflexive	Yamada et al. 2015	NA
Asia	Koreanic	Korean	No	NA	AOV	Dependent	caus, passive	Yeon 2001	No
Asia	Mongolic	Monguor	No	NA	AOV	Dependent	Causative	Slater 2003	NA
Asia	Sinitic	Mandarin	No	NA	AVO	Neither	bei passive and middle.	Lu et al. 2015	No
Asia	Sinitic	Xiang	No	NA	AVO	Neither	passive like Mandarin, but markers grammaticalized differently.	Wu 2005	NA
Asia	Tai-Kadai	Lao	No	NA	AVO	Neither	NA [No morphologically coded valency alternations.]	Enfield 2007	NA
Asia	Tai-Kadai	Sanjiang Kam	No	NA	AVO	Neither	NA [Periphrastic passive, as well	Wu 2015	No

							as passive interpretation by object topicalization.]		
Asia	Tai-Kadai	Zoulei (Gelao)	No	NA	AVO	Neither	NA [Periphrastic caus, refl, and adversity passive constructions]	Li et al. 2014	NA
Asia	Tibeto-Burman (Bodic)	Bunan	Yes [pragmatic. optional 'erg'; no dominant alignment]	Pragmatic	AOV	mainly Dependent	recip/pass/anticaus, middle, stative	Widmer 2014	NA
Asia	Tibeto-Burman (Bodic)	Kurtöp	Yes [pragmatic/'optional'. Described also as active, but really no dominant alignment]	Pragmatic	AOV	Dependent	Few examples of lexicalized caus.	Hyslop 2010	NA
Asia	Tibeto-Burman (Brahmaputran)	Atong	No [A can be gen-marked in RCs and action nominalizations, but it's optional]	NA	AOV	Dependent	causative; reciprocal; 2 types of noun inc [transitivity decrease]	van Breugel 2014	NA
Asia	Tibeto-Burman (Burmish)	Zaiwa	No [optional 'agentive/inst' marker related to 'pragmatic erg']	NA	AOV	Dependent	passive can be indicated by different aspectivizers.	Lustig 2010	NA
Asia	Tibeto-Burman (Dhimal)	Dhimal	No [nom/acc case; only	NA	AOV	Head [non-core case marking;	middle, passive, caus.	King 2008	NA

			obl case marking]			subject agreement.]			
Asia	Tibeto-Burman (Karenic)	Eastern Kayah	No [pragmatic effects on order]	NA	AVO	Neither	NA [Valency increase done via separate items.]	Solnit 1997	NA
Asia	Tibeto-Burman (Kiranti)	Athpare	Yes [split. No erg on 1st pronouns. Agr. can index agents or patients]	Morphological Syntactic? ("a few")	AOV	Both	unproductive transitivizing element; causative, refl, recip	Ebert 1997	NA
Asia	Tibeto-Burman (Kiranti)	Bantawa	Yes [case, nom/acc agr pattern]	Morphological	AOV	Both	middle; s causative and t caus/appl/ benefactive, reflexive, reciprocal. No passive	Doornenbal 2009	NA
Asia	Tibeto-Burman (Kiranti)	Belhare	Yes [case, but not agr. Could treat detrans also as a split]	Morphological Syntactic [internally-headed RCs]	AOV	Both		Bickel 2003	NA
Asia	Tibeto-Burman (Kiranti)	Chiling	Yes [see Chintang, except agr. looks ergative (1 ex.)]	Morphological	(A)OV	Both	unknown	Schikowski 2013	NA
Asia	Tibeto-Burman (Kiranti)	Chintang	Yes [case marking; agr. does not display any single alignment]	Morphological	AOV	Both	Also has refl, recip, caus, benefactive, (passive ptcp).	Schikowski 2013; Schikowski et al. 2015	NA
Asia	Tibeto-Burman (Kiranti)	Kulung	Yes [split case/agr, and apparently	Morphological	AOV	Both	middle, caus.	Tolsma 2006	NA

			also some person effects]						
Asia	Tibeto-Burman (Kiranti)	Limbu	Yes [case. Describes agreement as active]	Morphological [person split]	AOV	Both		Van Driem 1987; Angdembe 1998	NA
Asia	Tibeto-Burman (Kiranti)	Puma	Yes [case; agreement more nom/acc]	Morphological	AOV	Both		Bickel et al. 2007	NA
Asia	Tibeto-Burman (Kiranti)	Sunwar	Yes [erg marker for agentive A only. Also has an obj marker]	NA	AOV	Both	middle, caus. (?)	Borchers 2008	NA
Asia	Tibeto-Burman (Kiranti)	Thulung	Yes [Kiranti case/agr split, but also person split: nom/dat for 1st and 2 nd sg and dual; erg-dat for 2 nd pl, 3 rd , and all other NPs.]	Morphological	AOV	Both	caus, benefactive, middle	Lahaussois 2002	NA
Asia	Tibeto-Burman (Kiranti)	Yakkha	Yes [person marking mixed. 1st and 2nd pronouns are always unmarked. Erg not pragmatically optional	Morphological	AOV	Both	also middle/recip	Schacklow 2014	NA

			generally in Kiranti]						
Asia	Tibeto-Burman (Kuki-Chin?)	Manipuri/Meithei	Yes [pragmatic/'optional' ergativity. Possibly not an alignment system (DeLancey) so here 'minimal' even for languages where the erg marker is relatively prevalent]	Pragmatic	AOV	Dependent	Causative, comitative, reciprocal, reflexive.	Chelliah 1997	No
Asia	Tibeto-Burman (Kuki-Chin)	Falam Chin	Yes [split, erg case, nom/acc agr]	Morphological	AOV	Both	Also has middle/refl/recip marker, productive caus, and many applicatives.	King 2010	NA
Asia	Tibeto-Burman (Kuki-Chin)	Haka Lai	Yes [2 splits: erg only in completive and with respect to case]	Morphological	AOV	Both	semiproductive middle/recip/refl, one productive, several non-productive caus (one being lexicalized PTB *s), and 7 applicative morphemes.	Peterson 1998, 2003	NA
Asia	Tibeto-Burman (Kuki-Chin)	Mizo	Yes [split case/agr. More consistent erg marking than in other	Morphological	AOV	Both	refl/reciprocal, productive and lexicalized caus, benefactive, associative, and malefactive.	Chhange 1993	NA

			TB languages]						
Asia	Tibeto-Burman (Nungish)	Dulong/Rawang	Yes [optional 'agentive' for A; hierarchical person marking]	NA	AOV	some Head	causative, benefactive, unproductive transitivizer	LaPolla 2000, 2008	NA
Asia	Tibeto-Burman (Rgyalrong)	Horpa	Yes [inverse v marking, erg case, in some dialects transition to subj-controlled agr]	Morphological	AOV	Dependent	middle	Sun 2005	NA
Asia	Tibeto-Burman (Rgyalrong)	Japhug	Yes [sole erg case marker, also used on some intrans S with comparative meaning. Inverse agr]	Morphological	AOV	Both	Also has passive (one productive, one not), causative, reciprocal [related to the passive], anticausative, unproductive noun inc.	Jacques 2012	NA
Asia	Tibeto-Burman (Rgyalrong)	Lavrung	Yes [Erg NP marking is optional when the host is an SAP agent. Inverse V marking]	Morphological	AOV	Dependent	middle	Sun 2005	NA
Asia	Tibeto-Burman (Rgyalrong)	Tsobdun	Yes [inverse v marking, erg case]	Morphological	AOV	Both	see Japhug?	Sun 2005	NA

Asia	Tibeto-Burman (Tani)	Galo	No ['identifiable S/A alignment'. Dependent subjects are 'usually genitive']	NA	AOV	Dependent	many applicative morphemes; no detransitivizing morphemes.	Post 2007	NA
Asia	Tungusic	Even	No	NA	AOV	Dependent	adversative passive, mediopassive, caus, recip. Reflexive	Malchukov and Nedjalkov 2015	No
Asia	Tungusic	Manchu	No	NA	AOV	Dependent	pass/caus/refl morph -bu; 'decausative' morph; also caus, comitative, recip.	Gorelova 2002	NA
Asia	Tungusic	Udihe	No	NA	AOV	Dependent	pass/caus morph -u-, -ktA/ptA unproductive decausative/middle. Also caus, comitative, recip.	Nikolaeva and Tolskaya 2001	NA
Asia	Yeniseian	Ket	No	NA	AOV	Head	NA	Vajda 2015	No
Asia	Yukaghir	Kolyma Yukaghir	No [active]	NA	AOV	Both	Recip, refl, dispersive, 2 caus, appl	Maslova 2003a	NA
Asia	Yukaghir	Tundra Yukaghir	No [active]	NA	AOV	Both	caus (3 suffixes), resultative (passive-esque); recip/refl	Maslova 2003b	NA
Australia	Arnhem	Mara	No	NA	Flexible	Both	reflexive/recip, benefactive	Heath 1981	NA
Australia	Bunuban	Gooniyandi	Yes	Morphological	AOV	Both		McGregor 1990; 1997	Oblique patient; partially productive
Australia	Daly	Ngan'gityemerri	No	NA	Flexible	Head	body part inc, applicative,	Reid 2011	NA

							comitative/malef active		
Australia	Garrwan	Garrwa	Yes [split]	Morphological	AVO/VAO	Dependent	NA	Mushin 2012	NA
Australia	Gunwing-guan	Gunwinggu (Bininj Gun-Wok)	No	NA	AOV	Head	noun inc, middle	Evans 2004	NA
Australia	Isolate	Gaagudju	Yes [2nd and 3rd persons]	Morphological	Flexible	Head	2 middle affixes	Harvey 2002/2011	NA
Australia	Isolate	Tiwi	No	NA	AVO	Head	causative, reflexive, reciprocal, noun inc.	Lee 1987	No
Australia	Iwaidjan	Maung	No	NA	AVO	Head	NA	Singer 2006	No
Australia	Limilingan	Limilingan	Yes [only 1+2M, 2A, 1+2A; minimal]	Morphological	Flexible	Head	causative	Harvey 2001	NA
Australia	Maningrida	Nakkara	No [mixed prefix patterns. Hierarchical]	NA	AOV(?)	Head	reflexive, reciprocal	Eather 2011	NA
Australia	Mirndi	Jaminjung	Minimal [erg marking optional. Nom/acc cross-reference]	Morphological	Flexible	Both	reflexive/ reciprocal	Schultze-Berndt 2015	NA
Australia	Mirndi	Jingulu	Yes [split]	Morphological	AOV	Both	reflexive, causative	Pensalfini 2003	NA
Australia	Nyulnyulan	Yawuru	Yes [split: case erg/abs, agr nom/acc]	Morphological	AOV	Both	refl, recip., comitative, benefactive	Hosokawa 2011	NA
Australia	Pama-Nyungan	Diyari	Yes [split]	Morphological	AOV	Dependent	reciprocal, applicative, 2 causatives, benefactive	Austin 1981a	Implicit patient; partially productive

Australia	Pama-Nyungan	Dyirbal	Yes [split]	Morphological Syntactic	Flexible	Dependent	reciprocal, reflexive, comitative	Dixon 1972	Oblique patient; productive
Australia	Pama-Nyungan	Kalaw Lagaw Ya	Yes [split]	Morphological	AOV	mostly Dependent	passive	Comrie 1981, Ford and Ober 1991	NA
Australian	Pama-Nyungan	Kuku Yalanji	Yes [split]	Morphological [aspects of both ergative and nom/acc syntax. AP has nothing to do with pivot]	AOV	Dependent	reciprocal	Patz 2002	NA
Australia	Pama-Nyungan	Martuthunira	No	NA	AVO	Dependent	passive, causative	Dench 1982	No
Australia	Pama-Nyungan	Ngarla	Yes [split]	Morphological	VAO [Flexible]	Dependent	reciprocal, causative	Westerlund 2013	NA
Australia	Pama-Nyungan	Ngarluma	No	NA	AVO	Dependent	passive, causative (?)	Dench 1982	NA
Australia	Pama-Nyungan	Nhanda	Yes [split case/agr. bound pronouns are tripartite. split S in intransitives]	Morphological	Flexible	Dependent	causative [refl and recip have erg subjects]	Blevins 2001	NA
Australia	Pama-Nyungan	Panyjima	No	NA	Flexible	Dependent	passive, causative (?)	Dench 1982	NA
Australia	Pama-Nyungan	Warlpiri	Yes [split case/agr]	Morphological Syntactic [quantification only]	Flexible	Both	causative, reflexive	Simpson 1991, Campana 1993	NA
Australia	Pama-Nyungan	Warrgamay	Yes [split]	Morphological Syntactic	Flexible	Dependent	comitative, instrumental	Dixon 1981a, 1981b	NA
Australia	Pama-Nyungan	Warrungu	Yes [split]	Morphological Syntactic	Flexible	Dependent	also reciprocal, applicative	Tsunoda 2011	Oblique patient; partially productive

Australia	Pama-Nyungan	Yidjɪn	Yes [split]	Morphological Syntactic	AOV	Dependent	comitative	Dixon 1977	Oblique patient; productive
Australia	Pama-Nyungan	Yinjibarndi	No	NA	AVO	Dependent	passive, causative (?)	Dench 1982	NA
Australia	Tangkic	Kayardild	No	NA	Flexible	Dependent	causative, reciprocal, middle	Evans 1995	No
Australia	Tangkic	Lardil	No	NA	AVO	Dependent	middle, reciprocal, causative	Klokeid 1976, 1978	NA
Australia	Tangkic	Yukulta	Yes [split]	Morphological	AVO	Dependent	middle, reciprocal, causative	Keen 1983, Evans 1995	Oblique patient
Australia	Worrorran	Worrorra	Yes [split, also inverse/acc]	Morphological	AVO/flexible	Head	middle/'mutual action'	Clendon 2014	NA
Australia	Yangmanic	Wardaman	Yes [case; not clearly agr]	Morphological	Flexible	Both	middle, reflexive/reciprocal, causative	Merlan 1994	Oblique patient; productive
Europe	Abkhaz-Adyghean	Abkhaz	Yes	Morphological	AOV	Head	inchoative -xa; causative	Chirikba 2003	No
Europe	Abkhaz-Adyghean	Adyghe	Yes [pronouns and names don't get case]	Morphological	AOV	Both	causative; sociative; applicative; reflexive	Letuchiy 2012; Arkadiev & Letuchiy 2016	NA
Europe	Abkhaz-Adyghean	Kabardian	Yes	Morphological	AOV	Both	causative; benefactive; comitative; reflexive; reciprocal; directional applicative; transitivizer (for intrans.)	Matasovic 2010	oblique patient; productive
Europe	Indo-European (Baltic)	Latvian	No	NA	AVO	Both	middle; causative	Geniusiene 1987; Nau and Holvoet 2015	No

Europe	Indo-European (Baltic)	Lithuanian	No	NA	AVO	Both	middle [Separate periphrastic passive]; causative	Geniusiene 1987; Nau and Holvoet 2015	NA
Europe	Indo-European (Celtic)	Scottish Gaelic	No	NA	VAO	some Dependent	NA [several passive-type constructions, syntactic caus and refl]	Lamb 2003	No
Europe	Indo-European (Germanic)	English	No	NA	AVO	some Dependent	NA	Guerrero Medina 2011	No
Europe	Indo-European (Germanic)	Icelandic	No	NA	AVO	Dependent	NA	Barðdal 2015	No
Europe	Indo-European (Germanic)	Norwegian	No	NA	AVO	some Dependent	middle	Enger and Nessel 2011	NA
Europe	Indo-European (Hellenic)	Greek (modern)	No	NA	AVO/VAO	Both	middle; passive	Joseph and Philippaki-Warburton 1987	No
Europe	Indo-European (Indic)	Hindi	Yes [active, but split such that agent case only in perfective]	Morphological	AOV	Both	partially lexical causatives	Montaut 2004; Mahajan 2012	No
Europe	Indo-European (Indic)	Kashmiri	Yes [active, but split, tense. Erg in both past and perfect]	Morphological	AVO	Both	causative	Wali and Koul 2006	No
Europe	Indo-European (Indic)	Marathi	Yes [active, but split, tense (see Hindi) and person, no erg on 1st	Morphological	AOV	Both	causative	Dhongde and Wali 2009	NA

			and 2nd pronuns]						
Europe	Indo-European (Indic)	Punjabi	Yes [active, but split w/ agent case only in perfective. Person split, only 3 rd gets erg]	Morphological	AOV	Both	causative	Tej 1993	No
Europe	Indo-European (Iranian)	Balochi	Yes [split; varies by dialect]	Morphological	AOV	Both	causative	Axenov 2006; Jahani and Korn 2009	NA
Europe	Indo-European (Iranian)	Farsi	No	NA	AOV	Both	middle; causative	Mahootian 1997	No
Europe	Indo-European (Iranian)	Kurdish (Northern)	Yes [split]	Morphological	AOV	Both	reflexive, causative	Haig 2008	NA
Europe	Indo-European (Iranian)	Pashto	Yes [split, tense]	Morphological	AOV	Both	unproductive morphological causative.	David 2014	NA
Europe	Indo-European (Romance)	French	No	NA	AVO	some of Both	middle	Postal 1977	No
Europe	Indo-European (Romance)	Romanian	No	NA	AVO	Both	middle; passive	Cojocaru 2003	NA
Europe	Indo-European (Romance)	Spanish	No	NA	AVO	mostly Head	middle	Masullo 1992	No
Europe	Indo-European (Slavic)	Czech	No	NA	AVO	Both	middle	Medová 2009	NA
Europe	Indo-European (Slavic)	Polish	No	NA	AVO	Both	middle; causative	Rivero and Sheppard 2003; Wiemer 2007	NA

Europe	Indo-European (Slavic)	Russian	No	NA	AVO	Dependent	middle	Comrie 1985; Say 2005; Enger and Nesset 2011	No
Europe	Indo-European (Slavic)	Slovene	No	NA	AVO	Both	middle	Rivero and Sheppard 2003	NA
Europe	Isolate	Basque	Yes [but some dialects are active, or have non-erg progressive]	Morphological	AOV	Both	causative; most simply created by exchanging trans/ditrans/intrans auxs	Laka 2006; Etxepare 2003; Bossong 1984	oblique patient; partially productive
Europe	Kartvelian	Georgian	No [active; 3-way aspectual split]	NA	AOV	Both	reflexive; passive; causative	Harris 1981, 1985, 2008; Tuite 2003; Amiridze 2006	No
Europe	Kartvelian	Laz	No [active]	NA	AOV	Both	reflexive, applicative, causative	Lacroix 2012	NA
Europe	Nakh-Daghestanian	Avar	Yes	Morphological	AOV	mostly Dependent	causative	Authier 2016 (AP workshop), 2012; Charachidzé 1981	NA
Europe	Nakh-Daghestanian	Bezhta	Yes [pers. pron. don't distinguish abs/erg. Small number of onomatopoeic verbs have erg/obl subjects]	Morphological	AOV	mostly Dependent	potential; causative	Comrie et al. 2015	oblique patient; partially productive

Europe	Nakh-Daghestanian	Chechen	Yes [doesn't distinguish abs/erg for 1st pron.]	Morphological	AOV	mostly Dependent		Nichols 1980; Hewitt 1982	oblique patient; productive
Europe	Nakh-Daghestanian	Dargwa	Yes [agreement on person hierarchy]	Morphological	AOV	mostly Dependent	causative	Forker in press; Authier 2016 (AP workshop)	NA
Europe	Nakh-Daghestanian	Hinuq	Yes [pers. pron. don't distinguish abs/erg.]	Morphological	AOV	mostly Dependent	causative	Forker 2013	NA
Europe	Nakh-Daghestanian	Ingush	Yes (predominantly: light verbs are nom/acc)	Morphological Syntactic (caus, inceptive, chaining)	AOV	mostly Dependent	causative [no passive; Repl and recip do not modify valency]	Nichols 2011	No
Europe	Nakh-Daghestanian	Kryz	Yes; abs and erg for 1 and 2sg]	Morphological	AOV	mostly Dependent	NA [valency-increase is done periphrastically]	Authier 2012; 2016 (AP workshop)	NA
Europe	Nakh-Daghestanian	Lezgi	Yes [role-dominated]	Morphological	AOV	mostly Dependent	causative	Haspelmath 1993	No
Europe	Nakh-Daghestanian	Tsez	Yes [abs and erg for 1 and 2sg. Some also consider biabsolute construction to be a 'split' rather than voice]	Morphological	AOV	mostly Dependent	very productive causative, and obl. Marking for certain non-agentive subjects	Comrie 2000, Polinsky and Comrie 2003	oblique patient; partially productive
Europe	Turkic	Turkish	No	NA	AOV	Both; mostly dependent	reflexive; reciprocal; causative; passive	Dede 1981	No
Europe	Turkic	Yakut	No	NA	AOV	Dependent	reflexive; reciprocal;	Vinokurova 2005	NA

							causative; passive		
Europe	Uralic	Estonian	No	NA	AVO	Both; mostly dependent	reflexive, reciprocal, passive, causative	Erelt 2009	NA
Europe	Uralic	Finnish	No	NA	AVO	Both; mostly dependent	middle; passive; causative	Sands and Campbell 2001; Kittilä 2002	No
Europe	Uralic	Hungarian	No	NA	AVO/AOV	Both; mostly dependent	middle; causative; unproductive passive	Kiss 2002; Hartenstein 2012	No
Europe	Uralic	Pite Saami	No	NA	AVO	Both; mostly dependent	passive; diminutives with varied derivational functions (e.g. reflexive).	Wilbur 2014	NA
Europe	Uralic	Tundra Nenets	No	NA	AOV	Both	reflexive; possibly 6 transitivizing/app licative suffixes; causative. Passive is participial	Nikolaeva 2014; Leisiö and Kozlov 2016 (AP workshop)	NA
Europe	Uralic	Udmurt	No	NA	AOV	Both; mostly dependent	causative; refl/middle	Geniusiene 1987; Suihkonen 1995; Winkler 2001, 2011	NA
Pacific	Angan	Menya	No	NA	AOV	Head	caus and benefactive, some inst and obj incorporation	Whitehead 2004	NA
Pacific	Asmat- Kamoro	Asmat (Central)	No	NA	AOV	Head	[unclear]	Voorhoeve 1965	No

Pacific	Austronesian (Atayalic)	Atayal	No [symm.]	Philippine-type	VAO	Dependent	causative, reciprocal	Wu 2013	NA
Pacific	Austronesian (Atayalic)	Seediq	No [symm.]	Philippine-type	VOA	some Dependent	causative, reciprocal	Chen and Fukuda 2015; Holmer 1996	NA
Pacific	Austronesian (Bali-Sasak-Sumbawa)	Balinese	No [symm.]	Philippine-type	AVO/OVA	Neither	causative/benefactive, passive, middle	Shibatani and Artawa 2015, 2007	NA
Pacific	Austronesian (Malayic)	Malay (Sri Lanka) (Dravidian-Malay)	No	NA	AOV	Dependent	causative	Nordhoff 2015	NA
Pacific	Austronesian (Celebic)	Balantak	No [symm.]	Philippine-type	OVA/AVO	Neither	Decreasing: Adversative, accidental action, non-volitional action [all patientive subjects], 2 reciprocals. Incr: 4 causatives (one also applicative); directional applicative -i; benefactive.	van den Berg and Busenitz 2012	NA
Pacific	Austronesian (Central Luzon)	Kapampangan	No [mixed]	Philippine-type	VAO/VOA	Dependent	causative	Mithun 1994; Baetscher p.c. 2016	Implicit patient; productive
Pacific	Austronesian (Central Pacific)	Fijian	No	NA	VOA	Head	phrasal noun inc, reciprocal, stativizer, causative, passive, 2 transitivizers, 4 agent-deleting prefixes for stative roots	Schütz 2014	No

Pacific	Austronesian (Central Philippine)	Tagalog	No [symm.]	Philippine-type	VAO	Dependent	causative [note for all Ph-systems with bene./inst./loc voices, not included as 'applicative' here, bc not clear that these voices are actually increasing valency]	Latrouite 2011	No
Pacific	Austronesian (Central Vanuatu)	Daakaka	No	NA	AVO	Head	transitivizer; a large number of valency inc. lexical suffixes; reciprocal via reduplication	von Prince 2012	NA
Pacific	Austronesian (Central Vanuatu)	Neverver	No	NA	AVO	Head	applicative, noun inc, unproductive causative	Barbour 2012	NA
Pacific	Austronesian (Central Vanuatu)	Unua	No	NA	AVO	some Head	transitivizer -i	Pearce 2015	No
Pacific	Austronesian (Chamic)	Eastern Cham	No	NA	AVO	Neither	causative	Thurgood 1999; author's notes	NA
Pacific	Austronesian (Chamorro)	Chamorro	Yes [split realis/irrealis]	Morphological	VAO	Head	passive; causative	Cooreman 1988	Oblique patient; partially productive
Pacific	Austronesian (CMP)	Tetun (Dili)	No	NA	AVO	Neither	causative; unproductive nak- prefix 'resultative'	Williams-van Klinken et al 2002; Heaton 2013 ms.	NA
Pacific	Austronesian (East Formosan)	Amis	No [symm.]	Philippine-type	VAO/VOA	Dependent	reciprocal, caus, middle	Chen and Fukuda	NA

								2015; Wu 2006	
Pacific	Austronesian (East Formosan)	Kavalan	No [symm.]	Philippine-type	VAO	Both	causative, reciprocal, middle [ma-]	Lin 2014; Liao2002; Chang and Tsai 2001	NA
Pacific	Austronesian (Eastern Admiralty)	Paluai	No	NA	AVO	Head	causative; applicative (valency rearranging); fossilized anticausative; 2 valency-increasing SVCs	Schokkin 2014	NA
Pacific	Austronesian (Barito)	Malagasy	No [symm.]	Philippine-type	VOA	Neither	reciprocal, causative	Keenan and Manorohanta 2001; Pearson 2005	No
Pacific	Austronesian (Minahasan)	Tondano	No [symm.]	Philippine-type	AVO	Head	causative; requestive; reciprocal/comitative	Brickell 2014	NA
Pacific	Austronesian (New Caledonian)	Nyâlayu (Belep)	No [active]	NA	VOA	Both	causative; transitivizer for those without a stem alternation	McCracken 2013	NA
Pacific	Austronesian (New Caledonian)	Xârâcùù	No	NA	AVO	Neither	causative; unproductive: middle, resultative, applicative.	Moyse-Faurie 2015, 2016 (AP workshop)	NA
Pacific	Austronesian (Kenyah)	Western Penan	No [symm.]	NA	AVO	Neither	detrans/causative/benefactive/reciprocal [but apparently from an intransitive root]; passive/resultative/undergoer voice infix	Soriente 2010	NA

Pacific	Austronesian (Northern Vanuatu)	Tamambo	No	NA	AVO	Head	causative, stative/ anticausative, one productive and 2-3 unproductive applicatives	Jauncey 2011	NA
Pacific	Austronesian (Nuclear Micronesian)	Pohnpeian	No	NA	AVO	Neither (object pronoun suffixes, but not agreement)	causative, instrumental applicative, fossilized middle, fossilized reciprocal	Rehg 1981	NA
Pacific	Austronesian (Paiwan)	Paiwan	No [symm.]	Philippine-type	VAO	Dependent	causative, reciprocal, middle [ma-], passive	Wu 2013; Jiang ms.	Oblique patient; productive
Pacific	Austronesian (Polynesian)	Hawaiian	No [symm.]	NA	VAO	Dependent	causative; phrasal noun inc.; PV-type 'passive'	Otsuka 2011; Elbert and Pukui 1979	NA
Pacific	Austronesian (Polynesian)	Maori	No [symm.]	NA	VAO	Dependent	causative; phrasal noun inc.; PV-type 'passive'	Otsuka 2011; Ota 1999	No
Pacific	Austronesian (Polynesian)	Rapanui	No [symm.]	NA	VAO	Dependent	causative; PV-type 'passive'; phrasal noun inc. not mentioned	Otsuka 2011; Du Feu 1996	No
Pacific	Austronesian (Polynesian)	Samoan	Yes [case. Some call the 'middle' a TAM split]	Morphological	VAO	Dependent	causative; phrasal noun inc.; PV-type 'passive'	Otsuka 2011; Mosel & Hovdhaugen 1992	No
Pacific	Austronesian (Polynesian)	Tongan	Yes [case. Pronouns can be S and A only]	Morphological Syntactic (resolved with resumptive pronouns)	VAO	Dependent	causative; phrasal noun inc, although Ball argues it is lexical semantics, and patient can	Otsuka 2011, forthcoming ; Ball 2009	NA

							be modified; applicative 'aki		
Pacific	Austronesian (Puyuma)	Puyuma	No [symm.]	Philippine- type	VOA	Both	causative, middle [ma-], passive [ki-]	Chen and Fukuda 2015; Teng 2007	NA
Pacific	Austronesian (SHWNG)	Irarutu	No	NA	AVO	Head	ta 'incidental stative' reduces transitivity; stative m-	Jackson 2014, p.c. 2016	NA
Pacific	Austronesian (South Sulawesi)	Embaloh	Yes	Morphological	VOA	Head	causative, reflexive/reciprocal, noun inc., non-volitional prefix (?)	Adelaar 1995	Oblique patient; productive
Pacific	Austronesian (South Sulawesi)	Makassarese	Yes	Morphological	VOA	Head	passive; separate actor focus morpheme	Jukes 2013	NA
Pacific	Austronesian (Temotu)	Āiwoo	Yes [agr and order. Historically symm. could be argued as split erg]	Morphological	OVA/AVO	Head	causative; 2 passive-like constructions	Næss 2013	NA
Pacific	Austronesian (Temotu)	Engdewu	Yes [agr. See aiwoo]	Morphological	OVA [/AVO]	Head	causative; 2 applicatives; comitative; 2 passive-like constructions	Vaa 2013	NA
Pacific	Austronesian (Tsouic)	Saaroa	No [symm.]	Philippine- type	VAO	Dependent	causative, reciprocal	Li 2009; Pan 2012	NA
Pacific	Austronesian (Tsouic)	Tsou	No [symm.]	Philippine- type	AVO	Both/head, depending on the analysis	causative	Chang 2011; Lin 2010	NA
Pacific	Austronesian (Western Oceanic linkage)	Kove	No	NA	AVO	Head	causative; middle [syntactically transitive, as are reciprocals]	Sato 2013	NA

Pacific	Austronesian (Western Oceanic linkage)	Roviana	Yes [split, NP type]	Morphological Syntactic (?; uses nominal-type construction)	VAO	Both	passive, causative, pseudo noun inc.	Shuelke p.c.	NA
Pacific	Austronesian (Western Oceanic linkage)	Sinaugoro	Yes [erg case marker; optional except in ditrans clauses and disambiguation]	Morphological	AOV	mostly Head	reflexive/ reciprocal; causative	Tauberschmidt 1999	NA
Pacific	Awyu-Ok	Kombai	No	NA	AOV	Head	NA?	de Vries 1993	NA
Pacific	Awyu-Ok	Korowai	No	NA	AOV	Head	causative; anticausative	de Vries and van Enk 1997	NA
Pacific	Awyu-Ok	Mian	No	NA	AOV	Head	applicative; reciprocal	Fedden 2007	NA
Pacific	Border	Waris	No	NA	AOV	Dependent, [verb marked for number]	Benefactive, caus.	Brown 1981, 1990; Foley 1986	NA
Pacific	Dani	Lower Grand Valley Dani	Yes [minimal: optional 'erg' case]	Morphological	AOV	Head	transitivizer, reflexive; Appl. via aux constructions.	Bromley 1981	No
Pacific	Engan	Kewa (Kewapi)	Yes [erg case, nom agreement]	Morphological	AOV	Both	middle/anticaus-type detransitivizing suffix ba/bi. Has caus, benefactive	Yarapea 2006	No5
Pacific	Inanwatan	Inanwatan	No	NA	AOV	Head	causative; 'intransitivizer'?	de Vries 2004	NA
Pacific	Isolate	Kuot	No	NA	VAO	Head	see description	Lindström 2002	NA
Pacific	Isolate	Yéfi Dnye	Yes [case, not agr]	Morphological	AOV	Both	Productive detrans. noun inc.	Henderson 1995;	NA

								Levinson 2011	
Pacific	Koiarian	Koiari	Yes [number cross-reference, but aspect indicates features of S and A]	Morphological	AOV	some Head	-ra anticausative, -te causative	Dutton 1996	NA
Pacific	Lower Sepik-Ramu	Yimas	Minimal [3rd person only]	Morphological	Free; tendency towards V final	Head	Reciprocal. valency incr: caus [productive and unproductive], comitative, benefactive, allative, kinetic, 'following', inc. adverbial. Sporadic noun inc.	Foley 1991	No
Pacific	Morehead-Wasur	Nen	Yes [has middle patterns with A as S, but considering those to be additionally derived]	Morphological	AOV	Both	reciprocal/ reflexive, decausative, middle, autobenefactive, causative, benefactive	Evans 2015	NA
Pacific	Ndu	Iatmul	No	NA	AOV	some of Both		Jendraschek 2012	NA
Pacific	North Halmahera	Ternate	No	NA	AVO	Head	Separate reflexive, also caus; all can attach to intrans stems.	Hayami-Allen 2001	NA
Pacific	Nuclear Goroka	Yagaria (Hua)	Yes [erg case, acc agr]	Morphological	AOV	Both	all either unmarked or periphrastic	Haiman 1980	NA

Pacific	Rai Coast	Tauya	Minimal [mostly optional erg case only]	Morphological	AOV	Both	stative and transitivizing derivations.	Macdonald 1990	No
Pacific	Sentani	Sentani	No	NA	AOV	Head	middle and reflexive, but both apply to transitive and intransitives.	Cowan 1965	NA
Pacific	Simbu	Kuman	No	NA	AOV	minorly Head	NA; di 'say' has anticausative use	Piau 1985; Pfantz 2007	NA
Pacific	Sko	Skou	Minimal [optional 'erg' case]	Morphological	AOV	Both	applicative	Donohue 2004	NA
Pacific	Timbe- Selepet- Komba	Komba	No	NA	AOV?	Head	Small number of intrans can be transitivized by m-.	Southwell 1979	NA
Pacific	Timor-Alor- Pantar	Abui	No [active]	NA	AOV	Head	NA	Kratochvíl 2007	NA
Pacific	Timor-Alor- Pantar	Fataluku	No	NA	AOV	Neither; optional subj. clitic	none	Heston 2015	NA
Pacific	Timor-Alor- Pantar	Makalero	No	NA	AOV	Head	NA	Huber 2011	NA
Pacific	Timor-Alor- Pantar	Teiwa	No	NA	AOV	Head	Middle; distributive/ reciprocal and unproductive applicative	Klamer 2010	NA

APPENDIX C. GEOGRAPHIC COORDINATES FOR MAP GENERATION

The geographic data here come from *Glottolog*, *The Catalogue of Endangered Languages*, and, when necessary, my approximations based on descriptions of the location of the languages. This was the basic geographical data used to construct all of the maps which appear in this dissertation.

Language	ISO 639-3	Latitude	Longitude
!Xun (Taa)	nmn	-19.621892	20.253296
(Central) Asmat	cns	-5.80391	138.471
Abkhaz	abk	43.056218	41.159115
Abui	abz	-8.31058	124.588
Achumawi	acv	41.320107	-121.129761
Adyghe	ady	44	39.33
Ainu	ain	43	143
Äiwoo	nfl	-10.2302	166.21
Akateko	knj	15.83333333	-91.83333333
Akawaio	ake	6.16277	-60.862
Akuntsu	aqz	-10.9	-63.6
Amis	ami	23.0917	121.348
Anywa	anu	7.57714	34.0267
Apache (San Carlos)	apw	33.2563	-110.4637
Apalai	apy	0	-54
Apinajé	apn	-5.5	-48
Arabic (MSA)	arb	27.9625	43.8525
Atayal	tay	24.5209	121.388
Athpare	aph	26.8794	87.3296
Atong	aot	25.2844	91.1755
Avar	ava	41.7047	46.558
Awa-Pit	kwi	1.5	-78.25
Aymara	ayc	-16.515304	-68.246467
Balantak	blz	-0.86809	123.289
Balinese	ban	-8.35714	115.075
Balochi	bal	37.83	62.17
Bambara	bam	12.0401	-9.98949
Bangime	dba	14.8116	-3.77092
Bantawa	bap	27.0994	87.0048
Barbareño	boi	34.462	-119.699
Basque	eus	43.2787	-1.31622

Language	ISO 639-3	Latitude	Longitude
Ma'di	mhi	3.62499	31.8471
Maa	mas	-3.1419	36.4573
Macushi	mbc	4.31861	-60.2209
Majang	mpe	7.6843	35.0228
Makalero	mjb	8.717636	126.816931
Makassarese	mak	-5.65551	119.838
Mako	wpc	4.5621	-66.5813
Malagasy	mlg	-19.5907	47.1211
Mam	mam	14.8	-91.72
Mamvu	mdi	2.68167	28.9862
Manchu	mnc	49.5	127.5
Mandarin	cmn	40.0209	116.228
Mandinka	mnk	12.8165	-15.6539
Manipuri/Meithei	mni	24.4409	93.3426
Maori	mri	-40	176
Mapudungun	arn	-38.7392	-71.277
Mara	mec	-14.7927	134.865
Marathi	mar	17.9344	76.6665
Maria	mrr	19.7875	79.9144
Martuthunira	vma	-21.9140827	115.8212481
Mäsqan	mvz	8.10617	38.3386
Matis	mpq	-4.3553	-70.2079
Matses	mcf	-5.283333	-73.15
Maung	mph	-11.8393	133.185
Mbay	myb	8.23066	15.7328
Me'en	mym	6.63207	35.6255
Mende	men	7.90935	-10.9926
Menya	mcr	-7.17425	146.071
Mian	mpt	-4.9	141.6
Midob	mei	14.789	27.2236
Mina	hna	10.3805	13.8405

Beja	bej	17.2436	36.6666
Belhare	byw	26.9972	87.2783
Bella Coola	blc	52.49	-126.47
Beria	zag	17.48	23.46
Bezhta	kap	42.1369	46.1508
Blackfoot	bla	48.5699	-113.0918
Bobo	bwq/bbo	11.5409	-4.26497
Boko, Busa	bqp/bqc	9.52724	3.80058
Bora	boa	-2.16666667	-72.3333333
Brahui	brh	28.5347	64.2991
Bunan	bfu	32.2168	77.9596
Burun	bdi	10.725	33.921
Burushaski	bsk	36.3294753	74.6605365
Car Nicobarese	caq	8.2549	93.1022
Cavineña	cav	-13.3544	-66.6277
Central Alaskan Yup'ik	esu	59.8889	-166.289
Central Kanuri	knc	11.8863	16.3918
Ch'ol	ctu	17.49	-92.47
Ch'orti'	caa	14.83333333	-89.25
Chai	suq	6.03205	35.0823
Chamorro	cha	13.45	144.75
Chatino (Zenzontepec)	czn	16.528	-97.4555
Chechen	che	43.5	45.5
Cherokee (Oklahoma)	chr	36.7544	-98.3569
Chichewa	nya	-14.8047	32.8108
Chiling	cur	26.91	87.21
Chintang	ctn	26.961	87.1899
Chitimacha	ctm	29.66666667	-91
Choctaw	cho	32.7713	-89.1163
Chuj	cac	15.8259	-91.4783
Chukchi	ckt	67	-173
Chumburung	ncu	8.15211	-0.2755
Ciluba	lua	-5.72717	22.4422
Coast Tsimshian	tsi	54.38	-129.52
Comanche	com	34.6086	-98.3904
Cora	crn	22.014361	-104.811402
Czech	ces	49.873398	15.10437
Daakaka	bpa	-16.2696	168.013

Mískito	miq	15.1576	-84.2942
Mixe (Ayutla)	mxp	20.1280233	-104.343931
Mixtec (Chalcatongo)	mig	17.0777	-97.5432
Miyako (Tamara)	mvi	24.8004	125.2798
Mizo	lus	22.6138	92.6247
Mocho'	mhc	15.3709	-92.2484
Mocoví	moc	-28.097	-60.4145
Mohawk	moh	44.189	-77.1494
Monguor	mjg	36.82	102.12
Mono	mnh	4.562393	19.937169
Mopan	mop	16.58333333	-88.6666667
Movima	mzp	-13.83333333	-65.6666667
Murle	mur	6.5	33.5
Mutsun	css	36.364	-121.177
N ng	ngh	-27.935574	22.734146
Nahuatl	nhn	19.1248	-98.3002
Nakkara	nck	-12.0765	134.327
Naro	nhp	-21.677848	21.717224
Nen	nqn	-8.62	142.03
Neverver	lgk	-16.178	167.469
Nez Perce	nez	46.4347	-116.8268
Ngan'gityemerri	nam	-14.268	131.237
Ngarla	nrk	-20.3735603	118.8259443
Ngarluma	nrl	-20.848545	117.696075
Nhanda	nha	-27.4252364	114.2680442
Nihali	nll	19.75	77.83333333
Nivaclé	cag	-23.5	-60.5
Nivkh	niv	52.59	140.681
Northern Paiute	pao	41.9979	-117.7193
Norwegian	nor	60.472024	8.468946
Nyâlayu (Belep)	yly	-20.3239	164.352
Ojibwe	oji	46	-80
Okanagan	oka	49.29	-118.98
Osage	osa	36.6683	-96.3316
Otomí (Querétaro)	otq	20.1396	-100.115
Otoro	otr	11.16666667	30.5
Paiwan	pwn	22.3271	120.806
Paluai	blq	-2.5604	147.282

Dargwa	dar	42.4257	47.4388
Dēmushbo	NA	-4.837565	-70.873718
Desano	des	0.620173	-69.749138
Dhimal	dhi	26.66666667	87.75
Dholuo	luo	-0.93296	34.4896
Dii	dur	7.77412	13.9884
Dinka Bor	dks	7.02206	31.285
Diyari	dif	-28.5848662	139.0862193
Dongolawi	dgl	21.2837	31.8992
Dulong/Rawang	raw	27.1027	97.0738
Duruwa/Parji	pci	19.5	82.5
Dyirbal	dbl	-17.74	145.742
Dzubukua	kzw	-8.514206	-39.397888
East Dangla	daa	12.1517	18.385
Eastern Cham	cjm	11.2853	108.49
Eastern Kayah	eky	19.8939	98.3359
Emai	ema	7.09089	5.84494
Embaloh	emb	1.3156	112.63
Engdewu	ngr	-10.7441	165.887
English	eng	53	-1
Estonian	est	58.55	25.82
Even	eve	68	130
Eyak	eya	60.5	-145
Falam Chin	cfm	23.79	92.33
Farsi	fas	28.6593	55.1586
Fataluku	ddg	-8.49464	127.08
Fijian	fij	-18	178.33
Finnish	fin	64.7628	25.5577
French	fra	48	2
Fula	fuc	13.8694	-13.4482
Gaagudju	gbu	-12.5176	132.643
Gaahmg	tbi	11.4674	33.9797
Galo	adl	28.1688	94.7433
Garrwa	wrk	-17.1782821	136.5329137
Georgian	kat	39.3705	45.8066
Gikuyu	kik	-0.29005	36.719
Goemai	ank	8.74455	9.72453
Gooniyandi	gni	-18.2615344	126.2884882

Panare	pbh	6.5	-66
Panyjima	pnw	-23.0153968	117.6751312
Parecís	pab	-14.5929	-57.4059
Päri	lkr	5.09472	32.4822
Pashto	pus	34	71.33
Penobscot	aaq	45.0112	-68.6617
Piapoco	pio	4	-69.5
Pilagá	plg	-25.4035	-58.6669
Pirahã	myp	-7	-62
Pite Saami	sje	66.0447	17.8857
Plains Cree	crk	51.2437	-110.463
Pnar	pbv	24.8237	92.2628
Pohnpeian	pon	6.87212	158.223
Polish	pol	51.8439	18.6255
Puinave	pui	4	-68
Puma	pum	27.0167	86.85
Punjabi	pan	30.0368	75.6702
Purepecha (Tarascan)	tsz	19.533095	-102.315314
Puyuma	pyu	22.7583333	121.1444444
Q'anjob'al	kjb	15.33333333	-91.6666667
Q'eqchi'	kek	15.38	-89.25
Quechua I (Huallaga)	qub	-9.4598	-77.1789
Quechua II (San Martín)	qvs	-6.9582	-76.6608
Rama	rma	11.75	-83.75
Rapanui	rap	-27.113	-109.342
Romanian	ron	46.3913	24.2256
Roviana	rug	-8.20493	157.408
Russian	rus	59	50
Saaroa	sxr	23.133	120.721
Sabanê	sae	-12.5277	-59.6859
Sakapulteko	quv	14.9752	-91.0527
Samoaan	smo	-13.92	-171.83
Sanapaná	sap	-22	-59
Sandawe	sad	-5.342583	35.562744
Sanjiang Kam	cov	26.2236	109.547
Sanumá	xsu	4.5	-64.6666667
Scottish Gaelic	gla	57	-4
Seediq	trv	23.77	121.35

Great Andamanese (koine)	gac	12.240707	92.892052
Greek (modern)	ell	42.3224	24.8699
Guajiro/Wayuu	guc	12	-72
Guaraní	gug	-25.6055	-57.0882
Guatuso/Maleku	gut	10.75	-84.73
Guaymi	gym	8.666666667	-82
Gunwinggu (Bininj Gun-Wok)	gup	-12.2652543	133.6466651
Hadza	hts	-3.612107	35.315552
Haida	hai	53.2616	-132.008
Haka Lai	cnh	22.8735	92.8208
Halkomelem	hur	49.19	-123
Haro	kcx	6.3971	37.9291
Hausa	hau	11.1513	8.7804
Hawaiian	haw	21.9226	-160.1147
Hidatsa	hid	47.7321	-102.6758
Hindi	hin	25	77
Hinuq	gin	42.4502	45.8064
Hixkaryana	hix	-1	-59
Ho	hoc	23.96	87.12
Hocak	win	42.2475	-96.4722
Hopi	hop	35.8721	-110.6205
Horpa	ero	31.091339	101.748892
Huastec	hus	21.6153	-98.5028
Huave	hue	16.192003	-94.450428
Humburri Senni	hmb	15.2948	-1.69301
Hungarian	hun	46.9069	19.6555
Hup	jup	0.58622	-69.8359
Iatmul	ian	-4.3	143.32
Icelandic	isl	63.4837	-19.0212
Ik	ikx	3.75	34.16666667
Inanwatan	szp	-2.07971	132.157
Ingush	inh	42.9525	44.158
Inupiaq	ipk	66.8972	-162.5855
Iquito	iqu	-3.25	-74
Iraqw	irk	-4.19948	35.2939
Irarutu	irh	-2.94438	133.586

Semelai	sza	3.099	102.622
Sentani	set	-2.6013	140.512
Seri	sei	29	-112
Shilluk	shk	9.85472	31.7926
Shipibo-Konibo	shp	-7.5	-75
Sidamo	sid	6.74176	38.3729
Sierra Popoluca	poi	18.33333333	-95.1666667
Sinaugoro	snc	-9.79791	147.861
Siona	snn	-0.5712	-74.8828
Sipakapense	qum	15.25	-91.75
Skou	skv	-2.64	140.9
Slovene	slv	46.2543	14.7766
Soninke	snk	13.1273	-11.7178
Southern Pomo	peq	38.7048	-122.8971
Spanish	spa	40.4414	-1.11788
Squamish	squ	49.66666667	-123.166667
Sre	kpm	11.6444	108.057
Sri Lanka Malay (Dravidian-Malay)	sci	6.91603	79.864
Sukur	syk	10.735838	13.567772
Sunwar	suz	27.3485	86.2337
Supyire	spp	11.632	-5.87709
Suri/Tirmaga	suq	5.75	35.25
Swahili	swh	-8.25605	37.624
Tagalog	tgl	14.06	121.747
Takelma	tkm	42.423	-123.452
Tamambo	mlla	-15.66666667	167.1666667
Tamil	tam	10.520219	78.825989
Tanacross	tcb	64.2159	-145.9643
Tauya	tya	-5.74255	145.366
Teiwa	twe	-8.267	124.207
Telugu	tel	16.4529	78.7024
Tennet	tex	4.416666667	32.5
Tepehua (Huehuetla)	tee	20.5	-98
Ternate	tft	0.80562	127.333
Tetun (Dili)	tdt	-8.58405	125.583
Thompson	thp	50.36	-121.1

Itelmen	itl	57	157.5
Itzaj	itz	17.03	-89.87
Ixcatec	ixc	17.7597	-97.1242
Ixil	ixl	15.46	-90.89
Jakalteko/Popti'	jac	15.6685	-91.7111
Jaminjung	djd	-15.0281897	130.3565783
Japanese	jpn	35	135
Japhug	jya	32.248068	102.032477
Jenaama Bozo	bze	15.5	-4
Jibbali	shv	17.2915	53.9953
Jingulu	jig	-16.6271636	133.5450627
K'ichee'	quc	15.0309	-91.1485
Kabardian	kbd	43.5082	43.3918
Kabba	ksp	7.65	16.73
Kalaw Lagaw Ya	mwp	-10.156694	142.282428
Kalispel	fla	47.5944	-114.1182
Kannada	kan	13.5878	76.1198
Kanoê	kxo	-12.1789	-64.5812
Kapampangan	pam	14.9603	120.502
Kaqchikel	cak	14.47	-90.99
Kari'ña (Carib)	car	5.5	-56
Karo	arr	-10.3333333	-62
Kashmiri	kas	34.1668	74.3305
Katukina	knm	-5.6159	-68.7304
Kavalan	ckv	23.978097	121.605898
Kayabí	kyz	-11	-55.5
Kayardild	gyd	-17.0880805	139.4873823
Ket	ket	64	87
Kewa (Kewapi)	kjs	-6.32989	143.931
Khoekhoe	naq	-22.654572	17.017822
Kinyamwezi	nym	-5.08559	32.9445
KinyaRwanda	kin	-1.56771	29.6441
Kirundi	run	-1.44174	31.3191
Koiari	kbk	-9.5	147.3333333
Kolyma Yukaghir	yux	65.75	150.8333333
Komba	kpf	-6.16163	147.28
Kombai	tyn	-5.54543	139.902
Konni	kma	10.2368	-1.54376
Koraga	kfd	11.6952	75.6738

Thulung	tdh	27.41666667	86.5
Tillamook	til	44.0924	-122.769
Tima	tms	11.66666667	29.25
Timbira (Kanela)	ram	-7	-45
Tira	tic	11.0963	30.8092
Tiranige	tde	15	-3
Tiriyó	tri	3.25	-55.75
Tiwi	tiw	-11.6788294	130.8353696
Tlingit	tli	59.62	-132.87
Tojolabal	toj	16.33333333	-91.5
Tolowa	tol	41.9566	-124.1915
Tondano	tdn	1.28024	124.964
Tongan	ton	-21.17	-175.25
Tonkawa	tqw	30.25	-96.75
Toposa	toq	5.15904	34.2159
Totonac (Misantla)	tlc	20.298178	-97.536594
Trumai	tpy	-11.91666667	-53.5833333
Tseltal	tzh	16.64	-92.28
Tsez	ddo	42.25	45.75
Tsobdun	jya	31.9148675	102.2342205
Tsotsil	tzo	16.64	-92.74
Tsou	tsu	23.5	120.75
Tswana	tsn	-24.368	24.7587
Tuareg (Mali)	tmh	16.7665887	-3.0025615
Tundra Nenets	yrk	67.033163	71.176756
Tundra Yukaghir	ykg	69	155
Tunica	tun	31.1267	-92.0661
Turkish	tur	39.8667	32.8667
Tz'utujil	tzj	14.6394	-91.2301
Udihe	ude	46.6309	135.678
Udmurt	udm	57.5	52.5
Unua	onu	-16.2638	167.599
Upper Chehalis	cjh	46.7981	-123.169
Uspanteko	usp	15.3475	-90.8684
Ute	ute	37.6818	-113.088
Vietnamese	vie	18.3887	106.757
Wanano	gvc	0.833333333	-69.5
Wappo	wao	38.5	-122.5
Warao	wba	9.333333333	-61.6666667

Korean	kor	37.5	128
Korowai	khe	-5.25	140
Korubo	xor	-5.8346	-70.9277
Kove	kvc	-5.58333333	149.6666667
Koyra Chiini	khq	16.192	-3.73962
Koyraboro Senni	ses	16.9634	-0.55187
Koyukon	koy	66.3375	-151.1608
Kpelle	xpe	6.92048	-9.96128
Krahô	xra	-8.4071	-47.2851
Kryz	kry	41.1811	48.1846
Kuikúro	kui	-12.4166667	-53.0833333
Kuku Yalanji	gvn	-16.118117	145.047836
Kulina	xpk	-6.17715	-72.0438
Kulina	cul	-8.55268	-70.6648
Kulung	kle	27.5	87
Kuman	kue	-5.90586	144.977
Kuna	kvn	9.4	-78.316667
Kunama	kun	14.5879	37.5292
Kuot	kto	-3.05	151.5
Kurdish (Northern)	kmr	37	43
Kurtöp	xkz	27.5365	90.9822
Kwaza	xwa	-12.651	-60.4138
Kwegu	xwg	7	36.08333333
Lama	las	8.66954	0.833293
Lao	lao	16.0726	104.568
Lardil	lbz	-16.5336004	139.4069131
Latvian	lav	56.826108	24.309118
Lavrung	jiq	32.265796	100.978526
Laz	lzz	41.5	41.5
Lele	lln	9.158	15.8115
Lezgi	lez	41.5157	47.8951
Lillooet	lil	50.73	-123.01
Limbu	lif	27.16666667	87.75
Limilngan	lmc	-12.4776288	131.8581747
Lithuanian	lit	55.1429	23.9601
Logba	lgq	6.952328	0.472206
Logo	log	3.32608	29.8866
Looma (Liberian)	lom	7.91585	-9.69906

Wardaman	wrr	-15.4155	132.604
Waris	wrs	-3.14	140.93
Warlpiri	wbp	-20.1008	131.05
Warrgamay	wgy	-18.4	145.877
Warrungu	wrg	-18.2496	144.37
Wasco-Wishram	wac	44.2708	-121.2871
Washo	was	38.9226	-119.7256
Wayana	way	3.25	-54.1666667
Western Greenlandic	kal	69.3761	-52.864
Western Penan	pne	3.4667	114.523
Wintu	wit	39.8637	-122.0822
Wolof	wol	15.2534	-15.383
Worrorra	wro	-15.69549	124.84423
Xârâcùù	ane	-21.7034	165.996
Xavânte	xav	-15	-52.5
Xiang	hsn	27.6685	111.471
Yagaria (Hua)	ygr	-6.32432	145.388
Yagua	yad	-3.5	-72
Yakkha	ybh	27.3714	87.9306
Yakut	sah	62.3496	130.8691
Yalunka	yal	9.97186	-11.2836
Yaqui	yaq	27.868742	-110.279364
Yawuru	ywr	-17.9145753	122.3569459
Yélf Dnye	yle	-11.3796	154.127
Yidiñ	yii	-17.1159442	145.7736814
Yimas	yee	-4.66666667	143.55
Yine	pib	-11.1086	-73.3087
Yinjibarndi	yij	-22.1043221	118.0814646
Yokuts (Yowlumne)	yok	36.0269	-118.7213
Yonaguni (Dunan)	yoi	24.458	122.9802
Yoruba	yor	7.15345	3.67225
Yucatec	yua	18.78	-88.96
Yuchi	yuc	36.0009	-96.0988
Yukulta	ged	-16.74	138.023
Zaiwa	atb	24.1726	98.3643
Zapotec (Coatlán-Loxicha)	zps	16.1463	-96.7683
Zarma	dje	12.8554	2.41173
Zoulei (Gelao)	aou	26.057362	105.770402

Lower Grand Valley Dani	dni	-4.25684	138.992
Lowland Chontal	clo	16	-95.75
Lu Mien	ium	20.83	101.17

Zulu	zul	-25.3305	31.3512
Zuni	zun	35.082	-108.76

APPENDIX D. STATISTICAL MODELS

All of these models were generated in R (R Core Team 2014) using generalized linear regression models. The estimate values are the predicted mean log odds for that factor relative to the intercept. The natural log of the estimate gives the odds of occurrence (e.g. there is an X% chance of a language having antipassives given Y). P-values of .05 or less were considered significant (marked here by *, **, or ***). All values which were reported in body of the dissertation are given in bold.

MODEL 1. The relationship between antipassives and region, basic word order, locus of grammatical marking, and alignment

This corresponds to the data in Figures 5.1-5.4, 6.1.

Reference levels:

Basic word order: AOV

Region: Asia

Alignment: Nominative-accusative

Locus of grammatical marking: Neither head-marking nor dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-2.27	0.55	-4.15	3.32e-5 ***
OrderVAO	-0.37	0.42	-0.88	0.38
OrderAVO	0.40	0.33	1.21	0.23
OrderFlexible	0.49	0.47	1.03	0.30
OrderOAV	-16.48	3956.18	-0.00	1.00
OrderOVA	0.94	0.65	1.46	0.15
OrderVOA	1.45	0.54	2.68	7.30e-3 **
RegionAustralia	0.12	0.63	0.19	0.85
RegionAmericas	1.25	0.45	2.75	5.99e-3 **
RegionEurope	1.00	0.51	1.97	0.049 *
RegionAfrica	0.69	0.50	1.37	0.17
RegionPacific	0.25	0.54	0.45	0.65
AlignmentActive	0.56	0.44	1.29	0.20
AlignmentInverse	0.63	0.91	0.69	0.49
AlignmentSymm.	-15.76	872.41	-0.02	0.99
AlignmentErgative	1.18	0.30	3.96	7.45e-5 ***

LocusHead	-0.06	0.46	-0.14	0.89
LocusDependent	-0.29	0.52	-0.55	0.58
LocusBoth	-0.27	0.51	-0.54	0.59

MODEL 2. The relationship between antipassives and genetic affiliation

Reference level: Athabaskan-Eyak-Tlingit

NB: Because many families only have one member (isolates), or one sampled member, and in general n is very small for most families, this causes problems for the model and causes additional error.

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.34e-15	0.82	0.000	1.000
FamilyAbkhaz-Adyghean	-19.57	6209	-0.003	0.998
FamilyAfro-Asiatic	-19.57	2874	-0.007	0.995
FamilyAlgonquian	1.10	1.41	0.777	0.437
FamilyAndamanese	-19.57	10750	-0.002	0.999
FamilyAngan	-19.57	10750	-0.002	0.999
FamilyArawakan	-1.10	1.41	-0.777	0.437
FamilyArawan	-19.57	10750	-0.002	0.999
FamilyArnhem	-19.57	10750	-0.002	0.999
FamilyAsmat-Kamoro	-19.57	10750	-0.002	0.999
FamilyAustroasiatic	-1.61	1.37	-1.178	0.239
FamilyAustronesian	-1.27	0.90	-1.410	0.159
FamilyAwyu-Ok	-19.57	6209	-0.003	0.998
FamilyAymaran	-19.57	10750	-0.002	0.999
FamilyBarbacoan	-19.57	10750	-0.002	0.999
FamilyBoran	-19.57	10750	-0.002	0.999
FamilyBorder	-19.57	10750	-0.002	0.999
FamilyBunuban	-19.57	10750	-0.002	0.999
FamilyCariban	19.57	3585	0.005	0.996
FamilyCentral Sudanic	-19.57	4809	-0.004	0.997
FamilyChibchan	-1.10	1.41	-0.777	0.437

FamilyChinookan	19.57	10750	0.002	0.999
FamilyChukotko-Kamchatkan	19.57	7604	0.003	0.998
FamilyChumashan	-19.57	10750	-0.002	0.999
FamilyDaly	-19.57	10750	-0.002	0.999
FamilyDani	-19.57	10750	-0.002	0.999
FamilyDravidian	-19.57	4065	-0.005	0.996
FamilyEastern Jebel	19.57	10750	0.002	0.999
FamilyEngan	-19.57	10750	-0.002	0.999
FamilyEskimo-Aleut	19.57	6209	0.003	0.998
FamilyGarrwan	-19.57	10750	-0.002	0.999
FamilyGuaicuruan	4.048e-15	1.63	0.000	1.000
FamilyGunwinguan	-19.57	10750	-0.002	0.999
FamilyHmong-Mien	-19.57	10750	-0.002	0.999
FamilyInanwatan	-19.57	10750	-0.002	0.999
FamilyIndo-European	-0.98	0.95	-1.036	0.300
FamilyIroquoian	19.57	7604	0.003	0.998
FamilyIsolateA	-19.57	10750	-0.002	0.999
FamilyIsolateAA	19.57	10750	0.002	0.999
FamilyIsolateAB	-19.57	10750	-0.002	0.999
FamilyIsolateAC	-19.57	10750	-0.002	0.999
FamilyIsolateAD	-19.57	10750	-0.002	0.999
FamilyIsolateAE	-19.57	10750	-0.002	0.999
FamilyIsolateAF	-19.57	10750	-0.002	0.999
FamilyIsolateAG	-19.57	10750	-0.002	0.999
FamilyIsolateB	19.57	10750	0.002	0.999
FamilyIsolateC	-19.57	10750	-0.002	0.999
FamilyIsolateD	-19.57	10750	-0.002	0.999
FamilyIsolateE	-19.57	10750	-0.002	0.999
FamilyIsolateF	-19.57	10750	0.002	0.999
FamilyIsolateG	-19.57	10750	-0.002	0.999
FamilyIsolateH	-19.57	10750	-0.002	0.999
FamilyIsolateI	-19.57	10750	-0.002	0.999
FamilyIsolateJ	-19.57	10750	-0.002	0.999

FamilyIsolateK	-19.57	10750	-0.002	0.999
FamilyIsolateL	-19.57	10750	-0.002	0.999
FamilyIsolateM	-19.57	10750	-0.002	0.999
FamilyIsolateN	-19.57	10750	-0.002	0.999
FamilyIsolateO	-19.57	10750	0.002	0.999
FamilyIsolateP	-19.57	10750	0.002	0.999
FamilyIsolateQ	-19.57	10750	-0.002	0.999
FamilyIsolateR	-19.57	10750	-0.002	0.999
FamilyIsolateS	-19.57	10750	-0.002	0.999
FamilyIsolateT	-19.57	10750	-0.002	0.999
FamilyIsolateU	19.57	10750	0.002	0.999
FamilyIsolateV	-19.57	10750	-0.002	0.999
FamilyIsolateW	-19.57	10750	-0.002	0.999
FamilyIsolateX	-19.57	10750	-0.002	0.999
FamilyIsolateY	-19.57	10750	-0.002	0.999
FamilyIsolateZ	19.57	10750	0.002	0.999
FamilyIwaidjan	-19.57	10750	-0.002	0.999
FamilyJaponic	-19.57	6209	-0.003	0.998
FamilyJe	19.57	5377	0.004	0.997
FamilyKariri	-19.57	10750	-0.002	0.999
FamilyKartvelian	5.51e-15	1.63	0.000	1.000
FamilyKhoisan	-19.57	5377	-0.004	0.997
FamilyKoiarian	-19.57	10750	-0.002	0.999
FamilyKoreanic	-19.57	10750	-0.002	0.999
FamilyKuliak	-19.57	10750	-0.002	0.999
FamilyLimilngan	-19.57	10750	-0.002	0.999
FamilyLower Sepik-Ramu	-19.57	10750	-0.002	0.999
FamilyManingrida	-19.57	10750	-0.002	0.999
FamilyMascoyan	-19.57	10750	-0.002	0.999
FamilyMatacoan	19.57	10750	0.002	0.999
FamilyMayan	1.90	1.03	1.851	0.064
FamilyMirndi	-19.57	7604	-0.003	0.998
FamilyMisumalpan	-19.57	10750	-0.002	0.999

FamilyMiwok-Costanoan	-19.57	10750	-0.002	0.999
FamilyMixe-Zoquean	3.83e-15	1.63	0.000	1.000
FamilyMongolic	-19.57	10750	-0.002	0.999
FamilyMorehead-Wasur	-19.57	10750	-0.002	0.999
FamilyMuran	-19.57	10750	-0.002	0.999
FamilyMuskogean	-19.57	10750	-0.002	0.999
FamilyNadahup	-19.57	10750	-0.002	0.999
FamilyNakh-Daghestanian	0.22	1.06	0.211	0.833
FamilyNambikwaran	-19.57	10750	-0.002	0.999
FamilyNdu	-19.57	10750	-0.002	0.999
FamilyNiger-Congo	-0.88	0.90	-0.974	0.330
FamilyNilotic	-1.099	1.16	-0.951	0.341
FamilyNorth Halmahera	-19.57	10750	-0.002	0.999
FamilyNubian	-19.57	7604	-0.003	0.998
FamilyNuclear Goroka	-19.57	10750	-0.002	0.999
FamilyNyulnyulan	-19.57	10750	-0.002	0.999
FamilyOtomanguean	-0.41	1.23	-0.331	0.741
FamilyPalaihnihan	-19.57	10750	-0.002	0.999
FamilyPama-Nyungan	2.77e-15	0.98	0.000	1.000
FamilyPano-Tacanan	1.79	1.35	1.323	0.186
FamilyPeba-Yaguan	-19.57	10750	-0.002	0.999
FamilyPomoan	-19.57	10750	-0.002	0.999
FamilyQuechuan	-19.57	7604	-0.003	0.998
FamilyRai Coast	-19.57	10750	-0.002	0.999
FamilySahaptian	-19.57	10750	-0.002	0.999
FamilySaharan	-19.57	7604	-0.003	0.998
FamilySaliban	-19.57	10750	-0.002	0.999
FamilySalishan	-19.57	3585	-0.005	0.996
FamilySentani	-19.57	10750	-0.002	0.999
FamilySimbu	-19.57	10750	-0.002	0.999
FamilySinitic	-19.57	7604	-0.003	0.998
FamilySiouan	19.57	6209	0.003	0.998
FamilySko	-19.57	10750	-0.002	0.999

FamilySonghay	6.38e-15	1.29	0.000	1.000
FamilySurmic	0.29	1.12	0.257	0.797
FamilyTai-Kadai	-19.57	6209	-0.003	0.998
FamilyTangkic	-19.57	6209	-0.003	0.998
FamilyTequistlatecan	-19.57	10750	-0.002	0.999
FamilyTibeto-Burman	-2.08	1.02	-2.037	0.042 *
FamilyTimbe-Selepet-Komba	-19.57	10750	-0.002	0.999
FamilyTimor-Alor-Pantar	-1.10	1.41	-0.777	0.437
FamilyTotonacan	-19.57	7604	-0.003	0.998
FamilyTsimshianic	-19.57	10750	-0.002	0.999
FamilyTucanoan	-19.57	6209	-0.003	0.998
FamilyTungusic	-19.57	6209	-0.003	0.998
FamilyTupian	-19.57	5377	-0.004	0.997
FamilyTurkic	-19.57	7604	-0.003	0.998
FamilyUralic	-0.69	1.19	-0.582	0.560
FamilyUto-Aztecan	-19.57	4065	-0.005	0.996
FamilyWintuan	-19.57	10750	-0.002	0.999
FamilyWorroran	-19.57	10750	-0.002	0.999
FamilyYangmanic	-19.57	10750	-0.002	0.999
FamilyYanomaman	-19.57	10750	-0.002	0.999
FamilyYeniseian	-19.57	10750	-0.002	0.999
FamilyYokutsan	-19.57	10750	-0.002	0.999
FamilyYukaghir	19.57	7604	0.003	0.998
FamilyZaparoan	-19.57	10750	-0.002	0.996

MODEL 3. The relationship between antipassives and VO vs. OV basic word order

Reference levels:

Basic word order: OV

Region: Asia

Alignment: Nominative-accusative

Locus of grammatical marking: Neither head-marking nor dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-2.07	0.54	-3.82	1.32e-4 ***
Order2VO	0.19	0.26	0.73	0.46
RegionAustralia	0.75	0.68	1.11	0.27
RegionAmericas	1.06	0.46	2.32	0.02 *
RegionEurope	1.10	0.51	2.16	0.03 *
RegionAfrica	0.67	0.50	1.35	0.18
RegionPacific	0.30	0.54	0.55	0.58
AlignmentActive	0.58	0.44	1.31	0.19
AlignmentInverse	-16.84	2797.44	-0.01	1.00
Alignment3Symm.	-15.48	946.12	-0.02	0.99
Alignment3Ergative	1.20	0.29	4.17	3.08e-5 ***
LocusHead	0.10	0.46	0.22	0.82
LocusDependent	-0.84	0.55	-1.53	0.13
LocusBoth	-0.35	0.51	-0.68	0.50

MODEL 4. The relationship between antipassives and verb-medial vs. verb-peripheral basic word order

Reference levels:

Basic word order: Verb-medial

Region: Asia

Alignment: Nominative-accusative

Locus of grammatical marking: Neither head-marking nor dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.71	0.55	-3.10	1.91e-3 **
Order3VP	-0.46	0.30	-1.55	0.12
RegionAustralia	0.79	0.68	1.16	0.25
RegionAmericas	1.14	0.46	2.50	0.01 *
RegionEurope	1.05	0.51	2.07	0.04 *
RegionAfrica	0.60	0.50	1.21	0.23
RegionPacific	0.23	0.54	0.42	0.67
AlignmentActive	0.69	0.45	1.54	0.12
AlignmentInverse	-17.08	2797.44	-0.01	1.00
AlignmentSymm.	-15.39	907.37	-0.02	0.99
AlignmentErgative	1.18	0.30	4.00	6.37e-5 ***
LocusHead	0.09	0.46	0.19	0.85
LocusDependent	-0.74	0.56	-1.35	0.18
LocusBoth	-0.24	0.51	-0.48	0.63

MODEL 5. The relationship between ergativity and region, basic word order, and locus of grammatical marking

This corresponds to the data in figures 6.3-6.5.

Reference levels:

Basic word order: AOV

Region: Europe

Locus of grammatical marking: Dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.15	0.41	-0.38	0.71
OrderVOA	1.29	0.48	2.65	8.00e-3 **
OrderFlexible	0.24	0.45	0.55	0.59
OrderVAO	0.60	0.36	1.69	0.09 .
OrderAVO	-1.77	0.44	-4.02	5.94e-5 ***
OrderOAV	-0.18	6523	-0.00	1.00

OrderOVA	3.19	0.90	3.55	3.81e-4 ***
RegionAsia	-0.32	0.46	-0.71	0.48
RegionAfrica	-2.34	0.62	-3.75	1.74e-4 ***
RegionAmericas	-0.35	0.44	-0.79	0.43
RegionAustralia	0.83	0.57	1.45	0.15
RegionPacific	-1.11	0.49	-2.25	0.02 *
LocusBoth	0.90	0.32	2.84	4.5e-3 **
LocusHead	-0.01	0.32	-0.03	0.98
LocusNeither	-16.67	817	-0.020	0.98

MODEL 6. The relationship between ergativity and VO vs. OV basic word order

Reference levels:

Basic word order: OV

Region: Europe

Locus of grammatical marking: Head-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.14	0.44	-0.33	0.74
Order2VO	-0.43	0.26	-1.65	0.10
RegionAsia	0.04	0.43	0.08	0.93
RegionAfrica	-1.62	0.53	-3.04	2.37e-3 **
RegionAmericas	0.23	0.41	0.57	0.57
RegionAustralia	1.05	0.60	1.73	0.08 .
RegionPacific	-0.63	0.46	-1.37	0.17
LocusDependent	-0.42	0.34	-1.26	0.21
LocusBoth	0.44	0.33	1.34	0.18
LocusNeither	-17.39	883.97	-0.02	0.98

MODEL 7. The relationship between ergativity and verb-medial vs. verb-peripheral basic word order

Reference levels:

Basic word order: Verb-medial

Region: Europe

Locus of grammatical marking: Head-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.79	0.45	-1.75	0.08 .
Order3VP	0.96	0.32	2.96	3.03e-3 **
RegionAsia	-0.18	0.44	-0.40	0.69
RegionAfrica	-1.72	0.54	-3.18	1.47e-3 **
RegionAmericas	-0.13	0.43	-0.30	0.77
RegionAustralia	0.96	0.63	1.53	0.13
RegionPacific	-0.81	0.47	-1.74	0.08 .
LocusDependent	-0.59	0.34	-1.73	0.08 .
LocusBoth	0.39	0.32	1.19	0.23
LocusNeither	-17.28	872.06	-0.02	0.98

MODEL 8. The relationship between antipassives in ergative languages and region, basic word order, and locus of grammatical marking

This corresponds to the data in figures 6.6-6.7.

Reference levels:

Basic word order: AVO

Region: Europe

Locus of grammatical marking: Dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	0.46	1.05	0.44	0.65719
OrderFlexible	-1.45	1.00	-1.44	0.14963
OrderAOV	-1.04	0.91	-1.15	0.24915

OrderOVA	-0.42	1.09	-0.39	0.69960
OrderVAO	-2.41	1.00	-2.41	0.01595 *
OrderVOA	0.15	1.21	0.13	0.90068
RegionAustralia	0.54	0.80	0.67	0.50198
RegionAfrica	0.14	1.09	0.13	0.89929
RegionAmericas	1.93	0.72	2.67	0.00764 **
RegionAsia	-0.17	0.79	-0.22	0.82739
RegionPacific	-0.38	0.93	-0.41	0.68178
LocusBoth	-1.31	0.53	-2.46	0.01403 *
LocusHead	-0.33	0.58	-0.57	0.56879

MODEL 9. The relationship between antipassives in ergative languages and VO vs. OV basic word order

Reference levels:

Basic word order: OV

Region: Europe

Locus of grammatical marking: Both head-marking and dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.48	0.62	-2.40	0.02 *
Order2VO	-0.46	0.51	-0.89	0.37
RegionAustralia	0.92	0.83	1.11	0.27
RegionAfrica	0.057	1.03	0.06	0.96
RegionAmericas	1.18	0.72	1.65	0.095 .
RegionAsia	-0.41	0.78	-0.53	0.60
RegionPacific	-0.62	0.91	-0.68	0.50
LocusDependent	0.63	0.58	1.09	0.28
LocusHead	1.56	0.61	2.56	0.01 *

MODEL 10. The relationship between antipassives in ergative languages and verb-medial vs. verb-peripheral basic word order

Reference levels:

Basic word order: Verb-medial

Region: Europe

Locus of grammatical marking: Both head-marking and dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.62	0.83	-0.74	0.46
Order3VP	-0.97	0.63	-1.55	0.12
RegionAustralia	0.84	0.85	0.99	0.32
RegionAfrica	-0.44	1.09	-0.41	0.69
RegionAmericas	0.97	0.70	1.40	0.16
RegionAsia	-0.32	0.78	-0.41	0.68
RegionPacific	-0.95	0.91	-1.04	0.30
LocusDependent	0.74	0.58	1.28	0.20
LocusHead	1.29	0.59	2.20	0.03 *

MODEL 11. The relationship between nominative-accusativity and region, basic word order, and locus of grammatical marking

This corresponds to the data in Figures 7.1-7.3.

Reference levels:

Basic word order: VAO

Region: Europe

Locus of grammatical marking: Head-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.75	0.55	-1.37	0.17
OrderAOV	0.67	0.37	1.84	0.07 .
OrderAVO	1.76	0.43	4.06	4.92e-5 ***
OrderFlexible	-0.09	0.56	-0.17	0.87
OrderOAV	14.73	535.41	0.03	0.98

OrderOVA	-2.76	1.18	-2.33	0.02 *
OrderVOA	-0.92	0.65	-1.42	0.16
RegionAfrica	2.13	0.55	3.90	9.76e-5 ***
RegionAmericas	-0.42	0.42	-0.98	0.33
RegionAsia	0.23	0.43	0.54	0.59
RegionAustralia	-0.51	0.55	-0.92	0.36
RegionPacific	-0.21	0.46	-0.46	0.64
LocusDependent	0.14	0.32	0.43	0.66
LocusBoth	-0.54	0.33	-1.66	0.10 .
LocusNeither	1.29	0.57	2.25	0.02 *

MODEL 12. The relationship between nominative-accusativity and VO vs. OV basic word order

Reference levels:

Basic word order: OV

Region: Europe

Locus of grammatical marking: Head-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	0.14	0.43	0.32	0.75
Order2VO	0.22	0.25	0.91	0.36
RegionAfrica	1.45	0.49	2.98	2.86e-3 **
RegionAmericas	-0.97	0.41	-2.35	0.02 *
RegionAsia	-0.04	0.42	-0.11	0.92
RegionAustralia	-0.74	0.59	-1.24	0.21
RegionPacific	-0.59	0.43	-1.36	0.17
LocusDependent	0.14	0.32	0.44	0.66
LocusBoth	-0.45	0.33	-1.37	0.17
LocusNeither	1.92	0.58	3.32	9.08e-4 ***

MODEL 13. The relationship between nominative-accusativity and verb-medial vs. verb-peripheral basic word order

Reference levels:

Basic word order: Verb-peripheral

Region: Europe

Locus of grammatical marking: Head-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.27	0.45	-0.61	0.54
Order3VM	0.87	0.29	3.02	2.56e-3 **
RegionAfrica	1.58	0.49	3.18	1.45e-3 **
RegionAmericas	-0.61	0.43	-1.43	0.15
RegionAsia	0.23	0.43	0.53	0.60
RegionAustralia	-0.66	0.62	-1.08	0.28
RegionPacific	-0.43	0.45	-0.96	0.34
LocusDependent	0.35	0.33	1.06	0.29
LocusBoth	-0.36	0.33	-1.08	0.28
LocusNeither	1.57	0.54	2.93	3.43e-3 **

MODEL 14. The relationship between unmarked antipassive-type detransitivizing operations and basic word order, region, alignment, and locus of grammatical marking

Reference levels:

Basic word order: AOV

Region: Europe

Alignment: Nominative-accusative

Locus of grammatical marking: Both head-marking and dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.31	0.38	-0.82	0.41
OrderAVO	-0.07	0.27	-0.26	0.80
OrderFlexible	1.17	0.50	2.33	0.02 *

OrderOAV	-13.53	535.41	-0.03	0.98
OrderOVA	1.68	1.07	1.56	0.12
OrderVAO	-0.00	0.34	-0.01	0.99
OrderVOA	-0.37	0.40	-0.91	0.36
RegionAfrica	0.33	0.43	0.76	0.45
RegionAmericas	-0.20	0.42	-0.48	0.64
RegionAsia	-0.74	0.43	-1.74	0.08
RegionAustralia	-0.62	0.54	-1.13	0.26
RegionPacific	-0.39	0.47	-0.83	0.41
AlignmentActive	0.02	0.40	0.05	0.96
AlignmentInverse	0.34	0.93	0.37	0.71
AlignmentSymm.	-0.21	0.66	-0.32	0.74
AlignmentErgative	1.02	0.26	3.96	7.38e-5 ***
LocusDependent	-0.05	0.31	-0.17	0.87
LocusHead	0.47	0.31	1.55	0.12
LocusNeither	0.25	0.40	0.62	0.53

MODEL 15. The relationship between antipassives which only serve detransitivizing functions [VALDEC] and basic word order, region, alignment, and locus of grammatical marking

Reference levels:

Basic word order: AOV

Region: Africa

Alignment: Nominative-accusative

Locus of grammatical marking: Both head-marking and dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-2.53	0.55	-4.59	4.37e-6 ***
OrderAVO	0.03	0.45	0.08	0.94
OrderFlexible	0.75	0.54	1.39	0.16
OrderOAV	-15.66	3956.18	-0.00	1.00
OrderOVA	1.78	0.69	2.58	9.97e-3 **

OrderVAO	0.18	0.48	0.37	0.71
OrderVOA	1.55	0.55	2.83	4.68e-3 **
RegionAmericas	0.46	0.48	0.95	0.34
RegionAsia	-0.62	0.65	-0.96	0.34
RegionAustralia	-0.87	0.82	-1.07	0.29
RegionEurope	-1.16	0.87	-1.33	0.19
RegionPacific	-1.07	0.69	-1.56	0.12
AlignmentActive	0.88	0.52	1.68	0.09 .
AlignmentInverse	1.39	0.96	1.45	0.15
AlignmentSymm.	-14.40	879.18	-0.02	0.99
AlignmentErgative	1.28	0.39	3.25	1.14e-3 **
LocusDependent	-0.54	0.52	-1.05	0.30
LocusHead	0.17	0.44	0.38	0.70
LocusNeither	0.44	0.66	0.66	0.51

MODEL 16. The relationship between fully or partially productive antipassives and basic word order, region, alignment, and locus of grammatical marking

Reference levels:

Basic word order: AOV

Region: Europe

Alignment: Nominative-accusative

Locus of grammatical marking: Both head-marking and dependent-marking

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-3.13	0.59	-5.30	1.14e-7 ***
OrderAVO	0.41	0.39	1.06	0.29
OrderFlexible	0.76	0.49	1.54	0.12
OrderOAV	-16.11	3956	-0.00	1.00
OrderOVA	0.77	0.65	1.18	0.24
OrderVAO	-0.26	0.45	-0.58	0.57
OrderVOA	1.53	0.56	2.74	6.10e-3 **
RegionAfrica	0.76	0.64	1.19	0.23

RegionAmericas	1.30	0.58	2.26	0.02 *
RegionAsia	-0.54	0.72	-0.75	0.46
RegionAustralia	0.00	0.73	0.00	1.00
RegionPacific	0.29	0.67	0.44	0.66
AlignmentActive	0.39	0.50	0.78	0.43
AlignmentInverse	0.82	0.93	0.89	0.38
AlignmentSymm.	-15.39	880.70	-0.02	0.99
AlignmentErgative	1.42	0.34	4.16	3.13e-5 ***
LocusDependent	0.24	0.42	0.56	0.58
LocusHead	0.37	0.40	0.93	0.35
LocusNeither	0.16	0.63	0.26	0.80

MODEL 17. The progression of *-on* detransitive marking by dialect into constructions which historically took *-o*

The model excludes those dialects which are only represented by one speaker (San José Poaquil, Santiago Sacatepequéz, and San Andres Itzapa), which was required in order for the model to converge.

Reference levels:

Dialect: Patzicía

Age: 40-50

Type: AF

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	1.51	0.33	4.59	4.41e-6 ***
DialectPatzún	0.27	0.58	0.47	0.64
DialectSololá	1.03	0.53	1.92	0.05 .
DialectStaMaría	-2.73	0.53	-5.13	2.91e-7 ***
DialectTecpán	-4.00	1.08	-3.71	2.10e-4 ***
DialectComalapa	-20.04	981.47	-0.02	0.98
Age20-30	-2.66	0.56	-4.78	1.74e-6 ***
Age31-39	-1.31	0.54	-2.45	0.01 *
Age51-70	-1.12	2940.12	0.00	1.00
TypeOblAP	0.37	0.44	0.83	0.41

APPENDIX E. LANGUAGES WITH MULTIPLE ANTIPASSIVES

This section lists the languages which were considered here to have multiple antipassives. A brief description of the constructions/markers is given, as well as how the languages were categorized based on the differences between the antipassives in Chapter 10. Question marks indicate uncertainty. If you have additional relevant information from the language(s) you research, feel free to contact me at heatonr@hawaii.edu.

Family	Language	Markers	Constructions	Description	Categorization
Algonquian	Balckfoot	2	1	-ak(-)i and -im(-)aa 'deriving' suffixes which create agentive intransitive verbs from transitive verbs.	Patient (animacy)
Algonquian	Ojibwe	2	1	AI constructions with primary objects have detransitivizing markers, -(V)ge and -iwe (animate patients only). Both unspecified obj. same correspondence with ditransitives as in Pen.	Patient (animacy)
Algonquian	Penobscot	2	1	has cognate animate and inanimate detransitivizing theme signs.	Patient (animacy)
Algonquian	Plains Cree	2	1	Also -ike: (TA and TI) and -iwe: (TA) 'general object' markers which detransitivize with unspecified obj interpretation.	Patient (animacy)
Austronesian	Tamambo	2	2	detransitivization via reduplication, which is the most common and productive function of reduplication in the language, although there are many other functions as well. Also has productive detransitivizing prefix vari- from the POc reciprocal for habitual actions.	Aspect
Austronesian	Chamorro	2	1?	discusses it as two constructions, 'demoting' and 'indefinite', but there is at least some crossover between the categories and they share a marker. It seems possible to unite them by saying that the obl marker is omitted when the patient is indefinite. realis vs. irrealis.	Aspect
Chukotko-Kamchatkan	Itelmen	2	1	in- (and variations thereof? Georg lists 5), cognate with Chukchi ine-, and -?l markers, which often occur together. Georg says they are very rare. Interacts with the causative system.	Lexical(?)
Chukotko-Kamchatkan	Chukchi	2 (3?)	1 (2?)	2/3 AP markers, ine- and -tku- +obl, -et- patientless, unproductive (only K et al.; others reflexive). Like in Halkomelem, some instances exist of AP stacking (ine= and tku=). Choice of marker appears to be lexical, although tku= has additional iterative or refl/recip sense.	Aspect
Chibchan	Guatuso/ Maleku	2	2	one is an antipassive use of the middle morpheme, and the other is a dedicated antipassive morpheme [has a null allomorph]. Refl.recip is also middle, pushing out an older middle marker -teki. both my have an oblique patient	Lexical

Eskimo-Aleut	Western Greenlandic	4	1	Backgrounding APs. 4 AP affixes and intrans+obl obj [i.e. lacks mark]. Difference doesn't appear to be syntactic, but debated exactly what distinctions are. Bittner says -si, -(ss), -nnig imperfective; -llir inceptive, -□ imperfective activity. -si is also inceptive/inchoative and can attach to intransitives.	Aspect/Patient(?)
Eskimo-Aleut	Central Alaskan Yup'ik	3	1	-gi- marker is the most productive; -uc- and -kenge- are lexically restricted. A verb can be formed with a restricted marker as well as a productive marker. of the two restricted ones, speakers may prefer one to the other. if both are used, there may be some appreciable difference. because uc and gi are also applicative and causative morphemes, antipassive forms generally have both readings.	Lexical
Eskimo-Aleut	Inupiaq	4	1	calls the AP markers cognate with Greenlandic 'postbases', and also agentive AP structure with lack of postbase. different markers distribution dependent on phonology, 2 of 4 can be adversative, although choice is often specified for each base. Has been unable to identify clear semantic differences like in Greenlandic. 3 are productive.	Lexical/Aspect
Isolate	Washo	2	1 (??)	<?um-> prefix creates intransitives apparently with same meaning and role relations as the transitive (patientless). w-'Static' prefix derives diffuse agent intransitives with intransitive roots, but diffuse patient (patientless) intransitives with transitive roots. be-'indefinite object' creates intransitives from intransitives and transitives, and focuses on the action (patient implied). Roles not always clear b/c does not provide contextual examples.	Patient
Matacoan	Nivaclé	2	1	Two different detransitivizing and valency decreasing affixes, wanka- and -jan. Both are productive, and can be stacked. LC feels one is more inflectional, and the other more derivational, where one leaves the patient unspecified while the other removes it entirely from the discourse	Patient
Mayan	Tseltal	3	1	AbsAP /-wan/, productive, implied human patient; -maj and -baj, non-productive, implied inanimate patient. no AF.	Lexical; Patient (animacy)
Mayan	K'ichee'	2	2	absAP [-on] is traditional AP+/-obl. oblAP [-ow] in focus only. Inc.AP [-ow], AF [-ow], refl.AP [-ow] not considered AP here, and possibly are the same (type of) construction.	Patient(?)
Mayan	Sipakapense	2	1/2?	absAP [-n] and oblAP [-w]; AF [-w]. Different in that 1 or 2 patients can't appear in obl phrase. no non-AV/SV examples, so unclear if obl AP ever appears outside of focus, or with an -n affix. Says 3rd person patients can be juxtaposed. Possibly incAP or AF, since limited to SVO order.	Patient(?)

Mayan	Uspanteko	2	1/2?	absAP [-n] and oblAP [-(o)w], possibly the same construction, traditional AP+/-obl; incAP [-ow], AF [-(o)w]. However, no examples of obl construction outside of focus; oblique discussed as AF in Pixab'aj 2007.	Patient(?)
Mayan	Kaqchikel	2	2	absAP [-on], oblAP[-o]; IncAP [-o], AF [-o], refl.AP [-o] not considered AP here, b/c are syntactically incorporated or transitive. oblAP limited to focus like AF. AbsAP can rarely have patientive subject.	Patient
Mayan	Tz'utujil	2	2 (?)	absAP [-oon], oblAP [-ow]; Inc. AP [-ow], AF [-ow], refl.AP [-ow] not considered AP here, b/c are syntactically incorporated or transitive. oblAP limited to focus like AF. Possible that inc.AP and refl.AP are the same type of construction.	Patient(?)
Mayan	Sakapulteko	2	1 (??)	absAP [-n] and oblAP [-Vw] considered to be the same construction, traditional AP+/-obl; AF [-Vw]. No mention of incAP or reflAP. absAP in focus still marked with [-n], and discusses obl AP as limited to focus.	Patient(?)
Nakho-Daghestanian	Hinuq	2	1	2 markers, distribution is lexically restricted. do:- can only be added to caus and anticaus stems. At least partially lexicalized, as meaning is not always predictable	Lexical
Niger-Congo	Soninke	2	2	one is a dedicated AP marker, and another middle-type marker i- that is generally detransitivizing: passive, anitcausative, autocausative, reflexive. 1st is productive, 2nd is not.	Lexical
Pama-Nyungan	Dyirbal	2	2	reflexive and reciprocal morphemes both have additional antipassive uses. Also has -ŋa(y) AP morpheme. Difference is in the meaning: -ŋay indicates an actual action; refl/recip indicates potential action	Aspect; Lexical
Surmic	Tennet	2	1	2 markers: one for the incompletive and one for the completive.	Aspect
Surmic	Suri/Tirmaga	2	1	restricted to habitual/progressive/reciprocal action. -nen for 1/2nd persons, -ne for 3rd and 1st incl. also functions as the reciprocal.	Person (not in categorization)
Tibeto-Burman	Japhug	2	1	one implying a animate patient, the other an inanimate patient. Not productive.	Patient (animacy)
Tibeto-Burman	Tsobdun	2	1	one implying a animate patient, the other an inanimate patient. Detransitivization indicated by case marking.	Patient (animacy)
Uralic	Tundra Nenets	2	1	at least 2 affixes, -ŋko/-nc'o- and -ŋkur-, no stated difference. Some 'passive' affix(es) (maybe middle, since some appear reflexive?) yield intransitives with agentive subjects.	Unknown
Yukaghir	Kolyma Yukaghir	3	1	AP morphemes -d'e-, -že-, and -de-. Each applies to a restricted group of verbs. Dispersive suffix also detransitivizes the verb (objectless).	Lexical

<i>Mayan</i>	<i>Huastec</i>	<i>3</i>	<i>1</i>	<i>[-Vl, -Vm, Vsh. Kondic (2016) says the distribution follows the distribution of the transitive status suffixes, which makes the distribution predictable (and as such not to be included here). Further information pending.</i>	<i>Lexical</i>
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