UNIVERSITY OF CALIFORNIA

Santa Barbara

Realis and Irrealis:

Chini Verb Morphology, Clause Chaining, and Discourse

A dissertation in partial satisfaction

of the requirements for the degree

Doctor of Philosophy in Linguistics

by

Joseph Daniel Brooks

Committee in charge:

Professor Marianne Mithun, Chair

Professor Bernard Comrie

Professor Wallace Chafe

Professor Marian Klamer, Leiden University

September 2018

The dissertation of Joseph Daniel Brooks is approved.

_____

Wallace Chafe

_____

Bernard Comrie

_____

Marian Klamer

_____

Marianne Mithun, Committee Chair

September 2018

Realis and Irrealis: Chini Verb Morphology, Clause Chaining, and Discourse

iii

Dedication

With love for my grandmother, Beverly Hannah Brooks (1923-2016)

Acknowledgments

My graduate years have given me a deep appreciation for how much I owe to other people. Many helped steer me toward what I would often only later realize was the right direction, so I hope to be able to recognize those influences here at least in a small way.

I am thankful to those Papua New Guineans, missionaries and expatriates who have helped me during my time in PNG. Thank you to: Katherine Epikana in Madang, my "sister from another mister" for her friendship and hospitality; Martha Wade for her hospitality in Angguna and also for multiple forms of help over the past several years; Bethany Butler with Pioneer Bible Translators who went out of her way to help a total stranger get to Aiome; Mark Eby, Ryan Shelby, Anne-Marie Wanamp, Ben Ruli, Henson Korio, and the librarians at DWU in Madang. Thanks to Don Daniels, who helped inform me about doing fieldwork in PNG and who went out of his way to get me to Andamang my first time in PNG.

For their intellectual engagement and patience throughout the dissertation process, I owe a special thanks to the members on my committee: Wallace Chafe, Bernard Comrie, Marian Klamer, and my committee chair Marianne Mithun. In addition to saving me from some embarrassing mistakes, many aspects of the present analysis and presentation are direct results of their insights or insistence that I rethink certain things. I have benefited greatly from their input from the prospectus to the last draft.

I am very thankful to the professors I have had over the years, and I would not be here without them. John Haiman, my professor at Macalester College, is the reason I became a linguist in the first place. His creative approach to teaching and to linguistics inspired me to go out into the world and try to understand the workings of a language different from my own. At UCSB, I have benefited from the rich training provided by Bernard Comrie, Carol Genetti, and Marianne Mithun. I know of no other department that provides its students with such an advanced education in linguistics, and I feel very lucky to have been part of the UCSB vision for the field. I reserve a special thanks for Marianne, who has been my advisor since I entered the program. She has always worked to teach me and her other students how to go about understanding a language for what it is and how it got that way. I am particularly indebted to her for imparting her knowledge about the relationships between data and theory and, relatedly, between description and explanation in linguistics.

For their help along the way, I would also like to thank the following people: Carol Genetti for instilling in me and her other students the importance of argumentation in linguistics, and also for allowing me the use of her office to complete my dissertation; Bernard Comrie for giving me and his other students the tools to see language from a cross-linguistic perspective and also for his advice and support over the past years; Avrom Schwartz who spent many mornings teaching me Yiddish, a language I hope to come back to eventually. Thank you also to Ger Reesink for his generous help on a manuscript of mine that relates to Chapter 7 in this work. I would like also to thank Lise Dobrin who has been a true mentor and has helped me in so many ways over the past several years. She has enabled me to conceive of fieldwork in the New Guinea context in a deeper sense than I would have on my own. I would also like to thank: Sasha Aikhenvald, Laura Arnold, Marnie Atkins, Danielle Barth, Andrea Berez-

Figure 1:   Mbariŋini Manna (Anton)

I also thank everyone in my family for their support, in particular Jackie, Sara, my dad Allan, and above all my grandmother Beverly Brooks. She nurtured my interests in language among other topics early on in life. I owe so much to her grandparenting, her compassion and intellectual spirit. She had hoped to make the journey to Santa Barbara to see me graduate but did not live to see it. She died in October 2016, and this dissertation is dedicated to her memory.

This dissertation owes so much to the above influences. Any mistakes or inconsistencies in the analysis or presentation are my responsibility.

Curriculum Vitae

Joseph Daniel Brooks

Academic Appointments
2010 - 2018   M.A. & Ph.D. student, *University of California, Santa Barbara*, United States.
            Advisor: Marianne Mithun
2016   Visiting researcher, *Language and Culture Research Centre*, Cairns, Australia. 4 months.
            Sponsor: Alexandra Aikhenvald
2015 & 2016   Visiting researcher, *Leiden University Centre for Linguistics*, the Netherlands. 8 months.
            Sponsor: Marian Klamer
2004 - 2008   Undergraduate student, *Macalester College*, St. Paul, MN., United States.
            Advisor: John Haiman

Academic Degrees
2018   Ph.D. Linguistics. University of California, Santa Barbara. United States.
            Dissertation: Realis and Irrealis: Chini Verb Morphology, Clause Chaining, and Discourse
            Committee: Wallace Chafe, Bernard Comrie, Marian Klamer, Marianne Mithun (chair)
            Dissertation: *Realis and Irrealis: Chini Verb Morphology, Clause Chaining, and Discourse*
2013   M.A. Linguistics. University of California Santa Barbara. United States.
            Thesis: *Interactions between the morphosyntax and prosody of switch-reference in Hua narrative discourse*
            Committee: Wallace Chafe, Matthew Gordon, Marianne Mithun (chair)
2008   B.A. Linguistics. Macalester College, Saint Paul, MN. United States.
            Major: Linguistics. Minor: French and francophone studies.

Research Interests
Clause chaining; Code-switching; Ethics in linguistic fieldwork; Ethnography; Historical linguistics; Language contact; Language documentation theory and practice; Language and interaction; Language shift; Linguistic anthropology, Linguistic description; Linguistic typology; Papuan languages; Prosody; Realis/irrealis distinctions

External Grants
Primary Investigator
2016   Endangered Languages Documentation Programme Individual Graduate Scholarship.
            'Expanding the documentation of Chini language and culture.' Co-PI: Marianne Mithun.
2013   Endangered Languages Documentation Programme Small Grant. 'Documentation and analysis of Andamang Chini.' Co-PI: Marianne Mithun.

Home Institution Grants and Fellowships
2016   Doctoral Student Travel Grant, University of California, Santa Barbara.
2015   Linguistics Department Mini-grant, University of California, Santa Barbara.
2015   Dean's Fellowship, University of California, Santa Barbara.
2014   Linguistics Department Mini-grant, University of California, Santa Barbara.
2013   Linguistics Department Mini-grant, University of California, Santa Barbara.
2010-14   Linguistics Department Fellowship, University of California, Santa Barbara.

Other Funding and Awards
2018   Grant from the Chafe-Mithun Fund for Research on Understudied Languages.
            Project: Pilot research trip for Yona (Left May family, Papua New Guinea)
2013   Best student abstract scholarship. 3rd International Conference on Language Documentation and Conservation. University of Hawai'i, Honolulu.

Institute Attendance and Training

2016   ELDP Training Programme, SOAS University of London. United Kingdom.
2016   ARC Centre of Excellence for Dynamics of Language Summer School, University of Melbourne. Australia.
2010   InField, the Institute for Language Documentation and Conservation, University of Oregon at Eugene.

Fieldwork

In-situ: 9 months

2016   Chini (Ramu), Papua New Guinea. 2 months.
2014   Chini (Ramu), Papua New Guinea. 6 months.
2012   Chini (Ramu), Kaje (Ramu), Papua New Guinea. 1 month.

Field methods courses: 13 months

2011-12   Shona (Bantu), field methods course at UCSB. 9 months.
2010   Northern Paiute (Uto-Aztecan), field methods course at InField. 1 month.
2008   Thai (Tai-Kadai), field methods course at Macalester College. 3 months.

Languages

Native	English
Advanced proficiency	French, German, Spanish, Tok Pisin
Moderate proficiency	Swedish, Yiddish

Publications

Journal articles (peer-reviewed):

2015   On training in language documentation and capacity building in Papua New Guinea: A response to Bird et al. *Journal of Language Documentation and Conservation* 9. 1-9.
Submitted.   *Secret language and resistance to borrowing in Chini. International Journal of Cultural Linguistics.*
Submitted.   *The history of *=a: Contact and reconstruction in northeast New Guinea (co-authored with Don Daniels). The Journal of Language Contact.*

Presentations

Conferences and workshops

2017   'When prosody can be reconstructed: A case from Papua New Guinea.' 23rd International Conference on Historical Linguistics. San Antonio, Texas, USA. (main presenter: Don Daniels).
2016   'Reconstructing pragmatic borrowing along the Ramu River.' 49th meeting of the Australian Linguistics Society. Melbourne, Australia. December 8. (main presenter: Don Daniels).
2016   'New words for new concepts: Creative word coinage in Chini.' Special International Workshop: Secret codes and special styles. Language and Culture Research Centre, James Cook University. Cairns, Australia. August 11.
2016   'Topical and focused object constructions in object-initial clauses in Chini.' Workshop on grammatical categories and information structure. Language and Culture Research Centre, James Cook University. Cairns, Australia. June 30.
2016   'The few and the plenty: A typologically rare number opposition in Chini.' 8th Austronesian and Papuan Languages and Linguistics conference. London, United Kingdom. May 14.
2016   'Realis/irrealis and verbal number in Chini verbs of motion: Explaining categorial change.' 90th Annual Meeting of the Linguistic Society of America. Washington D.C., United States. January 8.
2015   'Revisiting switch-reference: On the contact-induced origin of clause chains in Chini.' 48th Annual Meeting of the Societas Linguistica Europaea. Leiden University Centre for Linguistics, Leiden, Netherlands. September 2.

2015	'Fieldwork as exchange: A Chini interpretation of linguist-community relations.' 4th International Conference on Language Documentation and Conservation. University of Hawai'i, Honolulu, United States. February 27.

2015   'Fieldwork as exchange: A Chini interpretation of linguist-community relations.' 4th International Conference on Language Documentation and Conservation. University of Hawai'i, Honolulu, United States. February 27.

2014   'Three applicative-like constructions in Chini in synchronic and diachronic perspective.' Leiden University Friday Afternoon Lectures. Leiden, Netherlands. March 21.

2014   'Event continuity and causality in clause combining: A new look at Hua switch reference constructions in connected speech.' Georgetown University Round Table on Languages and Linguistics. Washington D.C., United States. March 15.

2014   'Split paths in the same domain: the polygrammaticalization of *mi-* in Chini.' 40th Annual Meeting of the Berkeley Linguistics Society. University of California, Berkeley, United States. February 9.

2013   'When repatriation is not 'giving back': evidence from a meeting with the Hua of Papua New Guinea.' 3rd International Conference on Language Documentation and Conservation. University of Hawai'i, Honolulu, United States. March 3.

2013   'Syntactic-prosodic form and pragmatic function: focus and left-detached patients in Chini.' 5th Biennial Meeting of the Rice Linguistics Society: Language, Culture, and Cognition. Rice University, Houston, Texas, United States. February 9.

2012   'The languages of Papua New Guinea.' International Workshop on Language Preservation. University of Goroka, Goroka, Papua New Guinea. May 20.

2012   'Interdependence between word-level stress and intonational contours in Northern Paiute.' Annual meeting of the Society for the Study of the Indigenous Languages of the Americas, Portland, Oregon, United States. January 5.

2011   'Suprasegmental features in Northern Paiute.' Poster presentation. Annual meeting of the Acoustical Society of America, San Diego, California, United States. November 1.

Departmental seminars

2018   'The linguistic encoding of reality: Realis/irrealis distinctions in Chini grammar and discourse.' Doctoral colloquium. University of California, Santa Barbara. April 19.

2018   'Realis/irrealis shifts in Chini clause chains.' Prospective student orientation week. University of California, Santa Barbara. January 18.

2016   'Possession in Chini.' Language and Culture Research Centre, James Cook University. Cairns, Australia. August 3.

2016   'Verbal number in Chini.' Language and Culture Research Centre, James Cook University. Cairns, Australia. July 13.

2016   'Switch-reference or event-linkage? Chini clause chaining constructions in narrative and conversation.' Centre of Excellence for the Dynamics of Language, The Australian National University, Canberra. June 15.

2016   'Interactional and historical insights into the anterior modal tense category in Chini.' The Nijmegen Grammar Group. Netherlands. March 31.

2016   'The phonologization of implosive prestopped nasals in Andamang Chini.' The Phonetics/Phonology Workshop. University of Edinburgh. United Kingdom. March 11.

2016   'The contact-fueled development of clause chaining in Chini.' Friday Afternoon Lecture Series. Leiden University, Netherlands. March 4.

2016   ' "Throw it on the down-low": Secret language and lexical renewal in Chini.' New Adventures with Indigenous Languages. Santa Barbara, California, United States. January 12.

2015   'Glossing issues in Chini: The real and the imaginary.' New Adventures with Indigenous Languages. Santa Barbara, California, United States. February 10.

Workshop Participation

2012   Staff member. International Workshop on Language Preservation. University of Goroka, Goroka, Papua New Guinea. May 21-June 1.

Research Assistantships

2012-2013   Research assistant. 'The prosodic structure of Koasati.' PI: Matthew Gordon.

Teaching

2018	TA. Language in Life. University of California, Santa Barbara. Spring.
2018	TA. Language in Society. University of California, Santa Barbara. Winter.
2016	Reader. Introduction to TESOL. University of California, Santa Barbara. Winter.
2015	TA. First Language Acquisition. University of California, Santa Barbara. Fall.
2015	TA. Introduction to Linguistics. University of California, Santa Barbara. Winter.
2014	TA. Introduction to Phonetics. University of California, Santa Barbara. Fall.
2014	TA. Language and Power. University of California. Winter.
2013	TA. Introduction to Linguistics. University of California, Santa Barbara. Fall.
2013	TA. Introduction to Linguistics. University of California, Santa Barbara. Summer.

Supervising

2015-2016	Graduate student supervisor for undergraduate linguistics major Shannon Li. Research project: 'Digitization of Chini narrative and conversational data.' 10 months.
2013	Graduate student supervisor for undergraduate linguistics major Kaveh Varjoy. Research project: 'Digitization of the Hua documentary corpus.' 5 months.
2013	Graduate student supervisor for undergraduate linguistics major Daniel Ginat. Research project: 'Digitization of the Hua documentary corpus.' 5 months.

Professional Service

2013-2016	Co-organizer for the student organization New Adventures with Indigenous Languages.
2013-2014	Search Committee Member for the position: 'Typologically-informed field linguist.' UCSB Linguistics Department.
2011-2012	Committee Member for the 15th Annual Workshop on the Indigenous Languages of the Americas. University of California, Santa Barbara. April 27-28.
2010-2011	Committee Member for the 14th Annual Workshop on the Indigenous Languages of the Americas. University of California, Santa Barbara. April 15-16.

Membership of Professional Organizations

2015	Societas Linguistica Europaea
2013, 2015-18	Linguistic Society of America
2011	Society for the Study of the Indigenous Languages of the Americas

Abstract

Realis and Irrealis:

Chini Verb Morphology, Clause Chaining, and Discourse

by

Joseph Daniel Brooks

At this point in time, realis/irrealis distinctions have been described for many languages, particularly of North America and New Guinea. There remains considerable debate, however, about the language-specific functions of these categories and to what extent they are comparable cross-linguistically. From a descriptive point of view, they are a challenge in part due to the ways in which they do not quite fit better understood areas of typology, in particular tense and its semantic basis in temporal reference. Another part of the analytical challenge lies in the contextual uses and interpretations of realis and irrealis constructions, which crosscut temporal reference, aspect, modality, and polarity, epistemic concepts involving presupposability and expectability, illocutionary and perlocutionary force.

In this dissertation, I seek to contribute to what we know about this little-understood and often misunderstood area of grammar by discussing the workings of realis/irrealis distinctions in a language where they are highly elaborated. Chini, the traditional language of the Awakŋi people of Andamang village and the Yavɨnaŋri of Akrukay in Madang Province, Papua New Guinea, is well-positioned in that respect, because distinctions recognizable in

terms of realis and irrealis meaning are marked in all of three unrelated sets of forms: twice in the inflectional morphology of the Chini verb and then again in the forms of the linking enclitics that attach to dependent ('medial') clauses in clause chains. One set of inflectional markers occur in multiple parts of the verb morphology, where the distinction has taken on certain specialized functions as a result of grammaticalization and other historical processes. In order to understand the workings of realis and irrealis constructions in Chini grammar and discourse, I draw on nine months of documentary fieldwork and a corpus of 10.5 hours of annotated connected speech and additional fieldnotes.

This multiplicity of realis/irrealis distinctions encoded in the language allows us to see that the functions of the markers are at once language-specific but also dependent on the area of the grammar where the marking occurs. In Chini, this can be seen in the divergent functions of realis and irrealis marking in the verb morphology versus in the chain linkage devices. The inflectional distinction has a semantic basis I describe as 'within (realis) versus beyond (irrealis) experience'. The distinction in clause chaining is pragmatically based. Roughly put, the linkers signal events in medial clauses as being 'within (realis) or beyond (irrealis) the expected or expectable course of reality'. Irrespective of where in the grammar the distinction occurs, the underlying concepts involve a general notion of reality, one that does not refer to a universal conceptual space, philosophical notion, or set of notional semantic features. It refers to the real, culturally-specific world of lived experience.

In order to contextualize the discussion on realis/irrealis distinctions, also embedded in the structure of the dissertation are descriptions of the ethnographic and historical setting, and descriptions of the structures involved in Chini verbal morphology and clause chaining. The appendix includes three texts: a narrative and two excerpts from Chini conversation.

Table of Contents

List of Figures

List of Tables

Glossing conventions and other abbreviations

-	Affix boundary
~	Reduplicated form
=	Clitic boundary
[ ]	Clause boundary (in morphemically parsed line)
	Or: Indication of covertly specified root aspect (glossed line)
	Or: Indication of derivational zeros for modal or negative bases (glossed line)
[TP:]	Tok Pisin substance
' '	Glosses for lexical items that occur infrequently and just match the translation
.	Morpheme break either redundant (for distributed morphemes), vestigial or otherwise unique to lexeme
..	Minor omission of material from original utterance
...	Omission of adjacent material from original utterance
?	Morpheme of unclear function
1/2/3	First person/Second person/Third person
ACC	Accusative (first-person singular pronoun only)
ADESS	Adessive case (demonstratives); adessive-inessive case (postposition)
ADJ	'Adjectivizer' (derivational marker for all verbal adjectives)
ALL	Allative (verbal proclitic)
A.FUT	Anterior future mood
ASS	Associative case (postposition)
ATT	Attenuative
AUG	Augmentative
AUTH	Authentic-ancestral (nominal prefix)
BEN	Benefactive (pronominal case, verbal proclitic)
CF	Counterfactual
CHAR	Characterizing form (relative pronoun)
CISLOC	Cislocative case (demonstratives)
CNT	Continuity chain linkage device
COH	Cohesion (medial verb forms marked by -i)
COM	Comitative case (postposition)
COP	Copula
CTRST	Oppositional contrast dependent clause
DAT	Dative pronoun
DEF	Definite
D.FUT	Delayed future mood
DIM	Diminutive
DIST	Distal deictic
DM	Discourse marker
DU	Dual
ELAT	Elative case (demonstratives)
EXCL	Exclamative
F.DIST	Far-distal deixis
FEM	Feminine (kin terms)
FOC	Focus (pronoun forms) or focused non-agent argument in multivalent clause

GER	Gerund (verbal proclitic)
HAB	Gnomic habitual
IDEO	Ideophone
IMP	Imperative mood
INCONS	Inconsequential
INDET	Indeterminate case (demonstratives)
INS	Instrumental-manual (verbal proclitic)
INTENS	Intensifier
INTER	Interjection
IPFV	Imperfective
IRR	Irrealis
LH	Light head
MID	Middle voice
MOD	Modal base derivation
NEG	Negation or negative base derivation
NEW	Newly-experienced case (postposition)
NEW.P/ALL	New patient or allative argument (verbal proclitic)
NMLZ	Nominalizer (diverse forms and functions)
NOM	Nominative (first-person singular pronoun only)
PC	Paucal (nouns and nominalized forms)
	Paucactional (verbs and verbalized forms)
PFV	Perfective
PL	Plural (nouns and nominalized forms)
	Pluractional (verbs and verbalized forms)
POSS	Possessive
POT	Potential mood
PRE	Presuppositional chain linkage device
PROX	Proximal deictic
Q	Question
QUOT	Quotative
R	Realis
REP	Repetitive (verbal proclitic)
RETURN	Return (verbal proclitic)
SEQ	Temporal contingency/succession chain linkage device
SG	Singular
STAT	Stative imperfective
SUC	Successive (verbal proclitic)
TLOC	Translocative (verb derivation)
TOP	Topic, topical, topicworthy
TR	Transitivizer (only for Tok Pisin *-im*)
TRANS	Translational case (postposition)
UFUT	Uncertain future mood
VIA	Vialis case (postposition)
VOC	Vocative (pronominal and nominal case)

Data citation conventions

The examples in this dissertation are followed by data citation forms (see also 3.3.5). The main data citation convention used in this work is to cite the original speaker's name following by a citation form with the structure afiDDMMYY. [afi] is the ISO code for Chini, and the date is the original date of the recording. This form is then followed by a Roman numeral indicating the number of primary interactants in the recording event. That same citation form corresponds to the IDs used in the Chini corpus as archived in the Endangered Languages Archive at the following URL: [https://elar.soas.ac.uk/Collection/MPI1014225]. Following the citation form itself is an underscore followed by the time stamp indicating where in the said recording the utterance in question can be found. So, from the data citation form for the following example, we know that in an archived recording from 26 August 2014 in which five people conversed, Dorothy Paul uttered this sentence at 6:59 in the recording.

> *añi   pa   mɨni   ami.*
> añi   pa   mɨ-ni   am-i
> 1PL   first   DIST-some   ingest-IRR
> 'Mipela kaikai sampela pastaim.'[1]
> 'Let's eat some of them (the fish) first (i.e. before the Watabu folks arrive).'
> (Dorothy Paul, afi260814v_6:59)

For speech events where an additional audio recording accompanied the main audiovisual recording, the time stamp may differ across the two recordings. (In these cases, the time stamp generally corresponds to the audio-only recording.)

Some examples come from unrecorded utterances from natural speech, while others were offered by speakers as what one should say in a particular context, or were elicited in context by me. These have all been verified with native speakers and transcribed in my notebooks and are cited as being from my fieldnotes (also archived). There are a small number of examples that are not cited, because they represent very common expressions and can be found throughout the corpus (e.g. 'I did not go.', 'I'm cold.' etc.).

---

[1] Some examples include the Tok Pisin translations provided by native speakers during transcription. This is mostly just for the benefit of those readers who know Tok Pisin. In some examples the Tok Pisin conveys a meaning or subtlety that English lacks. Other Tok Pisin translations reveal the inability of the Tok Pisin to approximate the original Chini. See further discussion in (3.3.1).

Chapter 1
Introduction to Realis/Irrealis Distinctions

The terms 'realis' and 'irrealis' have figured prominently in descriptions of languages of New Guinea, North America, as well as other parts of the world.[2] They have also been the focus of considerable debate among linguists. However we might label it, a binarily-marked modal distinction, one that evades more highly theorized concepts in our cross-linguistic understanding of TAM categories, is undeniably present in the grammars of many languages. What the terms 'realis' and 'irrealis' refer to, then, is the grammatical division of the semantic-pragmatic space we know generally as modality into two deictic categories. My goal in this dissertation is to advance our understanding of these categories and the constructions in which they occur through the workings of Chini, a Papuan language of Madang Province, Papua New Guinea. Chini is unusually well-positioned to contribute to what we know, since realis/irrealis distinctions are central to multiple parts of the grammar. In Sapir's terms, they correspond to what we might call the 'genius of the language'. There are hardly any complete utterances in Chini discourse that do not rely on at least one realis or irrealis marker. It is not uncommon for multiple markers, indicating different types of information about reality status, to co-occur in a single clause.

In order to gain an initial foothold on these categories, let us consider the analogy of tense and its semantic basis in temporal reference. In his seminal book on the topic, Comrie

---

[2] Terms other than 'realis/irrealis distinctions' have been used in the literature. My usage follows the most common one that emphasizes the oppositional relation between the categories. It is also similar to the term 'reality status' that is sometimes encountered. Some scholars, in particular those hailing from SIL, have used 'actual/potential' (Cornyn & Roop 1987; Ekdahl & Grimes 1964; Hooley 1970; Lauck 1980; Muzzey 1979 as cited in Bradshaw 2001 and in Elliott 2000). And the terms 'factive'/'non-factive' have occasionally been used (Feldman 1986). Distinctions sometimes described in terms of tense as 'non-future/future' can be shown to be modal and not based on temporal reference, and would thus be more accurately termed 'realis/irrealis' (Comrie 1985; Aeschliman 1988). While there are some significant differences between these systems, the basic concept of a binarily marked modal distinction having something to do with real versus unreal meaning is the same.

(1985) writes: "The idea of locating situations in time is a purely conceptual notion, and is as such potentially independent of the range of distinctions made in any particular language" (1985:7). It is not new to our cross-linguistic understanding of tense that some languages divide the axis of temporal reference in very different ways. Yet, as Comrie explains, they have in common a semantic basis in the generalized notion of situations being locatable in time. For example, while Hua has a clear future/non-future tense distinction (Haiman 1980 cited in Comrie 1985:49-50), several languages of the Sogeram family distinguish four past tenses in addition to a future tense (Daniels 2015). Somewhat differently, in Chini, there are three modal categories that have future temporal reference as part of their consistent meaning. The differences between these languages are significant. At the same time, these categories share a conceptual basis in temporal reference — they all involve locating situations along the temporal axis. We would not want to claim that they lack comparability or that any language-specific meanings or interpretations count as evidence against tense as a cross-linguistically valid concept.

The relationship between realis/irrealis distinctions in individual languages and what they share or do not share cross-linguistically can be understood in the same way as tense, with the general difference that realis and irrealis constructions are (much) more multidimensional. Those dimensions correspond generally to the epistemic, contingent, and deontic areas of modality (Timberlake 2007). They may, furthermore, extend into conceptual space more notionally attributable to aspect, negation, or particular types of speech acts. We might then extend Comrie's (1985) statement about tense and apply it to a general notion of 'reality' and 'irreality', stating in nearly identical phrasing that: "the idea of locating situations according to a general dualistic division of the multi-dimensional space of modality (in

general terms of reality and irreality) is a purely conceptual notion, and is as such potentially independent of the range of particular distinctions made in any particular language". The language-specific ways of carving up domains within modality into realis and irrealis categories are commensurate with the conceptual complexity of that space.

While the diverse language-specific patterns for realis/irrealis distinctions do pose significant obstacles to cross-linguistic comparison, it is also true that the distinctions — even in languages as genealogically and areally unrelated as Central Pomo and Amele or Chini and Caddo — bear resemblances that are too remarkable to be dismissed (Roberts 1994; Chafe 1995; Mithun 1995; Elliott 2000).

The remainder of the introduction is devoted to issues surrounding how our theoretical understanding relates to its basis in methods in the original documentation, data, linguistic analysis, and linguistic description. In (1.1) I provide a basic orientation with respect to my use of certain terms and specify what is meant by my use of 'realis' and 'irrealis'. In (1.2) I argue for and against different approaches to this area of grammar with some discussion about the realis/irrealis debate. In (1.3) I provide a brief overview of the two realis/irrealis distinctions in Chini that are the focus of this dissertation.

1.1   Basic orientation and use of 'realis', 'irrealis', and other terms

A source of potential confusion in any discussion on realis/irrealis distinctions is that 'realis' and 'irrealis' have been applied to different concepts and construction types in languages. Because not all of these phenomena are necessarily related, it is essential to specify what is meant when using these terms (see also Contini-Morava 2012:201). My use of these terms in reference to Chini concerns **specific markers** (rather than notional descriptions of non-

encoded meanings of constructions) in the forms of verbal affixes and clausal enclitics.[3]
These are used consistently and frequently in ways that are **central to the grammar** (rather than peripheral). As I argue in this dissertation, these markers have **independent meanings and functionality** (rather than being joint with, or dependent on, other markers for the type of meaning they express). Unless otherwise specified, uses of 'realis' and/or 'irrealis' in the literature that diverge significantly from the characterization I have laid out here may not be relevant to the discussion in this dissertation.

Throughout this work, I refer to realis/irrealis 'categories', 'distinctions', and 'constructions', while keeping in mind the fact that these are interrelated but separate concepts. While 'realis' and 'irrealis' correspond to separately marked **grammatical categories**, they also exist in relation to one another as two halves of a **grammatical distinction** (rather than the use of 'irrealis' as a modal category with no deictic relation to a corresponding realis category). These markers and the information they encode occur in **realis and irrealis constructions**, by which I refer to the full range of communicative units speakers make use so long as they include realis and/or irrealis markers. Speakers use realis and irrealis constructions in real contexts, in different settings, interactional constellations, and with diverse communicative goals.

Other major concepts that I make use of are temporal reference, aspect, modality, and polarity. I follow Comrie (1985) for matters pertaining to tense and temporal reference. I follow Comrie (1976) for most matters of aspect and also rely on Sasse's (1991) insights and

---

[3] It is important in any discussion of realis and irrealis constructions to distinguish notional "realis" and "irrealis" — where the terms do not relate to specific morphemes that encode realis and irrealis as categories — from languages where the distinction is in fact encoded in specific forms. As Contini-Morava (2012) argues: "Rather than assuming the relevance of a priori notional categories, it is more methodologically sound to interpret "coding" of a semantic substance to mean that the substance is conventionally, and constantly, signaled by one or more particular linguistic forms, or signs in Saussure's sense" (2012:202). Uses of the terms "realis" and "irrealis" in the notional sense can be quite misleading.

discussion about aspectual boundedness. I follow Timberlake (2007) for most matters of modality, in particular, his distinction between epistemic, directive, and contingent modality. In order to account for the pragmatic uses of realis and irrealis constructions, I make use of Searle's (1969) and Austin's (1962) notion of speech acts, in particular the notions of illocutionary and perlocutionary force. I do so while keeping in mind the shortcomings of these concepts in their application to natural speech and also their European bias, and in that respect follow the thinking of Rosaldo (1982) and Slotta (2015) as I relate those concepts to Chini-/Melanesian-specific linguistic practices.

Finally, I draw on Reesink's (2008) insights and his use of Pike's (1967, 1982) original dichotomy between the 'emic' and the 'etic' (while acknowledging, as Reesink also does, that the application of these concepts is not perfect). I use 'emic' to refer to the language-specific associations between the form and meaning of realis and irrealis categories (and the language-specific constructions in which they appear). The 'emic' perspective on the use of a realis or irrealis construction would be the specific part of the semantic or pragmatic substance that one or the other category is interpreted as expressing according to language-specific conventions. I use 'etic' in reference to the semantic-pragmatic substance that is present in any given use of a realis or irrealis construction and, to greater or lesser extent, variable from one context of use to the next.

1.2 A roadmap for investigating realis/irrealis distinctions

Any approach to the analysis of realis/irrealis distinctions must somehow make sense out of the extraordinary ways in which realis and irrealis constructions carve through the conceptual territory of other more highly theorized areas of grammar like temporal reference, aspect, modality and negation, among others. In this part of the introduction I provide a roadmap to

5

the analysis and theorization of realis/irrealis distinctions based on my reading of the literature on this topic and on my own analysis of realis/irrealis distinctions in Chini. What I discuss here is intended as a set of suggestions for the approach leading to the most empirically-grounded and fruitful understanding of this area of grammar. The approach I advocate has common methodological-theoretical ground with a number of recent works emphasizing the following kinds of ideas: the importance of understanding the workings of lexico-grammatical codes in their own terms; the distinction between language-specific constructions and categories versus their degrees of cross-linguistic comparability; and the need to move beyond framework-driven approaches (Croft 2001; Haspelmath 2010a; Haspelmath 2010b; Pawley 1993; Reesink 2008, among others).

One assumption that I begin with in this introduction is that these categories are commonly perceived as murky or even wishy-washy by linguists, perhaps much more so than any other TAM category. This is understandable, considering the complex and abstract nature of the conceptual space involved. To demystify this area of grammar, I propose the following initial principles which I discuss further in the following sections and throughout the dissertation: i) the need to distinguish between the encoded meaning consistent across contexts of use for realis and irrealis constructions versus the uses themselves that involve diverse semantic-pragmatic meanings; ii) the concept that these categories are relational in the meaning they express, as two oppositional halves of a deictic distinction; iii) the appreciation of functional differences evident in different types of realis and irrealis constructions (e.g. the influence of other categories that co-occur with realis and irrealis markers e.g. negation, aspect, and the effects of different types of speech acts); iv) the constraints on the range of construction-specific interpretations of realis or irrealis meaning

by other TAM categories or constructions in the language; v) the relegation of temporal reference to the context rather than the meaning for realis and irrealis categories in some languages; vi) the relevance of the area of structure where the realis/irrealis distinction is marked to its functional basis.

In my view, the most fundamental of these principles is the need to distinguish the consistent meaning that a realis or irrealis marker contributes from the diversity of uses of the constructions in which that marker (and its oppositional counterpart) occurs. In her paper on irrealis in Swahili, Contini-Morava (2012) argues for this principle as a starting point for analysis:

> [A] distinction should be made between meaning — the conceptual content conventionally associated with a specific linguistic sign — and message — conceptual content that is inferrable from a combination of linguistic meanings and contextual and pragmatic information (Contini-Morava 2012:200).

So, we are interested in both the consistent, encoded meanings as well as the less consistent, construction-specific and/or contextual meanings and interpretations of realis and irrealis marking.

The remainder of the introduction is devoted to the history of scholarship on realis/irrealis distinctions and the relatively recent debate about their validity, as seen through my own critique of particular approaches and my support or advocacy of others. This introductory discussion is not intended, however, to be a thorough treatise or final word on any approach. What I hope that readers with otherwise diverse views will be able to agree upon, however, is the more basic point. Our methodological and theoretical approach should be able to speak to the relationships that realis and irrealis categories have to their language-specific, construction-specific, and context-specific associations between form and meaning.[4]

---

[4] I have avoided discussion in the introduction about the additional importance of our methodological and theoretical principles to speak to the *culturally-specific* uses of realis and irrealis constructions. At this point in

1.2.1 "Das Verbum ist kein Zeitwort":

Insights from early work on languages with realis/irrealis distinctions

The terms 'realis' and 'irrealis' have been part of linguistic parlance for just over a hundred years. More recently, Bybee et al. (1994; 1998) opened the current debate about what place these categories should have in the descriptions of individual languages and in typology and theory. It is useful to consider how some matters at the center of the realis/irrealis debate can be seen in the first uses and theorization of these terms about a century ago.

To my knowledge, the first published use of the term 'irrealis' to refer to categories in non-European languages is in Sapir's (1930) grammar of Southern Paiute, a Uto-Aztecan language of Utah and Arizona (in fact completed in 1917 but not published until 1930). He describes the function of the affix he labels 'irrealis' as follows: "This element indicates that the activity expressed by the verb is unreal, i.e. either merely potential or contrary to fact (potential in past time)" (1930:168 in Elliott 2000:55). Around the same time that Sapir was conducting fieldwork in North America, the missionary-linguists Heinrich Zahn and Otto Dempwolff were working in northeast New Guinea. They worked on the Austronesian language Jabêm in what is now Morobe Province, respectively from 1902-1932 and from 1909-1914 (Bradshaw 1997, 2001; Dempwolff 1939).[5] Zahn and Dempwolff first recognized the realis/irrealis distinction in forms of the subject prefixes. Their work on Jabêm grammar was then published after Dempwolff's death (Dempwolff 1939). Dempwolff's discussion of the fundamental differences between the expression of events in Jabêm versus in German and

---

time, that is something about which very little is known. For further discussion on this topic as it relates to Chini, see (8.3.2).

[5] Thanks to Joel Bradshaw for sharing his knowledge about the history between Zahn and Dempwolff and their early work in northeast New Guinea.

other European languages is predictive of the analytical challenges that linguists would face again later on in approaching these kinds of categories:

> Aber das Verbum des Jabêm ist kein "Zeitwort", es fehlen ihm jegliche "Tempora" [...] Vielmehr ist die einzige psychologische Begriffsbildung, die am Geschehnis zum Ausdruck kommt, die Einstellung des Redenden dazu, ob er von einer Wirklichkeit (Realität) spricht, oder ob ihm das Geschehnis im Bilde (Imago) vorschwebt; es ist die Unterscheidung eines Modus realis von einem Modus imaginativus. Unser Präsens, Imperfekt und Perfekt fallen unter den Realis; den Imaginativ müssen wir durch unser Futur, unseren Imperatif, unseren Konjunktiv und häufig durch unsere Hilfszeitswörter wiedergeben (1939:12).[6]

One key insight Dempwolff expresses in this passage is that his metalanguage for grammatical description, notably the German *Zeitwort* (English 'verb', lit. 'time word') and *Tempora* ('tense/s') would misrepresent the Jabêm, since Jabêm verbs do not distinguish temporal reference. The basic assumptions of those terms, it turns out, are rooted in a metalanguage developed in, and thus not surprisingly most suited for, German.

The broader insight in Dempwolff's discussion is that the functions of modal categories like realis and irrealis tend to be independent of temporal reference. A similar point is expressed by Comrie (1985) regarding realis and irrealis categories in Burmese. At first glance they could be analyzed as encoding a future/non-future tense distinction, but this analysis ultimately fails. He writes: "a basically modal opposition has implications for time reference without this time reference being grammaticalised in the language" (Comrie 1985:51-2).

A second key insight of Dempwolff's is found in his careful phrasing of what the realis versus irrealis constructions represent in Jabêm. They do not represent (ir)reality itself

---

[6] "But the Jabêm verb is no "verb" [i.e. in the sense of one of the German metalinguistic terms for 'verb' *Zeitwort,* lit. 'time-word']. It lacks any sort of "tenses" ... Rather, the sole psychological [basis of the] formulation of the concept by means of which events are expressed, concerns the perspective the speaker takes toward the event — whether they are speaking in terms of reality or whether they have in mind an imagined picture of the event. This involves a difference between a 'realis' mood and an 'imaginative' mood. Our [i.e. German] present tense, imperfect, and perfect, fall under the [Jabêm] 'realis', while we must express the 'imaginative' via our future tense, our imperative, our subjunctive [the German 'Konjunktiv'] or often through our verbal auxiliaries" (my translation).

but rather the speaker's perspective toward, and their resulting linguistic presentation of, events. This allows us to understand why we need not be concerned with whether a realis category can be seen as directly reflecting 'reality' or whether an irrealis category directly reflects 'irreality'. The difference is an important one, as later scholars would also find. As Sun (2007) writes: "[T]he relevant distinctions are communicatively oriented and have more to do with the speaker's subjective attitude than with objective reality" (798). Conceptual mismatches between the use of a realis or irrealis marker and a particular notion about (ir)reality are not in fact grounds for supporting or refuting the validity of these categories.

1.2.2   Temporal reference as an analytical tool for realis and irrealis constructions

In the analysis of realis and irrealis constructions, it is important to determine what their temporal interpretations are and whether any of their uses are constrained by temporal reference. For languages like Jabêm, Burmese, and Chini, we should consider what it means for our theoretical understanding if temporal readings arise primarily from the uses and interpretations of realis and irrealis constructions, rather than from the coded material.

When temporal reference is not part of the coded material, we can then use it as a tool in the analysis of realis and irrealis constructions.[7] Temporal reference can be used as a 'control' due to its status as a (relatively) conceptually straightforward variable that has relevance across all uses of realis and irrealis constructions. This analytical method allows us to better understand the semantic and pragmatic consistencies versus constructional uses of realis and irrealis marking. This approach is used throughout this work, in Chapter 5 on the

---

[7] See also Michael (2014) and Cleary-Kemp (2014) for discussion about temporal reference as a parameter and temporal specificity versus non-specificity in the realis/irrealis systems of some languages. Due to the fact that temporal reference is not part of the encoded information for realis or irrealis categories in Chini, I have not discussed the fact that it is important for realis/irrealis distinctions in other languages. While offering a robust typology for realis/irrealis distinctions is beyond the scope of this work, ultimately temporal reference will, I imagine, represent an important parameter distinguishing the functions of these systems cross-linguistically (as Michael and Cleary-Kemp have suggested).

distinction in the verb morphology and in Chapter 8 on the distinction in the clause chain linkage devices.

1.2.3 Balancing language-specific and cross-linguistic relevance

Just as Dempwolff found fault with the metalinguistic terminology available to him (leading him to introduce 'Realis' and 'Imaginativus' to describe the structures he found in Jabêm), we might question how well 'realis' and 'irrealis' represent otherwise very different languages. This relates to the more central question of just how comparable these categories are across languages. A useful way to approach the problem is found in Reesink's (2008) paper and his use of Pike's (1967, 1982) emic/etic dichotomy. He argues that our metalinguistic concepts (as well as English translations and glosses) are tools we should use carefully in order to represent the emic, or language-specific, relationship between form and meaning in a previously undescribed language:

> Only once we understand the unique system of form-meaning composites that each language offers can we appreciate the richness of universal tendencies or properties of human communication systems... The heuristic value of Pike's distinction is that we remain constantly aware of the bias our native language(s) puts on our linguistic analyses of other languages (Reesink 2008:869).

Although not about realis/irrealis distinctions per se, Reesink's paper relates to the present discussion, since it allows us to regard 'realis' and 'irrealis' as descriptive labels that refer to the linguistic encoding of (ir)reality via deictic modal categories — without assuming that the labels themselves shed any light on the language-specific meanings or functions of realis and irrealis constructions. The language-specific meanings and functions can only be understood through the type of analysis that begins with substantial fieldwork and documentation, eventually leading (ideally) to a convincing presentation of annotated data from texts.

11

The other part of Reesink's argument relates to the issue of cross-linguistic comparison. He argues that it is only once we have considered and understood the meanings of constructions from the emic viewpoint that we have a sound basis for cross-linguistic comparison (see Contini-Morava 2012 for a similar perspective). Without a doubt, it is crucial to ensure that (language-specific) realis and irrealis categories under comparison are indeed comparable, and some may turn out not to be. But by now there is enough evidence that shows there are significant similarities just as there are differences. As Mithun (1995) explains:

> If the 'Irrealis/Realis' terminology were not used, the cross-linguistic convergences in the semantic nature of the distinction, and the contrasts in its application, might go unnoticed. Of course special care should be taken in cross-linguistic comparison of these categories, as with any modal categories, to ensure that the distinctions on which they are based are indeed comparable (Mithun 1995:386).

Where comparability is concerned, the key concept here is the notion of realis and irrealis as a grammatical distinction. In the descriptions of many languages, such as Hualapai (Watahomigie et al. 2001), Sio (Clark & Clark 1987), Savosavo (Wegener 2012), and others, 'irrealis' is used as a descriptive label for a singular (non-distinctive) modal category. We would not want to include these languages in a cross-linguistic study of realis/irrealis distinctions without caveat. We might not want to include them at all if irrealis is very peripheral to the workings of the language (i.e., occurring only in a small number of specialized constructions). For instance, in his description of Limbu, Van Driem (1987) uses 'irrealis' to describe a morpheme that occurs mostly just in counterfactual conditional clauses. To be clear, my point here is not about how linguists should or should not use 'irrealis' as a descriptive label. Descriptive labels are always approximations, ideally apt ones, but so long as the terms are explained and seem reasonable, there is little reason to take issue with such uses. My point is rather that there is good reason to focus our comparative efforts on

languages with realis/irrealis as a robust distinction that is central to the workings of particular languages. This principle applies equally to efforts to refute the validity of realis/irrealis distinctions, lest terminologically identical but grammatically distinct phenomena be compared for the sake of disproving just one of them.

This use of the descriptive labels 'realis' and 'irrealis' (i.e. for a robust modal distinction that is central to the grammar) can be found in a substantial body of ever-growing linguistic descriptions and journal articles for: languages of North America (Chafe 1995 for Caddo; Mithun 1995 for Central Pomo; Mixco 1997 for Mandan); South America (van Gijn 2006 and van Gijn & Gipper 2009 for Yurakaré; Michael 2014 for Nanti; Mihas 2015 for Alto Perené; Danielsen & Terhart 2016 for multiple Southern Arawak languages); Australia (Merlan 1994 for Wardaman); for Austronesian as well as genealogically diverse Papuan languages of New Guinea and Eastern Indonesia (Aeschliman 1988 and Roberts 1994 for Nobonob; Daniels 2015 for Kursav and Gants; Dempwolff 1939 and Bradshaw 2001 for Yabem; Donohue 1999 for Tukang Besi; Hartzler 1983 for Sentani; Hepner 1995 and 2006 for Bargam; Ingram 2004 for Anamuxra; Klamer 2012 for Teiwa; Lichtenberk 1983 and Blewett 1991 for Manam; Pennington 2016 for Ma Manda; Roberts 1987 and 1990 for Amele; Ross 1978 for Waskia; Ross 2002 for Takia; West 1973 and Roberts 1994 for Wojokeso; Rucker 1992 for Anjam); and southeast Asia (Okell 1969 and Cornyn & Roop 1987 for Burmese). While this is not an exhaustive list, it does suggest that realis/irrealis distinctions represent a widespread development and are deserving of study from a cross-linguistic perspective.

A small number of other languages have realis/irrealis distinctions marked in multiple places in the grammar, and one major finding of this dissertation relates to how important

those languages in particular are to our understanding. Such languages include: Alsea on the Oregonian coast (Buckley 1988), the Southern Arawak languages (Danielsen & Terhart 2015 for Terena; Michael 2014 for Nanti; Mihas 2015 for Alto Perené), and the Bel languages in northeast New Guinea (Ross 2002 for Takia). As far as I am aware, Chini is the only language with sufficient data available to investigate how realis/irrealis distinctions in the verb morphology and clause linkage morphology compare. The functional differences of the two sets of realis/irrealis constructions (as I discuss in chapters 5 and 8, respectively) allow us to see many of the seemingly problematic issues of cross-linguistic comparability in a new light. That is, the functional properties of any given realis/irrealis distinction are not only language-specific but also arise from the locus of the marking in the grammar. So, we would not expect a realis/irrealis distinction marked in the forms of pronominal prefixes on verbs in Caddo (for example) to have much functional overlap with a distinction in the different-subject clause chain linkage morphology in Amele. Rather, all that we would expect the two systems to share is a basis in dividing some part of the conceptual space of modality into two oppositional categories.

1.2.4   Problems for approaches based on philosophical concepts

The basis of realis and irrealis categories in some of the same concepts of import to philosophy has led, understandably, to philosophical notions being incorporated in the realis/irrealis debate. In his analysis of reality status in Nanti, Michael (2014) argues that the Nanti system can be seen as 'canonical' (within Corbett's (2005) typological framework). While there is no doubt about his analysis of the Nanti system and its import for our cross-linguistic understanding, it is not clear what canonical typology can tell us about realis/irrealis distinctions, at least at this early point in our theoretical understanding. Part of

what the framework of canonical typology proposes to do is determine the "logical endpoint"

of a grammatical phenomenon. As Michael suggests:

> [T]he canonical case of a phenomenon is the "clearest" and "indisputable" one, in light of linguists' idealized understanding of the phenomenon, i.e., what Corbett (2007:9) characterizes as the "logical endpoint" of the definition of a given phenomenon. In the case of [reality status], the clearest and indisputable, and hence, canonical, [reality status] system would presumably be one that would optimally satisfy Bybee and other critics of the typological validity of [reality status] (Michael 2014: 259f).

Once we consider the abstract nature of the modal space these categories draw on, however,

it is not clear what sort of criteria would enable us to determine which realis/irrealis

distinctions in which languages have reached such an endpoint.

A stronger invocation of philosophy is found in de Haan's (2012) paper, where he

argues against the validity of (realis and) irrealis in individual languages and for the "demise

of reality status as a typological category" (2012:129). His position is that the linguistic

analysis of realis- and irrealis categories ought to accord with philosophical notions about

reality: "...there is no link between the philosophical notion of reality and the linguistic

reflection of this. It follows that... the typological status of the notions realis and irrealis, is

also invalid" (de Haan 2012:128). The view I take is that we would not expect realis

constructions to reflect or link directly to reality or irrealis to the imaginary. As discussed in

(1.2.1), this is because realis and irrealis meanings arise via a refraction of the real (or

imaginary) world through the perspective of language users and their recruitment of realis

and irrealis constructions for their communicative purposes.

It is also unclear in de Haan's argument to what extent the basis for the argument

hinges on a particular (presumably, Western) philosophical tradition, or is instead a product

of the conceptual particularities of the author. Either way, this approach, in its emphasis on a

central role for philosophical concepts, runs into a number of problems. Philosophers

consider language in idealized and decontextualized forms that are often quite unrepresentative of natural language use (e.g. see Schegloff in Sacks 1992). Philosophical works on language do not (as far as I am aware) take linguistic diversity into account, and most have a strong bias toward European languages, especially English. This linguistic bias goes hand in hand with the related Western European cultural bias in Western philosophical epistemology (see Rosaldo 1982; Slotta 2015, among others). For these reasons, philosophy is a tool of dubious usefulness when applied to something like realis/irrealis distinctions in languages that developed outside its historical and intellectual purview.

1.2.5   Problems for approaches based on presupposed categories[8]

Integral to Reesink's (2008) warning about our metalanguage in (mis)representing language-specific meanings is the problem that functional differences in otherwise comparable systems can be erased if linguists are too quick to see them in identical terms. As critics of linguists' use of 'realis' and 'irrealis' have pointed out, categories in some languages could in fact be misrepresented through the use of those terms. This possibility is an important one to consider. In her paper, Cristofaro (2012) warns of the "inaccurate representation of the distributional properties of the categories identified as 'irrealis' in particular languages" (Cristofaro 2012:134). Like the use of many terms in linguistics, I would agree with Cristofaro in the sense that there are indeed a number of grammatical descriptions where the use of 'realis' and (especially) 'irrealis' lead to an inaccurate representation of the data. At the

---

[8] There is one point about the realis/irrealis debate which does not quite fit elsewhere in this discussion. All other considerations aside, our common starting point is the empirical fact that a modal or type of TAM distinction *of some sort* is indisputably marked in a great many languages, in a way that is central to the grammatical workings of those languages. It is of course always possible that the original analysis is flawed or wrong. But wherever the original analysis in support of a realis/irrealis distinction is refuted, our understanding is advanced only if a compelling alternative analysis is offered in its place. With the exception of Winford (2000), who argues convincingly against the relevance of the term (and concept) 'irrealis' for Sranan and other creole languages, I know of no such alternative analysis for any language.

same time, when linguists use the descriptive labels 'realis' and (especially) 'irrealis' in relation to particular constructions, there is typically an explanation of what is meant, even if it does not follow from this that all things labeled as such should be considered comparable. Cristofaro's point is nevertheless a reminder to linguists to take care in their use of terms for modal categories, since 'irrealis' in particular has been used in such different ways.[9]

There is a flip side to this, however. If we only consider the conceptual space of realis and irrealis categories in terms of more highly theorized categories (e.g., with respect to tense, aspect, mood, and negation) and their associated concepts, we could miss opportunities to understand realis and irrealis as well as other lesser-known categories for what they are. Strong reliance on these more highly theorized categories can be found in the arguments against the validity of realis and irrealis as descriptive terms and as concepts with a functional basis (Bybee et al. 1994; Bybee 1998; Cristofaro 2012; de Haan 2012; Exter 2012; Mauri & Sansò 2012, *inter alia*). The most recurrent argument, expressed in a variety of ways in these works, is essentially that realis and irrealis categories in individual languages do not square with our own theoretical notions of how things like temporal reference, negation, and directive speech acts should relate to the notions of reality and irreality.[10] In their discussion of Capell and Hinch's (1970) description of realis/irrealis in Maung

---

[9] A related point about framing descriptions of realis and irrealis categories in particular languages can be found in Contini-Morava (2012). The general descriptive frame in that sense is provided for the workings of the Chini systems in (1.1). As I suggest in that section, one place where scholars on both sides of the realis/irrealis debate might find common ground is in rejecting the use of "notional" realis and irrealis terminology. There is a major difference between a language where specific and regular morphological forms are describable in terms of 'realis' and 'irrealis' versus a language where the author describes only certain generalized contexts — for otherwise morphologically diverse constructions — in terms of 'realis' and 'irrealis'. For instance, were we to describe the use of an adverbial lexical item meaning 'maybe' in a clause in a particular language as an "irrealis" construction, we would not want to compare that to a language that actually *encodes* irrealis as a category.

[10] Robust counter-arguments to this general position have already been articulated by a number of other scholars. Rather than trying to do justice to their arguments here, I refer the interested reader to: Chafe (1995); McGregor & Wagner (2006); Michael (2014); Mithun (1995) Palmer (2001); Roberts (1994).

(Mawng), a language of the Goulburn Islands of northern Australia, Bybee et al. (1994) notice that what counts as irrealis does not accord with some of our theoretical expectations:

> The negative imperative is considered realis and the affirmative imperative is considered irrealis, while if the definition were applied as usual, they would both be considered irrealis. Note also that the future affirmative is classified as realis here, while in some other systems it figures as irrealis. These facts suggest that realis/irrealis is not really explaining why the same forms are used for modality-related functions and for negation... [N]ot all members of the realis or irrealis categories fit the proposed definitions. Some authors wish to get around this problem by interpreting irrealis differently in each language (Bybee et al. 1994:237-8).

Yet even in theoretical terms, a negative imperative could be seen as a card-carrying realis concept, since a prohibitive makes reference to a situation that is underway in the real world. To my knowledge, the only place in the literature where this particular point is made is in Klamer (2012). Klamer describes the possibility for prohibitives in Teiwa to contain a realis verb form. She writes: "a prohibitive can refer to an actualized, 'real' event when something that is already happening must stop" (2012:222). What this tells us is that the semantic-pragmatic parameters that determine realis versus irrealis marking are themselves language-specific and variable.

A different theoretical approach to the complexities of the conceptual space of TAM and negation is articulated by Lazard (1998), who does not consider rigid categorical conceptualizations of TAM and negation to reflect the structures found in actual languages. In reference to the verbal categories with 'unreal'-type meanings in the sample of languages he investigates, he writes:

> Elles [i.e., les catégories de l'irréel] ont en commun de s'opposer à l'idée d'un procès réel, accompli ou en cours au moment de référence, en quoi elles relèvent du virtuel. Elles peuvent paraître disparates. Le prospectif ou futur est ordinairement considéré comme un temps, le subjonctif et l'optatif comme des modes, l'inceptif et l'habituel comme des aspects ou modes de procès. Mais les distinctions courantes entre temps, mode et aspect sont loin d'être claires, ou, plus exactement, ce sont des distinctions conceptuelles, qui se reflètent rarement telles quelles dans les systèmes verbaux des langues... Ils ne sont généralement pas structurés par la

trinité temps/aspect/mode... Chaque langue a ses catégories, qui ne coïncident pas avec les catégories de pensée (Lazard 1998:245).[11]

Lazard's insight, though not about realis/irrealis distinctions per se, expresses what I argue is true for realis and irrealis categories in Chini. For example, the 'unrealized' meaning of the irrealis inflectional category straddles the line between certain traditional notions of aspect and mood. Different uses of the irrealis category can, in different contexts, involve shades of meaning that run the gamut of TAM and negation: tense or temporal reference (future); aspect and/or tense-aspect (incompletive states, processes *in medias res*, cyclical or iterative situations in the past or present); modality (hypothetical, hortative); and negation (frustrated realization). The position I take is that if the theory (of TAM or anything else for that matter) is too far removed from the data, it is the theory, and not the data, which should be reconsidered.

1.2.6   Problems for prototype-based approaches

The notion of a prototype or semantic core has been used as a tool to better understand what semantic material (or, interpretations) of irrealis marking can be expected to remain consistent across languages (e.g. Bugenhagen 1994; van Gijn & Gipper 2009; Givón 1994; Plungian 2005; Roberts 1994).[12] These studies have contributed to our understanding in a number of important ways.[13] Separately, typologically-oriented works that provide general

---

[11] "They [i.e., categories involving irreality] have in common an opposition to the idea of a process that is real, accomplished, or ongoing at the moment of reference, such that they fall under potentiality. They can seem disparate. The prospective or future is ordinarily considered as a tense, the subjunctive and the optative as moods, the inceptive and the habitual as aspects or moods involving processes. But the usual distinctions between tense, mood, and aspect are far from being clear, or, more precisely, these are conceptual distinctions, that are rarely reflected as such in the verbal systems of languages... which are not generally structured via the tense/aspect/mood trinity... Every language has its own categories, that do not correspond with categories of the mind [i.e. conceptual categories]" (my translation, with my own clarifications in brackets).

[12] There has been little discussion of realis categories in the typological literature, perhaps in part because they are generally assumed to be, or described as, little different from past tense or past perfective categories.

[13] For example, Roberts points out that we can understand the semantic core across irrealis categories in many Papuan languages as all being based on comparable functions relating to the notion of (non-)actualization: "The

overviews of TAM categories use definitions for realis and irrealis categories that often rely implicitly on the notion of a cross-linguistic core. However, this approach is not without some problems.

One problem is that there is no single semantic prototype that applies in all cases; what exactly the core for irrealis is said to be differs depending on the sample of languages (indeed, this is often used as evidence against its cross-linguistic validity). One area of general agreement is that future temporal orientation (or, relatedly, future-hypothetical) is consistent across irrealis categories in different languages and thus a good candidate for a core (Givón 1994; Roberts 1994). Others have found that counterfactuality is the most reliable use or interpretation of irrealis meaning (van Gijn & Gipper 2009) (see also Mithun 1995). However, these are just strong cross-linguistic tendencies, and there is no one core.

A related but more fundamental problem is the potential for prototype-based approaches to skew emic categories and their functions toward a more narrow etic perspective on their uses and/or interpretations in context. About the irrealis category in Burmese, Comrie (1985) writes: "[F]uture time reference is subsumed under irrealis, while present time reference (in the absence of any other modal value) is subsumed under realis... [F]uture time reference is just one of the interpretations possible for the irrealis, and there is no reason to assume that it is significantly more basic than any of the other interpretations of this form" (1985:45). On the one hand, we can acknowledge the strong cross-linguistic tendency for irrealis markers to be used in future-oriented utterances and/or to have future interpretations. On the other hand, we should recognize that these observations do not really

common denominatory that groups together the verb final categories of future tense, and imperative, hortative, counterfactual, prohibitive, and apprehensive mood is the fact that these categories refer to events that are not actualized in the real world in some way" (Roberts 1990:372-3)

shed light on the cross-linguistic functions of irrealis categories so much as they shed light on common interpretations that irrealis categories have.

1.2.7 On the granularity of linguistic concepts in describing contexts of use for realis and irrealis constructions[14]

Another issue is the degree of granularity our metalinguistic concepts and terms allow for, in particular when we seek to describe how realis and irrealis categories in specific languages are used in different constructions and contexts. I suggest that the degree of granularity required in the description can only be done on a language-by-language basis. While a given term and its associated concept (e.g. 'past habitual', 'future', 'counterfactual') may accurately characterize a particular use of a realis or irrealis construction in one language, it may be overly fine-grained (or not fine-grained enough) in its application to uses of comparable categories in other languages.

The issue of conceptual-terminological granularity has been richly discussed for other areas of TAM meaning. Comrie (1976) points out how analyses that divide generalized imperfective categories into overly fine-grained concepts end up distorting the descriptions for those languages:

> In traditional grammars of many languages with a category covering the whole of imperfectivity, the impression is given that the general area of imperfectivity must be subdivided into two quite distinct concepts of habituality and continuousness. Thus one is told that the imperfective form expresses either a habitual situation or a situation viewed in its duration, and the term 'imperfective' is glossed as 'continuous-habitual' (or 'durative-habitual'). This approach... fails to recognise that these various subdivisions do in fact join together to form a single unified concept, as is suggested by the large number of languages that have a single category to express imperfectivity as a whole, irrespective of such subdivisions as habituality and continuousness (Comrie 1976:26).

---

[14] I refer the reader to the following works, where the different authors have made use of finer-grained concepts (under the umbrella terms provided) in their respective analyses: 'modal notions' (Bugenhagen 1994), 'core categories/meaning' and 'category groupings' (Roberts 1994), 'semantic contexts' (Elliott 2000), 'basic semantic features' (Verstraete 2005), '(semantic) subcategories' (van Gijn & Gipper 2009), 'basic semantic components' (Mauri & Sansò 2012), 'notional features' (Matić & Nikolaeva 2014), 'semantic parameter values' (Michael 2014), among others.

If we apply Comrie's insight to the conceptual-semantic space of realis and irrealis, we can consider how in some languages, the meaning of a realis or irrealis category could be seen as coherent and useful in the language-internal logic, but overly generalized (in our own logic, or in the workings of an unrelated language). For example, the meaning of some irrealis categories can be seen in terms of 'unreality' or 'temporal non-specificity' (Cleary-Kemp 2014) or, for other languages, in terms of the non-overlapping concepts of 'potential realization' and 'non-realization' (Mithun 1995; Elliott 2000; Verstraete 2005, among others). In his paper on the irrealis category in non-Pama-Nyungan languages of northern Australia, Verstraete (2005) offers an explanation for the latter type of division. He writes that the "feature of non-actualization can originate as a generalized implicature of the feature of potentiality: when located in a temporal domain that is... within the realm of certainty, use of an expression of potentiality is in salient contrast with a more informative expression of certainty and therefore triggers the implicature that the event described did not take place" (Verstraete 2005:250-1). We can conclude that positing multiple, mutually exclusive meanings for a single irrealis category can prove problematic unless there are clear language-specific grounds for doing so.

The possibility for our outside terms (and the perspective we bring with those terms) to mismatch with the ways that language-specific categories work is also evident in discussions of realis/irrealis and past habituals. In the perspective of some linguists, past habituals would seem to associate with realis rather than irrealis (Bugenhagen 1994; Bybee et al. 1994: Cristofaro 2012; de Haan 2012; Michael 2014, among others).[15] And in some

---

[15] Representative of this idea is the following statement: "As this category [habitual aspect] denotes that an action is or was done habitually, there would appear to be little doubt that such actions are real and any marker of habitual aspect would fall into the realis camp" (de Haan 2012:121). This sort of top-down approach reveals

languages, it is indeed realis that is used in past habitual situations. Past habitual meaning in

the Southern Arawak language Nanti is marked as realis, "since habitual constructions denote

repeated realization of some situation" (Michael 2014:271). As Michael also notes, other

perspectives on a past habitual state of affairs are possible. Past habitual meaning can also

indicate a lack of specificity of any single iteration or express the event without any single

realization being under the focus of expression (Elliott 2000). Elliott's insight allows us to

understand why a language might mark a past habitual situation as irrealis: what might

appear very similar situations in fact have many more component parts than our general

concept of 'past habitual'. In Manam, irrealis may be used in certain habitual contexts (i.e.,

sequences of customary events), the semantic ecology of imperfectivity being crowded by at

least two other constructions (Lichtenberk 1983:189-191).

The key point made by these authors, and the position I take as well, is that notions

like 'past habitual', 'future', 'negative imperative', and even 'realization' are not monolithic

concepts. They are comprised of a multitude of moving parts, and some of those parts which

may be most salient from diverse language-specific perspectives are not always going to

correspond to the parts most salient to our own perspective. A key insight on this matter is

articulated by McGregor and Wagner (2006) in their discussion of irrealis modal

constructions in Nyulnyulan languages of northwest Australia:

> [F]eatures should not be interpreted notionally, in accordance with the lexical meaning of the
> feature label. It is in the nature of grammatical (emic) categories that they do not correspond
> directly to nonlinguistic notional (etic) distinctions... If this were used as a basis to refute
> grammatical distinctions, all grammatical categories could be rejected. The meaning of the
> feature [unrealized] is not to be derived from the meaning of the English lexeme *unrealized*,

---

more about our own preconceived notions about this area of grammar than it does about how these
constructions pattern in actual languages. As I discuss in (5.3.3), in Chini the concept 'past habitual' turns out
not to be fine-grained enough to describe the uses of inflectional realis versus irrealis categories in past habitual
contexts. Irrealis marking is used in what I call 'extended situations (iteratives and/or habituals) in the past'
which are considered outside of the realm of experience. So, extended situations in ancestral times are
expressed via the inflectional irrealis category.

or from everyday notions of unreal situations. Rather, it must be understood in a language-particular way (which should correspond reasonably well with the sense of the English term, or otherwise a better term is warranted). The task of the linguist is to attempt to come to grips with the emic semantics of the category, via investigation of the senses associated with uses of the category — not via logical consideration of the label's semantics (McGregor & Wagner 2006:371).

The fact that categorizations of the notion 'realization' differ across languages and diverge from our own idea about what that word means in English are not really problems for the validity of realis/irrealis distinctions as a linguistic phenomenon (i.e. with the exception of more universalist approaches or ones that maintain TAM categories to be semantically monolithic across languages) (cf. Cristofaro 2012). Likewise, the use of irrealis marking for a past habitual or any other type of situation is not reliable evidence for or against the validity of irrealis as some scholars suggest (e.g., Bybee et al. 1994). What matters is the language-specific range of uses and interpretations of the construction in question.[16]

1.2.8   Toward an approach grounded in naturalistic data

One general point I have endeavored to make is that we cannot assume the universal applicability of any particular concept — there are just too many critical differences between constructions in different languages that can be missed or misrepresented. Our current metalanguage that we use to frame descriptions of realis and irrealis constructions can be maladroit in its application, and can lead to oversimplified analyses and representations. Our concepts and terms are not the object of study — they are, rather, important as the lens through which the data can be understood in its own terms.

As I have also argued, what this means is that analyses of language-specific realis and irrealis categories can risk being biased toward the "etic" contextual material that Reesink

---

[16] A related point that Plungian (2005) argues for is that differences, including significant ones, between the semantic ranges of irrealis in different languages are really quite typical for most grammatical categories, and thus ultimately not problematic for irrealis as has been claimed by critics of the term (2005:137).

(2008) and Contini-Morava (2012) warn against. This risk is especially true for modality and, as I have suggested, applies to a wide range of concepts and analytical tools. No matter how fine-grained our concepts may seem, they always bring with them associations, entailments, connotations and possible interpretations that can result in misrepresentation of the structures of particular languages. That is not to say that we should avoid making fine-grained distinctions or eschew familiar concepts in semantics or pragmatics. After all, as Roberts (1994) convincingly shows for a number of Papuan languages, these concepts prove especially useful in investigations of cross-linguistic differences and similarities in realis/irrealis constructions. In the analysis of individual languages, however, we can avoid imposing too much of our own theoretical biases by ensuring that the analysis is rooted as much as possible in the language- and culture-specific logic.

How then, can we get at what the language-specific logic involves? The most, if not only, promising method is the documentation of the use of realis and irrealis constructions across a wide range of interactive contexts and analysis of that type of data. This approach leads to richer insights into what speakers are actually doing and what they might be motivated by when they recruit a realis or an irrealis construction. One context of use where this can be seen is in directive speech acts. Chafe (1995) and Mithun (1995) have explained that it is critical to consider, among other things, the degree of expectation or certainty that the action will be undertaken by the addressee(s).[17] Chini offers an interesting take on this corner of the realis/irrealis theoretical debate. Chini possesses two negative directive categories, one that patterns with realis linkers in clause chaining and the other with irrealis

---

[17] The marking of negative directives as realis has been seen as particularly problematic, since it contradicts typological and logic-based notions of reality (Bybee et al. 1994; Mauri & Sansò 2012). The empirical evidence from usage in languages like Caddo, Central Pomo, Chini and others shows that there are language-specific functional reasons for the use of realis marking in negative directives.

linkers, and both for motivated reasons as I discuss in greater detail later on (8.3.2). The *-rati* negative directive construction expresses what we could call a warning, roughly akin to the English 'should/ought not to do something'. A speaker's use of the *-rati* construction always relies on an external reason (either implicitly or explicitly in the surrounding discourse) why one ought not to do something — that is what makes it a warning. In clause chains, *-rati* warnings pattern with realis linkers. The use of realis linkers are motivated by the speaker's external reason, i.e. one independent of their own desires such as established social taboos enshrined in the ancestral code of law, for the addressee(s) to comply. In contrast, the *-ndɨ* negative directive construction expresses the speaker's internally-motivated desire for the negation of some state of affairs; there is no independent reason for compliance beyond the speaker's wish for the state of affairs to cease or not to take place. The *-ndɨ* construction patterns strongly with irrealis linkers (*=ndata*, *=tɨ*, *=mɨ*). For cultural reasons I discuss later on, the use of irrealis linkers is because the speaker cannot generally expect compliance or (more to the point) mark their internally-motivated prohibition as such, except for extremely low-demand prohibitions (8.2.2.3.2). These observations correspond to Chafe (1995) and Mithun's (1995) insights about how the cross-linguistic differences in the patterning of realis versus irrealis directives (among other types of uses) are attributable to synchronic functions of the categories.

At this point, we are now in a position to step back and consider what types of data are most informative for this area of grammar and help us understand speakers' uses of realis versus irrealis constructions in particular languages. In Chini, the language-specific uses of realis versus irrealis clause chaining constructions and their specific functions in negative directive speech acts are best understood in reference to data from connected speech

produced in real interactions (see also 3.3.3). Narrative data are certainly important, e.g. monologic texts about cultural taboos, but conversational data are key. Some of the most revelatory data for realis and irrealis constructions come from more highly interactive, multi-participant discourse types, including: accounts of situations underway at the time of speech (5.3.1), major and minor complaints (8.2.2.3.3) and major and minor prohibitions (8.2.2.3.2), diverse types of directives (5.3.6 and 8.3.2), among many other possibilities. Conversational interaction is where realis and irrealis constructions are used to their full potential.

Where realis and irrealis categories and their constructional uses are concerned, the analytical pitfalls an outside linguist can encounter are many. It is perhaps inevitable in approaching this area of grammar that some part of the analysis or exemplification will fall short of representing the language-specific workings — the complexity of another language is just too vast even with our recording and transcription technology for us to achieve full understanding. But so long as the analyst makes an effort to avoid the dangers of their own theoretical biases, so long as the documentation is robust and includes conversational data, and so long as the role of native knowledge is valued and integral to the documentation process — I think, then, a reasonably accurate and empirically sound understanding of the language- and construction-specific functions can be achieved.

1.3 Brief overview of the two main realis/irrealis distinctions in Chini

In order to ease the reader into the discussion, here I provide the working definitions and minimal pairs from discourse data for the Chini-specific realis and irrealis constructions as encoded in the verb morphology and, separately, in the clause chain linkage enclitics. I also provide some basic information on proportions of the markers in discourse. This information can be found repeated in the relevant chapters later on.

In Chini, realis and irrealis categories are distinguished in three morphologically unrelated places in the grammar: as a verbal inflection whose functional load in the language far exceeds that of all other inflectional categories (where the forms are lexically-conditioned but representable via the most frequent allomorphs, realis -*a* and irrealis -*i*); in negative verb forms where either a realis (-*ma*) or irrealis (-*ra*) suffix co-occurs with a negation suffix; and finally in the three pairs of clause chain linking enclitics that code dependency relations as well as a realis/irrealis distinction (realis: =*ndaka*, =*kɨ*, =*va* and their irrealis counterparts: =*ndata*, =*tɨ*, =*mɨ*). The first, most basic distinction in the verb morphology has also taken on specialized roles in particular constructions, including grammaticalized homologues with functions like distinguishing realis -*a* (content) from irrealis -*i* (yes-no) questions.

The definitions below describe the basic meaning and functions of the realis/irrealis distinction found in the verb morphology:

REALIS (INFLECTIONAL CATEGORY OF THE VERB)
Realis is used to represent a situation whose (positive or negative) realization status is perceived or presupposed as being within the realm of experience, that is, within the unitary course of events that make up the real world. This corresponds to the native term for realis as it is marked in this part of Chini grammar, *paŋgɨ* which means, roughly: 'of/characterized by anteriority or primariness (*pa*)'.

IRREALIS (INFLECTIONAL CATEGORY OF THE VERB)
Irrealis is used to represent the (positive or negative) realization status of a situation as beyond the realm of experience and by extension beyond what can be presupposed. The realization resides purely within the imagined realm of alternative courses of events. This corresponds to the native Chini term for irrealis in this part of the grammar, *gŋaŋgɨ* which means, roughly: 'of/characterized by posteriority or contingency (*gŋɨ*)'.

This difference is illustrated in the following two examples. The contexts of use for the realis construction in (1) and the irrealis construction in (2) both involve distant future temporal reference. That is just part of the contextual material, however. The realis construction in (1) is used to present the situation as having a highly presupposed realization, while the irrealis

construction in (2) is used to present the situation as having a realization point that is not presupposed but is instead only within the realm of future possibilities:

Inflectional realis: highly presupposed situation in the distant future
(1) *kuyindmɨ chini, ku anurati.*
'I have no illness, I'm not going to die.'

    ku   *mɨgɨ*   *pɨyi.*
    ku   mɨ-gɨ   **pi-yi**
    1SG.NOM   DIST-thus   **sit-R**
    'I will remain (lit. sit) thus.' (Veronika Añjirovim, afi052014i_4:40)

Inflectional irrealis: distant future situation within realm of possibilities
(2) *nu*   *gŋɨkanɨ*   *ŋguñarkɨ*   *rui.*
    [nu   gŋi-kanɨ   ŋgu=ñarkɨ   **ru-i**]
    2SG   later-here   2SG.POSS=skin   **be_hot-IRR**

    nu   *ñitwavɨ*   *ñjarwi.*   *ñi*   *ñjaki.*
    [nu   ñi=twavɨ   **ñji-aru-i**]   [ñi   **ñji-aki**]
    2SG   PL=with   **MID-be_angry-IRR**   PL   **MID-spear.IRR**
    'Later on you'll get distressed (lit. 'your skin will be hot'). You'll get angry with them, you all will fight.' (Dorothy Paul, afi250814iv_45:06)

A very different type of realis/irrealis distinction is encoded in the forms of the linkage enclitics that attach to dependent (medial) clauses in clause chains. The definitions below describe what part of the meaning is consistent across these markers, with the caveat that their functions depend also on the speech act conveyed in the chain. Specifically, the notion of 'expectability' in these definitions is only meant to give a general idea of the range of communicative goals these constructions can be used for.

REALIS (IN CLAUSE CHAIN LINKAGE)
Realis linkers are used to indicate a pragmatically unmarked form of discourse, where the speaker conveys the information in a chained sequence of events 'as is', i.e. as being within the real world of expected or expectable events.

IRREALIS (IN CLAUSE CHAIN LINKAGE)
Irrealis linkers are used to signal a pragmatically marked form of discourse, in which the speaker does not convey their talk 'as is' with respect to the *prima facie* or normative interpretation of the segmental information in a clause chain. The alternative interpretation makes reference to an imaginary course of events over which agents have less control and/or knowledge than is expressed through the use of realis marking.

We can see a glimpse of this difference in the following pragmatic-grammatical minimal pair. Both involve biclausal chains with the desiderative *vɨndɨ* construction used in the final clause, and both chains involve past temporal reference. The dependency relation (functionally independent of the realis/irrealis distinction but also encoded in the form of each linkage device) across the linked clauses is also the same, and here relies on =*kɨ*/=*tɨ*, the pair of linkers indicating continuity of information. What distinguishes the two examples is that the realis marker in (3) indicates a pragmatically unmarked sequence of events: the normative interpretation of the segmental information in the chain is maintained:

Realis chain linkage device: information presented 'as is'

(3) ñi   avkɨkɨ   ñjimanɨ   ŋgu   amamɨ   vɨndɨ.
     [ñi   av-kɨ=**kɨ**]   [ñji-manɨ   ŋgu   amɨ~amɨ   vɨ-ndɨ]
     PL   descend-R.PC=CNT.**R** downhill-there   fish   eat~NMLZ   BEN-think
     'They went down bushwards in order to eat some fish down there.'
     (Dorothy Paul, afi051116ii_33:04)

But the use of the irrealis marker in (4) signals a more pragmatically-marked sequence of events, where the normative interpretation does not hold. The speaker (in reference to the author of the quoted speech) is expressing the fact that the attempt to go check on the fish in the marsh was thwarted:

Irrealis chain linkage device: information contrasts with normative state of affairs

(4) "aga!   ku   aŋɨtɨ
      aga   [ku   aŋɨ=**tɨ**]
      INTER   1SG.NOM   go/come=**CNT.IRR**

      mɨkɨyi   ŋginɨŋginɨ   vɨnda!"
      [mɨ=kɨyi   ŋginɨ~ŋginɨ   vɨ-ndɨ=a]
      DIST=whatsit   perceive.DIST~NMLZ   BEN-think=EXCL
      " 'Oh no! I had wanted to go check out some whatsit (fish)!' "
      (Joseph Manna, afi150514ii_28:07)

One method that can reveal a lot about realis/irrealis distinctions is descriptive statistics. Simple token counts of realis to irrealis marking can give an impression of just how often

speakers of a language use realis and irrealis constructions. Ratios of realis to irrealis marking hint strongly at which category is more functionally marked. And, when realis and irrealis markers are in competition with other TAM categories in the language, information on how much speakers use realis and irrealis relative to the other categories can give a reasonably good impression of their functional load in the language. The basic descriptive statistics for the two main realis/irrealis distinctions in Chini are seen in Table 1.

Table 1: FREQUENCY OF REALIS AND IRREALIS MARKING IN CHINI CONVERSATION

Locus of marking	Relative frequency	Total token frequency	Ratio of realis to irrealis marking
Clause-internal (the basic inflectional markers)	82% of total frequency of all inflectional categories of the verb	(in 30 minutes) Realis: 270 tokens Irrealis: 117 tokens	2.3 : 1 (69.7% : 30.2%)
Clause chaining (linkage enclitics)	100% of all medial clauses (obligatory)	(in 1.5 hours) Realis: 506 tokens Irrealis: 140 tokens	3.6 : 1 (78.3% : 21.7%)

Two generalizations can be drawn from these numbers. With frequencies of 82% and 100% in their respective areas of the grammar, the distinctions encoded in the inflectional morphology and in the chain linkage morphology have very high functional loads in the language. Across both distinctions, the use of realis versus irrealis marking involves ratios of about 2:1 to more than 3:1. In terms of frequency, then, the two types of irrealis categories in Chini are more marked functionally than the corresponding realis categories. The irrealis chain linkage devices are especially marked, at least to the extent that their frequency is any indication.

Chapter 2
The Chini Context

This chapter is intended to provide local and historical context for aspects of Chini language and culture, some of which are relevant to other parts of the dissertation. In (2.1) I discuss basic information about the location, name, and vitality status of Chini. In (2.2) I provide an ethnographic profile of Chini society, followed by a short history of the Chini people and language (2.3). In (2.4) I give a typological profile of the language. In (2.5) I discuss the Ramu family to which Chini belongs and then discuss the evidence showing how Chini's more immediate relationships.

2.1   Language location, name, and shift to Tok Pisin

Chini is one of the smallest of the Ramu languages (Z'graggen 1971; Laycock & Z'graggen 1975). It is spoken in the smaller hamlets of Andamang and Akrukay villages, on the lower Sogeram River in inland Madang Province, Papua New Guinea (hereafter: PNG). The Chini are wedged in between both Ramu- (indicated in green) and Trans New Guinea-speaking (red) people groups and by swaths of impenetrable jungle and swamp (white). Of these groups, the Chini have historically had and continue to have the most intensive contact with Rao people especially of Dibu and Watabu villages, with Breri people especially of Limbebu and Sotebu, with Manat people of Paynamar and Simbeivi, and with Nend people of Akavaŋku. Akrukay people have regular contact with Magɨyi people of Vguvɨndɨ and with Manŋga people of Tokegnam. The map in Figure 2 represents the immediate region and also the limits of the nearby groups and languages that Chini people are generally aware of.

Figure 2: **Chini territory in areal perspective**[18;19]
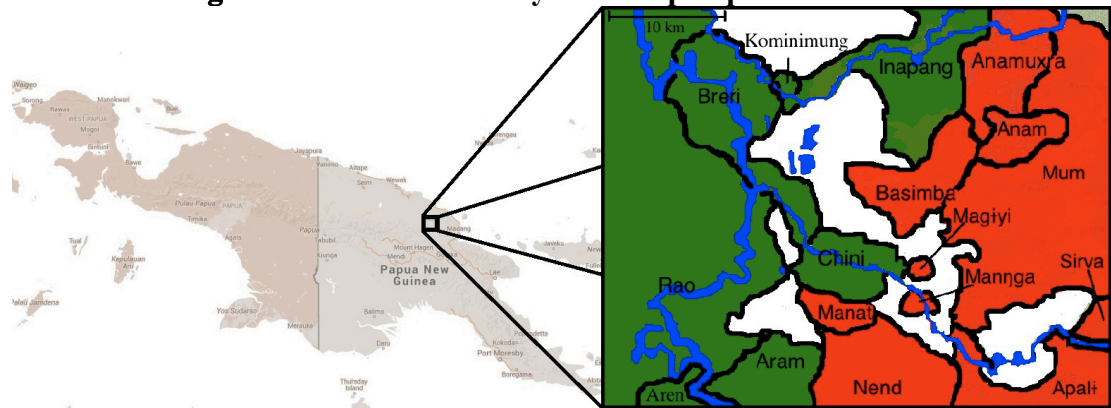
Map data @2015 GBRMPA, Google

The autonym *chini* is a derived form of the existential verb *ch-* and translates into English as 'there isn't any'. This is common practice throughout the region, where most autonyms are based on the word for 'no' or 'what'.[20] When contrasting the vernacular with Tok Pisin, the Chini refer to their language as *gwɨrkŋɨ* (gwu-ɨrk-ŋɨ AUTH-speech-PC, 'ancestral speech'), a term that distinguishes Chini in historical terms on the ancestral-modernity axis. *Chini* and also *ŋɨgɨ ɨrkŋɨ* 'language of the village (Tok Pisin *tok ples*)' distinguish the language geographically and relative to those of other groups.

---

[18] The borders of the different language groups are approximate. This map is the result of my own estimations, and descriptions of locals' knowledge about territory boundaries through my discussions with them. These were compared with the following three existing maps: Laycock & Z'graggen's (1975) linguistic map, the most recent official provincial map of Madang Province by the PNG Survey Haus; and Daniels' (2015:4) map of the Sogeram languages. The farther away a given border represented here is from Chini territory, the less certain I am about its accuracy. I am especially uncertain about the eastern extent of Basimba.

[19] I refer to Breri as the language spoken by the Breri people, and to Rao as the language spoken by the Rao people. These terms are both used autonymically and happen to also correspond to the conventions in the (albeit scant) literature. The Breri also refer to themselves and their language using the autonym 'Iski' ('no') and the Rao similarly use 'Bakɨndɨ' ('no'). To avoid unnecessary confusion I have avoided the latter terms. I also refer to 'Inapang', but this corresponds to what is very clearly a dialect continuum. Clusters of villages within the 'Inapang Area' (as it is referred to locally) use distinct autonyms for particular chunks of the continuum, e.g. 'Yigavesakama' for the variety spoken in Ponoke, Bogen, Ogi, and Igavaya. Dialects within the Inapang continuum have been mentioned occasionally in the literature under the names 'Itutang' and 'Midsivindi'.

[20] As he did with all other languages of Madang he documented wordlists in, Z'graggen called the language 'Akrukay' after the village of whomever he elicited a wordlist from, disregarding local autonyms: "Since there is no indigenous name for any of the languages, language naming has had to be artificial... language names meaning 'what', previously used by Kaspruś for instance, were abandoned, since they seem to provide no satisfactory basis for language naming and give no information on the location of the languages" (Z'graggen 1971:11). I refer to the language and the people according to the indigenous name of the language, 'Chini', as accepted by everyone in Akrukay and Andamang.

Chini is considered endangered including by its speakers who acknowledge that "tok ples i lus" ('the vernacular is loose') and "tok ples bai hait" ('the vernacular is going to hide'). At the time of my fieldwork there were about 20 speakers of the Andamang dialect and, together with speakers of the Akrukay dialect, amount to about 50 to 60 people who use Chini as a code of everyday interaction. All native Chini people speak Tok Pisin, but no one under the age of about 40 speaks Chini and the language has ceased being transmitted to children since the time of the establishment of the local school in Akrukay, in the early 1980s. The divide is fairly sharp between fluent speakers of Chini who (as far as I can tell) command the full dexterity of constructions and lexicon and younger community members who speak Tok Pisin but produce very little of the vernacular. Although the older generations do still speak Chini with one another, many spontaneous interactions in Chini involve code-switching with Tok Pisin. It is not unusual, however, for adults to carry on in Chini together without any extensive code-switching. Similar to what fieldworkers in other parts of Papua New Guinea have described (Kulick 1992), women generally code-switch between Chini and Tok Pisin much less than men. In general, different contexts and interactional set-ups affect which code is used. This is to some degree evident in the corpus. In one audiovisual recording, *Morning meal in Dorothy's kitchen*, Dorothy and Paul (one of three remaining pairs of spouses in Andamang where both parents are fluent Chini speakers) converse almost exclusively in Chini as they sit around the fire early one morning. As their children begin to filter in and out of the house, communication is is conducted increasingly in code-switched speech.

An important topic but one too complex to do justice to here is attitudes toward and local interpretations of endangerment (see e.g. Dobrin 2014). One thing local people have

34

told me in reference to the two languages is: "Mipela igat tupela tok ples" ('We have two native tongues/vernaculars.'). This reflects the idea that the context of shift in Papua New Guinea does not involve shift to a colonizers' language, but rather to a Papua New Guinean lingua franca and marker of national Papua New Guinean identity (for a representative native view, see narrative text *How Tok Pisin came to Andamang*).

2.2   Ethnographic profile

Very little has been written about the cultures of the Middle Ramu region in Papua New Guinea. The most detailed anthropological work in the region was done by Kaspruś, a missionary at Annaberg station from 1936-1943. His insights into local cultural practices are the only information about what some of the people groups in the Middle Ramu region were like just prior to the Australian colonial period. He describes the cultural practices of the Rao, and to a lesser extent some Breri ones as well (Kaspruś 1973). Stanhope (1970, 1980) also published on aspects of Rao culture. Information on several Trans New Guinea-speaking people groups in the area can be found in Daniels (2015).

In the absence of any other information about what Chini society is like, here I describe what I see as some of the most fundamental and interesting cultural practices and ideologies. These include the following, in most cases interrelated, topics: settlement patterns; cultural relevance of the local riverine geology; matrilineality and matrilocality; clan membership; historical male and female multilingualism; marriage and relationships with other groups; the role of Christianity; the cultural institution of the men's house; the types of work for men and women; gardening, fishing, and diet; and a few remarks on the relationship between the individual and the group.

The two Chini villages are sociopolitically distinct units. In the early 1970s, Laycock & Z'graggen (1975:35) recorded 47 and 144 as the populations of Andamang and Akrukay, respectively. Akrukay still has approximately three times the population of Andamang. A visual impression of the current population can be seen in the video stills below taken from a Catholic mass, which all but one or two people from both villages attended. Akrukay is wealthier, and it has the prestige and financing that comes with the local government-funded school. There is a local court system (*avemɨ twamɨ raŋgɨ* 'characterized by baby turtle')[21] that has operated out of Akrukay since colonial times, though the court members are drawn from both communities.

Figure 3: **Catholic mass, most Chini people present (video still 1/2)**

---

[21] The origin for this term is the shiny little pin that the Australian colonial administrator would give to the local man they would designate as the local magistrate of the court. From a Chini perspective, the pin resembled the shell of a baby turtle.

Figure 4: **Catholic mass, most Chini people present (video still 2/2)**

The term 'village' is somewhat misleading, because each is broken up into smaller clusters of houses of families separated from one another. Following common usage, I refer to these as 'hamlets' (Tok Pisin *ples*) and to the smaller, more freshly established units of just one or two houses as 'homesteads' or 'camps' (Tok Pisin *kem*).[22] In ancestral times, there were three main chunks of territory associated with Andamang (*Avendviŋgɨ*, *Andamŋgɨ*, *Akapmiŋgɨ*) and three others with Akrukay (*Ambañjiram*, *Arvichiŋgɨ*, *Yaviniŋgɨ*). These three continue to be considered the main hamlets associated with each village, regardless of whether they are inhabited or not. At the time of my fieldwork in the Akapmiŋgɨ hamlet of Andamang, there were six Andamang and ten Akrukay hamlets/homesteads, including one Andamang homestead ('Avendvi') and one Akrukay homestead ('Andɨ') established during the period of my 2012-2014 fieldwork.

---

[22] The native Chini concepts do not map onto the different settlement possibilities in the same way that the Tok Pisin concepts *kem* 'camp, homestead', *ples* 'village, hamlet', and *liklik ples* 'hamlet (lit. little village)' do. The Chini word *ŋgigɨ* refers equally to isolated homesteads and larger hamlets, and has been extended to the more abstract concept of a village (i.e., collection of hamlets). Its paucal augmentative form, *ŋgigamkɨ* 'big village', refers primarily to Madang (the town and provincial capital. The native word for 'community' is a derivative of *ŋgigɨ* that takes the nominal suffix *-aprɨ* 'all the leaves': *ŋgigaprɨ* 'all the component subparts of the village'.

Figure 5: Dominika Alfons and Alfons Garɨmbɨni's new homestead in Avendvi

The names 'Andamang' and 'Akrukay' are historical misnomers. The Australian colonial administrators who assumed that *Andamŋgɨ* and *Akrukaiŋgɨ* (i.e., the two hamlets where they happened to shore) included the other houses distributed throughout the bush in each respective area. The two names only came to signify the distinction between the two villages during the colonial era. Natively, the autonym *Awakŋi* refers to citizens of Andamang and *Yavɨnaŋri* to citizens of Akrukay.

The idea of grouping people in centralized areas came from the Australian colonial government. Older Chini villagers recall that in pre-contact times, one or a few families with ancestral rights to a particular area would live together in small, isolated groups. As they did throughout the region and beyond, the colonial administrators coerced the Chini into abandoning their practice of living in isolated groups scattered throughout the bush, and to instead live together in villages where they could be counted and kept track of. They also had the Chini abandon their traditional almond-shaped houses built at ground level (*varɨmbɨgɨ*),

in favor of square and rectangular houses with raised floors built about 1.5 meters from the ground (*akakrambɨgɨ*).

Pressures for the centralized versus distributed settlement models continue to be felt strongly, and most people see each in terms of its pros and cons. The centralized model is believed to contribute to social harmony, and the strength of this model is reinforced by the emphasis the Catholic Church continues to place upon it. This is counterbalanced by pressures favoring the ancestral model of hamlets and homesteads distributed throughout the bush. The ancestral model is perceived as allowing for peace and quiet and proximity to one's matrilineally-inherited land (and thus to one's garden), and it is also an escape from conflict. But it is also sometimes considered in a negative light, as an obstacle for the cooperative mindset and indicative of antisocial behavior (Tok Pisin *pasin bilong bruk bruk* 'behavior characterized by being scattered about'). The establishment of new homesteads is common, with about one or two per village breaking off each year. Major communal dissolutions are less frequent. Once every twenty years or so, a hamlet uproots itself entirely and its citizens abandon their homes, typically splintering into multiple smaller hamlets thereafter. This happens when there is evidence of sorcery. When a woman in the large Andamang hamlet of Ñiruna was killed by a crocodile in the early 2000s, this was interpreted as an act of sorcery (see narrative text *Mass Flight from Ñiruna*). Everyone fled downriver and split into two hamlets, Akapmiŋgɨ and Ravɨndɨ, and from these eventually split off three additional smaller hamlets, Aŋgwanmiŋgɨ, Akapmay, and Avendvi. In this way, attempts to settle people in large village units as an essentially colonial practice and ideology, do not last very long, since the ancestral processes of settlement dissolution and relocation continue to occur. Finally, it should be said that given the historical and ongoing complexity of settlement

patterns as well as the tendency for people to stick close to their bush grounds and their nearest kin, linguistic microvariation even in small speech varieties like the Andamang and Akrukay dialects of Chini is not altogether surprising. (A number of examples found throughout this dissertation contain forms subject to microvariation, and in all cases, the original forms as they were uttered are preserved.)

Internal mobility and changing settlement patterns are linked to a set of land-related issues — indeed there are few cultural concepts or societal issues I am aware of that are not related to land in some way. One example is the effect of the vagaries of the Sogeram River. The particular stretch that runs through most of Chini territory (and Andamang in particular) is geologically distinct from its lower and upper stretches within the lands of other tribes in that it deviates within a fairly wide meander belt. The Chini stretch of the Sogeram is more narrow, winding, and its path much more mutable from year to year. During the wet season (approximately mid-November through mid-March), the river may carve new paths for itself, either cutting into land adjacent to its course or sometimes much deeper toward the northern or southern edges of the meander belt. Sections of the old river that were cut off become oxbow marshes as water levels recede at the end of the wet season. At the same time, old oxbow marshes are reclaimed by the river if they lie in the path of the river during a later wet season. The Chini landscape is thus constantly undergoing change and can change dramatically over a single wet season. Chini people are affected by these geomorphic changes more than the Breri people downriver or the Manŋga upriver where the river is wider, less winding, and more permanent in its course. Houses, gardens, and cemeteries are destroyed when land collapses into the river, and marshes used for fishing can disappear in a single wet season. This same instability also has a major benefit that sets the Chini apart from

40

all other nearby groups, since each wet season, a great many fish become trapped in the marshes sprinkled throughout Chini territory. Halfway through the dry season around July or August, the water levels in the marshes are at their lowest, and all the remaining fish are harvested. Because of this, and unlike other groups in the region, the Chini have developed a tradition of smoking fish on fishracks. This allows the fish to last longer so that they can be eaten over a period of days and traded for sago or other things with other groups. See also (2.5.2) for discussion on how this relates to historical interactions between groups and the related linguistic effects of those interactions.

Figure 6: Richard Guku constructing a fishrack at the end of the dry season

Also related to land are several fundamental and interconnected concepts: matrilineal clan membership, matrilineal land tenure, matrilocality and endogamy for women, and clan

exogamy for everyone. There are two major clans: the *Avyɨ* and the *Atvɨ*.[23] Each major clan comes with its own set of subclans, and so every member of Chini society belongs to just one major clan and an associated subclan. The bush grounds and garden space one has ancestral rights to are passed down matrilineally via clan and subclan membership. Chini territory is divided up into dozens of small, named chunks, each of which is under the stewardship of a particular Atvɨ or Avyɨ subclan. Marriages between fellow clansmen (with respect to the two major clans) are forbidden, and so you must marry your 'enemy' clan (Tok Pisin *birua marit* 'enemy marriage'). Interestingly, there have been exceptions to this, for instance two generations ago when the population level was quite low. It has been my experience that children of these 'improper' (in the local view) marriages are noticeably different in their personalities and lifestyles in particular ways. They often are the target of other villagers' anger, since their improper origins are perceived to give rise to certain traits and behaviors. Finally, although clan membership is passed down matrilineally, it is possible under certain circumstances for a child to take their father's clan instead. This is done whenever the father's subclan complains of depleted membership and the related disuse of that subclan's bush grounds for gardening and hunting. The husband and his subclan can then petition the wife and her sub-clan for permission to assign a newborn child to the father's clan. The Chini word for 'four', *amɨŋɨndi* (lit. 'leaves-mother'), seems to reflect this practice, since occasionally Chini people will represent this practice by saying that in every four children, one goes to the father.

The Chini draw a sharp distinction between autochthones (members of society with matrilineally-inherited land tenure rights, including adopted children) and foreigners, who

---

[23] In Chini, the names for the two major clans are both bound nominal roots that only occur in compounds, so my use of them here is unavoidably somewhat strange. Specifically, these forms occur as the first component in a compound together with 'man' or 'woman', e.g. *atvami* 'women of the Atvɨ(-) clan'.

they refer to as *avaŋri* 'known foreigners' (i.e., those from nearby communities with whom the Chini have regular contact), or the pejorative *aruŋri* 'undifferentiated foreigners'. A small number of foreigners are nevertheless integrated into Chini society with varying degrees of acceptance. Important for language contact is the fact that there exist four substantial communities or 'settlements' (in the local term) of *avaŋri* within western Andamang territory. A short distance downriver from the western-most Andamang hamlet is the Rao settlement Kuvru (Chini: Akwavrɨmŋgɨ). Farther west are the Breri settlements Aŋgwanɨgru and Pranŋgram (Chini: Aŋgrupɨyindɨ). The westernmost is the Rao settlement Siruto. Adult members of these communities speak a Ramu koiné with Chini speakers, which in my experience is used primarily if not solely to joke around and is itself regarded with amusement. Some Rao and Breri people in the settlements as well as in Limbebu, a Breri village just downriver on the Sogeram from Andamang, have higher degrees of fluency in Chini.

Figure 7: Location of Chini hamlets and foreign settlements 2012-2014 (map)[24]

---
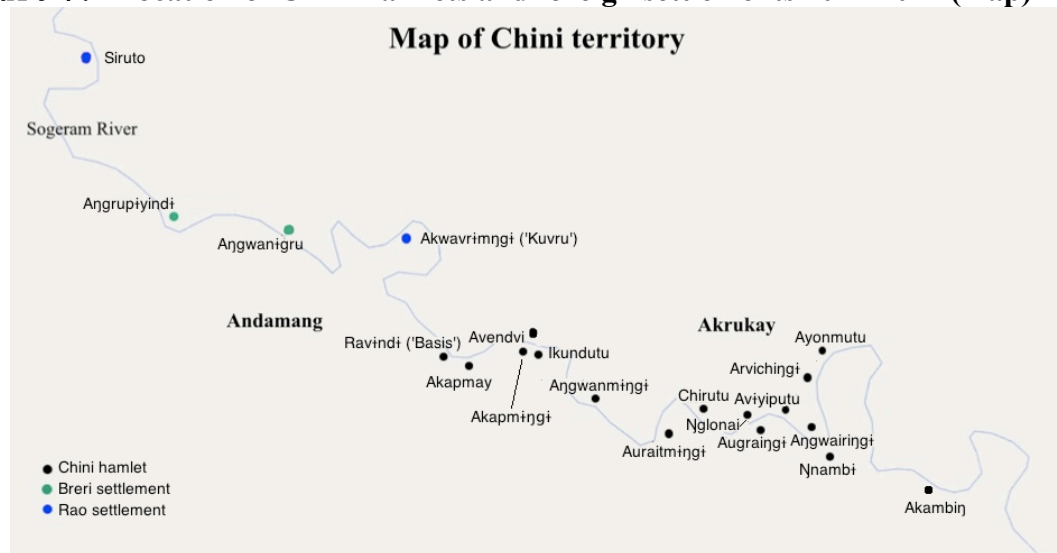
[24] This map indicates established communities only for the 2012-2014 period. Hardly a year goes by that a new settlement isn't established or abandoned. By 2016, a new homestead, Andɨ (lit. 'Hill'), had been established by Erman Manna and his family in Akrukay. And also by 2016, the Andamang hamlet Akapmay had been all but abandoned (for reasons of strife).

There is a general cultural division that maps, mostly though not absolutely, onto the linguistic division between Ramu and Trans New Guinea languages in the area. Local Ramu communities like the Chini are matrilineal and matrilocal, while the neighboring Trans New Guinea-speaking communities are patrilineal and patrilocal. In Chini society, there are two types of exceptions to matrilocality that result from intermarriage and adoption practices with these other groups.

The first exception involves relations between Ramu groups that share matrilineality and matrilocality like the Chini. Occasionally, for instance, a female Chini baby is permitted to be adopted by a Rao or Breri family. Her loss is felt by the community until, after a generation or two, her (foreign) family reciprocates and repatriates a female descendant of hers back to the Chini. The girl in question is nurtured and raised in the foreign community and then adopted during puberty by a Chini mother. During the time of my fieldwork, I knew two women in Andamang who had been adopted in this way, one from a Rao-speaking and the other from a Breri-speaking community (see narrative text *Daniela's Repatriation*). Due to their matrilineal heritage, these women are officially considered autochtonous, but are treated differently. Unlike other Chini women, they are expected to marry an autochtonous man. Their misdeeds and mistakes are also more publically scrutinized than those committed by other members of society. (No similar practice involving male children exists.)

It is possible that historically, the practice of repatriating these semi-autochtonous women has had linguistic consequences, since they begin acquiring Chini in their adolescence. As in other Melanesian societies, multilingualism has historically been a marker of prestige for Chini men. If the vestiges of multilingualism evident in older Chini men are

indicative of historical multilingualism, then at least for Andamang men the most commonly spoken foreign languages would have been Rao, Breri, Manat, and Nend.

The second exception to matrilocality are marriages between Chini women and men from neighboring patrilocal (all Trans New Guinea-speaking) groups, in particular the Manat of Paynamar and the Nend of Akavaŋku. When this happens, there is a clash between the two groups' cultural principles. The Chini want the couple to live locally, lest the woman's children grow up with no attachment to their rightful bush grounds and the woman's subclan be depleted in membership. The patrilineal and patrilocal community wants the same for the couple, since if they take up residence in Andamang or Akrukay, the father's subclan will be similarly negatively affected. The best solution I witnessed to the former situation, in which an Andamang woman married an Akavaŋku man, is that the couple do not settle permanently in either parent's village but continue to move back and forth. (That couple once tried to settle permanently in Andamang, but mysteriously, their house burnt down.)

Any permanent move results in yearning for the lost daughter (for the matrilocal cultures) or the lost son (for the patrilocal cultures). Unless resolved, the loss is felt for generations. At some point around the late 1930s, an Akavaŋku man moved to Andamang to marry a Chini woman, and in so doing abandoned the patrilocal imperative of his community. Every so often, his relatives renew their offer of repatriation (including ancestral land rights) to the male (Chini) progeny of that marriage. The Chini men, having been raised in a matrilineal-based society, are used to their own matrilineally-bequeathed bush grounds and gardens and express no interest in the offer from their desperate patrilineal relatives.

As in many other parts of Papua New Guinea, marriage patterns in Chini society have been changing in recent decades. People are marrying much farther afield than their ancestors

ever would have. This has had a number of different effects. One is that people are faced more and more with conflicting cultural imperatives surrounding marriage. Weki Manna for instance, recently married a woman far upriver in Umsa, a place Chini people explain their ancestors never would have ventured to. In Umsa, they practice exchange marriages, but the Chini do not. What this means is that the bride's family expects one of the groom's male relatives to marry one of her (the bride's) sisters. The Chini essentially ignore the pleas from the Umsa folks for an exchange marriage to take place. The Umsa folks have responded to the indifference by sending the bride's sisters for extending stays in Andamang to try and seduce the groom's male relatives.

The Chini are affiliated with the Catholic Church. The parish headquarters are in Kwanga, located downriver on the Ramu in Breri territory. They consider themselves Christians, and in fact the parish priest in Kwanga is a native Andamang man named Andmariŋini Manna. The first Catholic mass conducted in Chini country occurred at the beginning of my 2016 research period, an event I was able to record. In his sermon the priest admonishes people for continuing to split off into new homesteads, and he urges them to consider the benefits of a centralized community.

Chini people also maintain certain ancestral practices that have long since been abandoned in most other places in PNG as the result of contact with Westerners. The Chini of Andamang still maintain the cultural institution of the *amumhu* or men's house (see narrative text *Origin of the Men's House*). Women are forbidden from entering upon its grounds, and mention of it by men in the presence of women is strictly taboo. Boys receive their traditional education and rites of passage in the men's house, and during times of heated internal conflict, it is where men gather to seek resolution. These rare meetings are the only

place I know of where the use of Chini takes strong precedence over Tok Pisin, in part because only the important men of the village (locally referred to under the generalized term *aŋinɨmbriyi* and under the term *andovaŋri*, which refers to a type of clan-based status bestowed on some adult men in the village) have the floor. Prophetic visions are described, orations delivered, heated arguments exchanged. Missionization (in the form of Catholicism) has led to the cessation of certain cultural practices associated with the men's house, though I have never been able to receive an answer about what those practices were.

The aspect of their lives that Chini people emphasized most to me was how hard their lives are relative to those of whitemen.[25] Their lives revolve around various types of strenuous labor that are, in their view, rare or non-existent in the world of whitemen. Chini men hunt, harvest sago, carve canoes from tree trunks, and they build houses that decay and must be rebuilt every four to five years. They also construct fishracks (*ayandmɨ*), and weave hand fans (*ɨvkɨ*). The tasks of washing sago, of catching and smoking fish, and cooking are, with occasional exception, all female occupations. Women are also tasked with transporting heavy objects (especially: firewood) in a large string-bag where the strap is held by the forehead and hangs behind the head, causing no small amount of strain to the muscles of the neck.

Chini men and women together clear swaths of jungle by slash-and-burn methods to start new gardens, and like most Papua New Guinean villagers they are engaged almost daily in subsistence gardening and in harvesting other types of food. There are three types of gardens: 'standard' gardens (*arŋi*) where a multiplicity of crops are grown (multiple types of cooking bananas, squash, beans, corn, lesser yams (Tok Pisin *mami*), taro, sugarcane); hill

---

[25] The use of the term 'whitemen' is essentially a borrowing of Tok Pisin *waitman* and follows common usage in the anthropological literature about Melanesian societies (see Bashkow 2006).

gardens (*andɨ* lit. 'hill') where sugarcane and yams in particular are grown; and silt gardens

(*murupmu*) situated on the banks of the Sogeram, where lowland sweet potatoes are grown.

Figure 8: **Chopping a tree trunk to make a canoe**

Figure 9: **Hunting wild pigs**

Figure 10: **Dorothy Paul and her daughter Jeralin washing sago**

In part because they work so hard, the Chini place a great value on *muŋu*, rest and relaxation. The *ñjimɨŋɨ ambɨgɨ* 'wind house', a structure with a raised floor and thatched roof but no walls, is where people relax and socialize together, chatting and chewing betel nut and hoping to catch breezes that billow upriver from the direction of the Ramu.

Figure 11: Relaxing and chewing sugar cane in a *ñjimiŋi ambigi* 'wind house'

The staple food is sago, believed to be a source of strength and in contrast to the 'weak' foods like rice and noodles (believed to be staples) in the diet of whitemen. Yams are the most important garden vegetable. Also eaten in abundance are *rŋu* yams (English 'lesser yam'), lowland sweet potatoes, and several types of (cooked) bananas.

Figure 12: Sago soup (*añjigi kŋi*) with fish, greens, and an ancestral-style spoon

The Chini are known in their region for the abundance of fish in their territory, which, as described above, is due to the many marshes scattered near the Sogeram and clustered most densely in Chini territory. Fish is the primary source of protein, and opossum and bandicoot, a gamey but delicious marsupial, are also eaten frequently. Wallabies, guria pigeons, the eggs of wild fowl, the rare crocodile, the occasional cassowary or wild pig, as well as a few other types of game and fowl, and fried sago grubs are also eaten. Chickens and domesticated pigs are kept and slaughtered for special occasions. There are certain food restrictions that men and also pregnant women obey (see also narrative text *Garden Laws and Food Restrictions*). The most rigid prohibition is against pre-initiate boys and pregnant women eating the

bottom-feeding ariɨd catfish (Chini *awamɨ*, Tok Pisin *pis kondon*). There are other, somewhat looser restrictions against eating crayfish, turtles, and eel. Certain types of fish and seafood that a man did not eat as a pre-initiate boy, he may refrain from eating in his adult life.

Figure 13: Sago pancake (*añjigi akari*) and freshly-caught bandicoot

The relationship between the individual and the society as a whole is something that bears mentioning, even though I can only give my perspective as an outsider. (For a local discussion on the topic, see the third text included in the Appendix). At least in Andamang, there is a cultural ideology that places a virtually non-negotiable importance on the autonomy of the individual. Everyday talk is permeated by formulaic phrases in Chini and Tok Pisin that reinforce people's ability to follow their own compass, regardless of how that might conflict with others' expectations of them. At least in my experience in fieldwork, there is no request or demand of significance that any Chini person can make on another where there is certainty of compliance, including one's own children. So, it is not uncommon for children to deflect their parents' directives, often through a forceful verbal assault hurled back at the

parent. Though somewhat astounding from a Western perspective, the child's autonomy cannot be further imposed upon, and I have never witnessed a parent reacting in anger to these sorts of displays, i.e. what we would call 'disobedience' but which a Chini person would call 'spearing talk' (Chini *irkŋi akiki*) or 'shoving talk' (Tok Pisin *sakim tok*). That is not to say that parents do not discipline their children. They do, but serious disciplining of children (i.e., beating) occurs only under rare and extreme circumstances; I have only witnessed this a few times during my fieldwork. At least in my experience, the use of physical discipline is generally unheard of in Andamang, and there is a strong social taboo against it.

The central importance of the autonomy principle might also explain certain other cultural phenomena. Diverse types of difference or ways of being are not socially marked at all (and are not topicalizable information) like they are in some Western cultures, even though those individual differences do sometimes lead to slightly different roles in Chini society for some people. As it pertains to specific people in Andamang and Akrukay, these differences include things like: deafness, perpetual bachelorhood, sexual behavior, cognitive and/or developmentally-related difference, and individuals who are not ambulatory (i.e. due to serious accidents earlier in life). These things may be commented on in passing, for instance to recognize an individual's hardship, or their inability to participate in some group event. But there is no discomfort or negative social value associated with difference, at least not that I have ever perceived.

The above should give some insight into some of what makes up Chini cultural life, in ways that are characteristically Melanesian but also uniquely Chini. The Chini villagers I know do not play down the cultural differences between themselves and the others in their midst – they emphasize them. They represented themselves to me as being distinct from their

neighbors and as distinct from me and the world of whitemen, though not without an additional emphasis on the common humanity that we share. I hope to have done at least some justice to that distinction, and to have represented their world in a way they would approve of.

2.3   Overview of the history of the Chini people and language

In their oral history, the Awakŋi (i.e. the Chini of Andamang village)[26] locate the emergence of their language and society to a contact situation between a previous group who inhabited the territory and a group of migrants from a hamlet to the north they refer to as *Arwãŋɨ* 'Jungle village' (see narrative text *The Origins of the Chini*).[27] The original location of Arwãŋɨ was somewhere near the Guam River, where varieties of the Inapang dialect continuum are spoken. The local historical record recalls that the newcomers from Arwãŋɨ encountered the old inhabitants of what are now Andamang and Akrukay. That group was called the *Ɨvɨŋɨ*. Their own origins are lost to history other than a vague memory that they may have come from somewhere to the southeast of modern-day Chini territory. It seems that the Ɨvɨŋɨ, as the previous sole proprietors of the land, became inundated with outside settlers, and doled out chunks of territory to the new clans in their midst. At some point in time (presumably once they had become overly inundated by the newcomers), the Ɨvɨŋɨ were relegated to a subclan of the Avɨ (major) clan. This means that anyone who traces their

---

[26] I have not recorded an origin story from anyone from Akrukay, though I know of no reason why their account would differ in any major way. Distinguishing this origin story as the Awakŋi (Andamang) one is rather a matter of cultural property rights, since all folktales and official oral historical accounts belong to one village or the other, always with certain differences.

[27] Chini people's own knowledge of their history squares well with certain suggestions about historical relationships in the Ramu family. Z'graggen (1971) lists Chini as having a very high percentage of lexical cognates with Inapang dialects (across about 60-something words). During an encounter I had with two speakers of Yigavesakama (a dialect of Inapang) from Ponoke village, it became clear to me after jotting down a wordlist that Yigavesakama shares much segmental material with Chini, including at least a few short phrases that are mutually intelligible. Chini people themselves recognize the high degree of cognacy with Yigavesakama and also with the other Inapang dialect in Midsivindi. I discuss these matters in greater detail in later sections of this chapter.

matrilineage to them still belongs to that clan today. (To be clear, these people are fully autochthonous and culturally and linguistically Chini in all ways, with no evidence of any difference; they are in a sense "Ɨviŋɨ in name only", albeit without the political jab that that connotes.) Today their land takes up a fairly large space in southern Chini territory near Rkrwamrɨ stream. Of all the Chini subclans, they have the direst membership problems nowadays, and they have nearly ceased to exist as a subclan. The Chini lament the bush ground going almost completely to waste, since there are not enough people to garden or hunt there. There are no remaining Andamang people who belong to that clan, only a few Akrukay people like Gordon Dingaram for instance, who trace their matrilineage through the Ɨviŋɨ line and have land tenure rights in that area. I will return to this historical context in (2.5.2.1), where I discuss the possibility that Chini is a product of contact between whatever language the Ɨviŋɨ spoke and the Inapang dialect spoken by the newcomers from the north.

Another important part of the local history is the periodic exchange of ritual dances (Chini *mbanɨrkŋɨ*, Tok Pisin *singsing*). This involves a trip to another village, where everyone performs the singsing (the dance and the song that goes along with it), and does so in elaborate costume so as to indicate to the other village the amount of time, energy, and resources they put into the event. The dance moves and song are learned to some extent by the people in the foreign village, who offer something, for instance a pig, in exchange. What this has also led to is the phenomenon whereby no one seems to know their own society's traditional exchange dances. The Chini of Andamang had three traditional exchange dances: Mugwu, Popla, and Mena, but not a single dance move or lyric is remembered by anyone in this day and age. People point out that someone in some village somewhere is continuing on their tradition. It is still remembered for instance, that Andamang sold Mugwu to Araŋginam,

up north in Basimba territory. And, at a later point in time, Araŋɨnam sold Mañjare, a dance of uncertain origin, to Andamang. A long time ago, a number of exchange dances were sold down the Sogeram River from up around the Josephstaal area and found their way to Andamang. These include: Armai (or Tumbam) and Chuchwapɨ. Another dance the Chini of Andamang bought is Kɨtɨmko, from Wavapi village in Aram territory to the south. The Manat of Paynamar village eventually bought Rwaŋɨ, Chuchwapɨ, and Mañjare from Andamang. Very little even of these foreign dances is remembered, as they were sold and passed on, and then forgotten as new exchange dances made the rounds throughout the region. As far as I am aware, Paul Guku's continued remembrance of a short refrain of Mañjare is all that is left of local knowledge of the ancestral singsings. The most recent wave brought Mariam, apparently begun by the Anamuxra up near Josephstaal, who then sold it to the Manat of Paynamar, who then sold it to Andamang. Also part of the most recent wave is Laloy, which started near Madang (town), moved along the Rai Coast and Karkar Island and then came west. Laloy was also bought by the Manat of Paynamar (from what group, I do not know) and then sold to Andamang. Mariam and Laloy remain very à la mode, at least for now.[28]

---

[28] That these trade routes match almost exactly the locations of languages from three unrelated families that distinguish realis and irrealis medial clause constructions is likely no coincidence (see 8.1). Although much of the history remains unknown, it is clear that there has been intensive contact between groups in the Josephstaal region all the way down the Sogeram River for quite some time.

Figure 14: **Joseph Manna leading the dance procession (video still)**

Dramatic changes in Chini society were set in motion with the arrival of Western missionaries, colonial administrators, and other types of foreigners beginning in the early 20th century. The first published mention of the groups in the Ramu River area was by a geological surveyor who traveled up the Ramu River in the 1920s (Stanley 1922). Arthur Capell later traveled along the Ramu River and published brief sketches of several of the languages spoken there (Capell 1951). As for the Chini, people in Andamang and Akrukay attribute their own first interaction with Europeans to a brief encounter between the inhabitants of the Akrukay hamlet Arvichiŋɨ and the German missionaries who traveled up the Sogeram River in their boat sometime in the 1910s (see also narrative text *Missionaries come to Arvichiŋɨ*). The Arvichiŋɨ locals recall they obtained a few Western items that the missionaries left on the riverbank.[29]

---

[29] As far as I am aware, there is no record of this specific interaction in any of the Western historical literature, but I have no reason to doubt the Chini oral historical account. That account squares with a very similar experience that Rao people of Chungrebu village had with the German botanists Lauterbach and Tappenbeck around 1896-1898 (Stanhope 1980:1). It thus seems entirely possible that a boat with German missionaries did for one brief moment travel up the Sogeram in the early 20th century, or perhaps that it was in fact Lauterback

Christianization in this region began when SVD (Society of the Divine Word, representing the Catholic Church) missionaries established their mission headquarters in 1934 at Annaberg in Rao territory (Stanhope 1980:1). There does not appear to have been much contact between the SVD missionaries and Chini people, however. For instance, Kaspruś, an SVD missionary stationed in Rao territory and who had a sharp ethnographic sensitivity, scarcely mentions any groups on the Sogeram River. One brief but vague reference in his book to a 'Sogoram' tribe (Kaspruś 1973:170) does appear to be about Chini of Andamang. As Kaspruś reports and as people in Andamang remember to this day, Andamang villagers sold the *mandjare* ritual dance to a Rao village in the late 1920s.

The next encounter that Chini people had with outsiders was sometime between November 1951 and January 1952, when G. P. Taylor, a patrol officer of the Australian colonial administration, traveled briefly through the region. He described the history of contact in Chini's region up until his time as follows:

> Early pioneering of the Ramu River proper dates... [to] 1896 at least, when an expedition led by Dr. Lauterbach in the schooner "Johan Albrecht" partially navigated and surveyed some sections of the [Ramu] River... [I]n 1898... Ernest Tappenbech penetrated portions of the Ramu... The "Wattle" expedition of the late 1920's added much to the exploration of the Ramu for it penetrated some 200 miles upstream to a point near ATEMBLE, upstream from ANNANBERG. An interesting account of the expedition and as well accurate charts of the River, as it was then, is in existence. Whatever, all early exploration of the area seems to have been concentrated on the Ramu itself for no great attempt was made to navigate the Guam or Sogeram Rivers during any of these expeditions. The area has remained to this day a mystery for well meaning missionaries and recruiters have only penetrated to the outer perimeter of the central Guam region... Certainly no Government patrol had ever even neared the area prior to this occasion... (G.P. Taylor, NAA: A7034 Item No:91)

After Taylor's visit, there were a few more patrols in the area throughout the Australian colonial period, though interaction appears to have been very limited. During that time, Manna Avuŋgruŋɨ (the father of Anton Manna, Frank Manna, Joseph Manna and

---

and Tappenbeck who took a brief pilot trip up the Sogeram as they made their way along the Ramu. If they (or the missionaries, or whoever it was) wrote an account of the trip, it has been lost to history or is in an archive somewhere.

Dorothy Paul) was appointed *luluai tultul*, the local authority through which the colonial administration exerted its influence. That influence amounted primarily to coercing people into living in centralized villages where they could be counted for census purposes rather than the ancestral model of isolated homesteads.

At some point during the colonial administration (in my estimation, around the time of the Second World War or perhaps earlier), the Catholic Church established its headquarters on the Ramu River in Kwanga (Breri territory). According to the Chini, there was a succession of European priests who each spent much of their careers in Kwanga, until the position of the priest was given over in recent times to Andmariŋini Manna, a native Andamang man. The two Chini villages have been within its diocese since that time. It was in 2016 during my third visit to Andamang that the first Catholic mass was conducted, in part as a means to restore unity between the two Chini polities (Andamang and Akrukay) after a period of strife. Nearly every Chini person attended.[30]

2.4   Typological profile[31]

Here I give an overview of Chini grammar and highlight the less cross-linguistically common constructions as well as those I find most interesting. This section is also intended as a reference for aspects of the grammar relevant to some or many examples found throughout the dissertation, but which do not necessarily have to do with realis/irrealis distinctions. Cross-references are included for those areas discussed in greater detail in various parts of the dissertation.

---

[30] This event, along with the reconciliation feast (Tok Pisin *wanbel kaikai*) that took place later that afternoon, was recorded and constitutes part of the documentation housed in ELAR.

[31] Here I would like to acknowledge a number of resources that I have benefitted from in my analysis or generally but which are not acknowledged elsewhere in this dissertation. These include: The World Atlas of Language Structures Online (Dryer & Haspelmath 2013) and the Surrey Suppletion Database (Brown et al. 2003).

2.4.1 Phonology

The phonemic inventory for the Andamang dialect includes a total of 24 consonants and 8 vowels, where the Akrukay dialect exhibits a couple of minor differences (2.4.1). There are 5 sets of stops: monosegmental oral stops (bilabial, alveolar, velar), monosegmental nasal stops (bilabial, alveolar, palatal, velar), monosegmental nasal stops produced with pulmonary ingressive airflow (bilabial, velar), prenasalized oral stops (bilabial, alveolar, palatal, velar) and prestopped nasals (bilabial, velar, and palatal-bilabial). Phonetically, the initial (oral) segment(s) in the prestopped nasals /ɓm/ /ʄŋ/ and /cɓm/ (and in the non-phonemic cluster [fm]) are articulated with pulmonic ingressive airflow, i.e. in through the mouth. During the articulation of the final (i.e. nasal) segment, the air is released, i.e. through the nose. Some monosegmental bilabial and velar nasals are produced with ingressive airflow and may be analyzable as marginal phonemes. (C)(C)(C)V and CVC represent the canonical syllabic structure in terms of combinations that occur in the data (glides being analyzed as appendices to the onset). No syllable contains a complex onset and a coda. There are 2 triconsonantal and about 24 biconsonantal onset clusters. Penultimate stress appears to be phrasal for the most part though a small number of words have antepenultimate lexical stress. I have not investigated stress or other suprasegmental or prosodic properties in depth at this time, however. There are a few differences in the phonemic inventories and syllable structure in the two Chini dialects; the Akrukay dialect maintains the more conservative phonological system while the Andamang dialect has been more innovative.

2.4.2 Lexical classes and pan-grammatical categories

Open lexical classes include nouns and verbs. Closed lexical classes include pronouns, proper names and kinship terms, demonstratives, postpositions, numerals, adjectives, verbal

adjectives, verbal auxiliaries, and interjections. Other types of words (that do not appear to constitute classes per se) include various discourse markers, ideophones, particles and clitics.

Some categorial distinctions crosscut lexical classes. The directional system is indicated primarily by demonstratives and verbs, though the demonstrative marking can form nominal and pronominal compounds. That system distinguishes upriver/downriver according solely to the direction of the Sogeram River. It also exhibits a second, more complex dichotomy, where both uphill/downhill and village/bush directionality are referred to by identical sets of terms. Another pan-grammatical distinction is the paucal/plural (for verbal number: paucactional/pluractional) number opposition marked on verbal adjectives, a subset of nouns, a subset of verbs, certain suffixes on verbs and especially verbal adjectives, clitics (i.e., grammaticalized forms of former nouns). Pronouns, however, distinguish singular, dual, and plural participants. Number marking on multiple word types within a phrase or clause is not determined by agreement but by semantic principles.

2.4.3   Head versus dependent marking: case and information about participants

Chini employs a mix of head- and dependent-marking strategies for indicating information about participants. Case is primarily marked on noun phrases but case-like information is also indicated by several proclitics on the verb phrase. Pronominal forms distinguish: nominative, accusative, and benefactive cases for 1SG; generic, dative, and benefactive for 2/3SG and 1/2/3PL; generic only for 1/2/3DU. Via the use of postpositional enclitics, lexical noun phrases distinguish: the adessive-inessive, translational (movement or change into or out of a location or state), newly-experienced, vialis, associative, and comitative cases. There are also two vocatives, one for proper nouns and one for pronouns. Via suffixes that attach to the proximal, distal, or far-distal deictic forms, demonstratives distinguish: adessive, elative,

and cislocative cases. The same indeterminate spatial case is used for demonstratives, lexical nouns, and nominalizations (i.e. from a verb) form. In the Andamang dialect, proclitics on the verb complex function to register allatives, benefactives, and instrumental-manuals. The form of the adessive postposition in the Andamang dialect is a verbal proclitic in the Akrukay dialect.

Most information about the semantic and pragmatic properties of participants is indicated via proclitics on the verb complex (4.2). These markers, moreover, represent the primary means by which information about valency is indicated. Otherwise, valency is best seen in terms of constructional tendencies that are dependent on the semantics (and limitations of argument structures) of each individual lexical verb, where the specialized verbal proclitics allow for considerable dexterity in the addition of multiple possible arguments in a single clause. For example, as in many Papuan languages, the verb 'give' is almost exclusively bivalent in discourse and co-occurs maximally with an agentive noun phrase 'A' and a recipient (but not theme 'T') noun phrase 'R'. Yet, on rare occasion, 'give' occurs with a lexical or pronominal A and a pronominal T. Additionally, there are several strongly ambivalent lexical verbs in the language, in particular roots with postural semantics: *mbɨ-* 'stand up (oneself), stand (something) up'; *pɨ-* 'sit (oneself) down, sit (someone/something) down; finish'; *ga* 'lay (something down flat); lie (oneself down in vertical position)'. Separately, the middle voice construction involves a semantic alternation that focuses the activity of the verb. It has the semantic effect of the English expression 'be engaged in X activity' (see Kemmer 1994), and so it can be seen as a valency-decreasing device.

Evidence for what participants count as core come primarily from some combination of pronominal forms, the proclitic constructions, and candidacy for heads in relative clauses. Notwithstanding some language-specific nuances, Chini distinguishes the following core participant categories: subjects (or: topical agents), (directive) patients, gifts, benefactives, allatives, and instrumental-manuals. While there are some clear traces of nominative-accusative alignment (e.g. in the forms of the 1SG pronouns), the more traditional alignment systems for bi- and multi-valent clauses fall somewhat short of accounting for alignment in Chini. Though somewhat of a simplification, it can be said that Chini generally has, in Haspelmath's (2008) terms, an 'indirective' alignment system.

2.4.4 Morphology

Morphology in Chini is generally synthetic, agglutinating with some fusion, and is mostly suffixing across lexical classes. Verbs are the most morphologically complex of the lexical classes, and the verb morphology can be described as templatic for the most part. The morphologically most complex verbs in the corpus contain 9 affixes plus the root. Verbs are inflected within one of 3 template-like structures that correspond to distinct bases (aspectual, negative, and modal) (4.3). Inflectional and derivational categories are base-specific, except the infinitive which is formed independently. Lexically-conditioned allomorphy is a major morphological force in the language (4.3). There is also some degree of phonologically-conditioned allomorphy. Morphemes are formed by prefixes, suffixes, partial and full reduplication and weak and strong suppletion. Morphological harmony characterizes three constructions within in the aspectual base, where otherwise functionally identical forms alternate in form according to the realis or irrealis marking of the verb form they attach to (for 1 construction), or according to perfective versus imperfective aspect (for 2

constructions) (4.5). Some lexically-conditioned allomorphs for the infinitive category are formed by reduplicating the root consonant (typically in the onset) which infixes in the root itself or in the following suffix. Morphophonemic alternations include vowel deletion, epenthesis, metathesis, perseverative and anticipatory assimilation for the root vowel /u/, and consonant harmony (4.4).

Two TAM distinctions are central to the verb: perfective/imperfective and realis/irrealis. Verb roots are covertly specified as either perfective or imperfective (4.4). There are seven aspectual devices that are mostly derivational.

Other verbal categories include: the infinitive, middle voice, a partitive, translocative, gnomic habitual; negation, imperative, negative imperative/prohibitive, immediate imperative, potential mood and three future moods: the anterior future, delayed future and uncertain future (5.4 and 8.3.1.2.1). Beyond these, no other verbal category is restricted in terms of temporal reference; the language thus makes fine-grained categorical distinctions within the future conceptual space but lacks any 'past' or 'present' categories. There are also several periphrastic verbal categories including: the declarative, the desiderative, the apprehensional and the remissive (i.e., to express neglect). Negation is expressed via three morphological constructions and one periphrastic construction. In addition to the basic realis/irrealis distinction which requires no other category to co-occur in the meaning that is expressed, there are three other parts of the verbal morphology where the distinction is marked within specific suffixal constructions (Chapter 6). This includes the possibility for a single verb to be marked as many as four times for one half of the distinction. The three types of secondary marking are more highly grammaticalized and have their own specialized functions within the broader semantic-pragmatic conceptual space of realis/irrealis. For

instance, interrogative clauses take their own specialized realis (for content questions) or irrealis (for polar questions) marking (6.2). It is clear that these constructions are not only functionally related to the basic realis/irrealis inflectional distinction, but are in fact historically related. These constructions make use of the same pair of forms (realis *-a* and irrealis *-i*), which also happens to be the most frequent pair of lexically-conditioned allomorphs in the marking of the basic inflectional distinction. These are the result of historical processes, namely grammaticalization, whereby what were once lexical verbs or particles marked for *realis (*-a*) and *irrealis (*-i*) have maintained one or both halves of the distinction even in their synchronic grammaticalized forms as verbal suffixes.

Lexical nouns are morphologically elaborated primarily through suffixation, suppletion, or compounding. The 'authentic' (or 'ancestral') prefix indicates that its noun represents an authentic or ancestrally legitimate entity as opposed to an inauthentic, generic, or modern version of that entity. A subset of nouns are obligatorily marked for paucal or plural number, where the forms are lexically conditioned. All nouns (irrespective of their paucal/plural marking) may be marked for a further, entirely optional number distinction, one roughly of distributive versus collective or 'some' versus 'all'. Other nominal categories include a diminutive, augmentative, and a vocative. Kinship terms and proper names exhibit some of their own specific morphology, including a suffix for feminine persons (where masculine is formally unmarked).

2.4.5   The noun phrase and constituent order within the clause

Noun phrase structure is [noun][adjective][numeral] and in genitive constructions (including noun-noun combinations) [dependent][head]. The order of demonstratives goes according to scope. Particularly in conversational data, noun phrases can attain a fairly high degree of

internal elaboration. Not counting relative clauses, constituent order within the clause is rigidly verb final. The order of arguments in the clause is pragmatically-based. The most agentive, topical, or otherwise pragmatically prominent argument occurs in clause-initial position. APV is the normative constituent order in pragmatically-unmarked clauses. Less frequent is PAV order, used when the patient-like argument ('P') is pragmatically salient, e.g. for focus or topic-worthiness.

2.4.6 Clause combining

The most common clause combining constructions are chaining, asyndetic (prosodic) coordination, and relativization. Adverbial clauses of manner are expressed in a clause combination where a realis-inflected verb precedes the infinitival form of the same lexical verb marked by the instrumental proclitic (e.g. *chagɨ-yi nɨ=chagɨ~agɨ* emerge-R.PC INS=emerge~NMLZ 'how (something) emerged/originated'). Clause chaining makes use of three pairs of linkage enclitics. Each linker signals either realis or irrealis and one of three dependency relations. One pair indicates temporal contingency (7.1.1), another pair continuity of information (7.1.2), and another pair presuppositional information (7.1.3). The realis presuppositional and realis continuity linkers can co-occur, constituting a seventh medial clause construction (7.1.4). This medial construction and some others can occur without a final clause. Clauses introducing reported speech or thought are marked by a bisuffixal complex marking the dependency of the clause while also harmonizing according to a six-way split depending whether its clause is realis, irrealis perfective, irrealis imperfective, irrealis translocative, imperative/modal, or a verbless clause. This same construction is used in combinations that express contrastive propositions. In addition to these is copula complementation. Chaining constructions interact with other clause

combining constructions in a number of ways. Chains may interweave with the dependent contrastive construction and with relative clauses. Chains can be relativized through marking on the final clause or subordinated to the copula.

2.4.7 Discourse

Information about core participants is indicated via liberal use of nouns, pronouns, certain noun phrase enclitics, and a template of proclitics that attach to the verb complex to signal semantic and/or pragmatic information about different types of participants (4.2). Clauses consisting solely of verbs are very infrequent. The distribution of information across lexical categories within the clause is thus not biased toward the verb as has been described for other Papuan (especially: Trans New Guinea) languages (de Vries 2005). The inanimate pronoun doubles in its ability to represent a human referent as a discourse topic (i.e., more topical than all other referents in that stretch of discourse). The indeterminate human (e.g., whosit, whatstheirface, whosoever) and non-human (e.g., whatsit, whachamacallit) pronouns are frequent in conversation. Zero anaphora is common for highly accessible referents. Comparative and superlative constructions are interesting in that they do not exist either in Chini grammar or in the discourse practices of Chini people (including local use of Tok Pisin). Apart from one or two common asyndetic combinations ('Yesterday the water level was low, today it is high') I have come across no examples in 9 months of fieldwork. Other robust discourse-level structures include heavy reliance in narrative discourse on the realis chain linkage device that indicates temporal contingency. The use of the chaining devices in tail-head linkage constructions is robust. Final clauses have few if any syntactic constraints (7.3). In addition to independent, relativized, and complementized verb forms, final clauses may consist of a noun phrase, infinitive, interjection or ideophone.

2.5   The Ramu family

In this section I offer a somewhat different view of the historical linguistics of the Ramu family than what has been proposed thus far, in particular for the Tamolan subgroup to which Chini belongs. I also discuss the extent of the available descriptive and/or documentary materials on these languages.

It is by now well-known that New Guinea is home to about 20% of the world's spoken languages (Palmer 2017). The Sepik-Ramu basin, where Chini and many other languages are located, indeed appears to be its most linguistically diverse region (Foley 2017). With at least 150 languages (among them, Chini), Madang Province appears to be the most linguistically diverse province in PNG. Signed languages in this part of the world have received almost no attention by linguists, but recent groundbreaking work suggests New Guinea is home to an extreme diversity of signed as well as spoken languages (Rarrick 2018).

Within that diverse part of the world are the Ramu languages. What we know about their historical relationships would not be at all possible were it not for the work of Hans Anton ("John") Z'graggen, an SVD (Society of the Divine Word) missionary and ethnographer who sought to understand the historical relationships in this region, as well as the more recent work of William Foley who has conducted fieldwork on multiple languages in the region. Z'graggen collected wordlists for varieties of most languages of Madang Province, including Chini. He then applied lexicostatistical methods to those data, in order to understand which languages were related based on lexical look-alikes. Separately, Foley

(2005, 2017) has also argued that the only more ancient historical relationship that Ramu has is with the languages of the Lower Sepik family such as Yimas (Foley 1991).[32]

Evidence based on lexical look-alikes suggests (to me, convincingly) that Chini does indeed belong to the Ramu family along with at least 20 other languages spoken along the lower and middle stretches of the Ramu River and in adjacent areas (Z'graggen 1969, 1971; Foley 2005, 2017). The location and geographical extent of these languages can be seen in the map below.[33;34]

---

[32] Laycock & Z'graggen (1975) also offered some other tentative extensions of Lower Sepik-Ramu to include other languages in the region, but these have been convincingly refuted by Foley (2005). Barlow (2018) also argues that most of the higher-level groupings Z'graggen proposed have not panned out.

[33] Due to the rather extreme potential for confusion given the number of different names used in the literature that refer to the same languages, I am including here the ISO codes and the Glottolog codes along with the local autonyms (when known to me) or the primary convention as I understand it: Watam [wax] & [wata1253]; Kaian [kct] & [kaia1245]; Bore [gai] & [bore1247] ; Awar [aya] & [awar1249]; Bosmun [bqs] & [bosn1248]; Mikarew [msy] & [arua1260]; Sepen [spm] & [sepe1240]; Kire [geb] & [kire1240]; Tanggu [tgu] & [tang1355]; Igom [igm]; Kaje [aod] & [anda1284]; Tanguat [tbs] & [tang1356]; Inapang [mzu] & [inap1241]; Chini [afi] & [akru1241]; Breri [brq] & [brer1240]; Abu [ado] & [abuu1241]; Gorovu [grq] & [goro1261]; Banaro [byz] & [bana1292]; Rao [rao] & [raoo1244]; Aram [anj] & [anor1241]; Aren [aki] & [aiom1240].

[34] There are several languages that have been included in the Ramu family but which I have left out due to a total or near total lack of evidence for their classification in Ramu. Future research could very well prove Z'graggen's hunches right, but for the time being there is just not enough information to go on for the inclusion of any of the following language varieties: Ambakich, Botin, Ulwa, Mwakai, Pondi, Kominimung, and Igana. Z'graggen (1971:14) provisionally includes Ambakich (Aion) and Botin (also: Kambot, Ap Ma) as separate first-order branches within Ramu. Botin (see Wade 1984) has only a very small number of (2 verbal, 2 pronominal) 'look-alike' (i.e. and *not* actually demonstrable cognate) roots with Ramu languages. These represent the only evidence for a supposed genealogical affiliation with the Ramu family and are moreover so phonetically slight (*m* 'eat', *on/an* 'give', 2PL *nu-*, 1PL.EXCL *ni*). Botin also appears to be grammatically divergent from described languages of the Lower Sepik and Ramu languages (see Wade 1984). These pronouns have look-alikes in nearby Trans New Guinea family, e.g. Gants 3PL *niu* (Daniels 2015:1004). The evidence for including Ambakich is limited to the following look-alikes: *ɲa* 'give', *am* 'eat, drink', and (marginally) *kər* 'ear'. Certain other languages purported to be Ramu also do not appear to be. Foley (2018) tentatively includes the three Ulmapo languages: Ulwa, Mwakai, and Pondi (which he calls the 'Koam' subgroup). In his recent grammar of Ulwa, Barlow (2018) argues that there is not really convincing evidence, however. Two especially problematic language varieties are those labeled 'Kominimung' and 'Igana'. Z'graggen does not include a single transcribed word from either in his (1974) wordlist of the other Ramu languages, though in a subsequent work he alludes to "short wordlists" collected for Kominimung and Igana which he claims were "enough for classification" (1975:4). It is only in that later work that he classifies Kominimung and Igana as members of the Ramu family, specifically in the Tamolan subgroup to which he also assigned Chini (1975:35).

Figure 15:   Map of the languages of the Ramu family (tentative)[35]

A Watam	L Tanguat
B Kaian	M Inapang
C Bore	N Chini
D Awar	O Breri
E Bosmun	P **Aren**
F Mikarew	Q Abu
G Sepen	R Gorovu
H Kire	S Banaro
I Tanggu	T Rao
J Igom	U Aram
K Kaje	
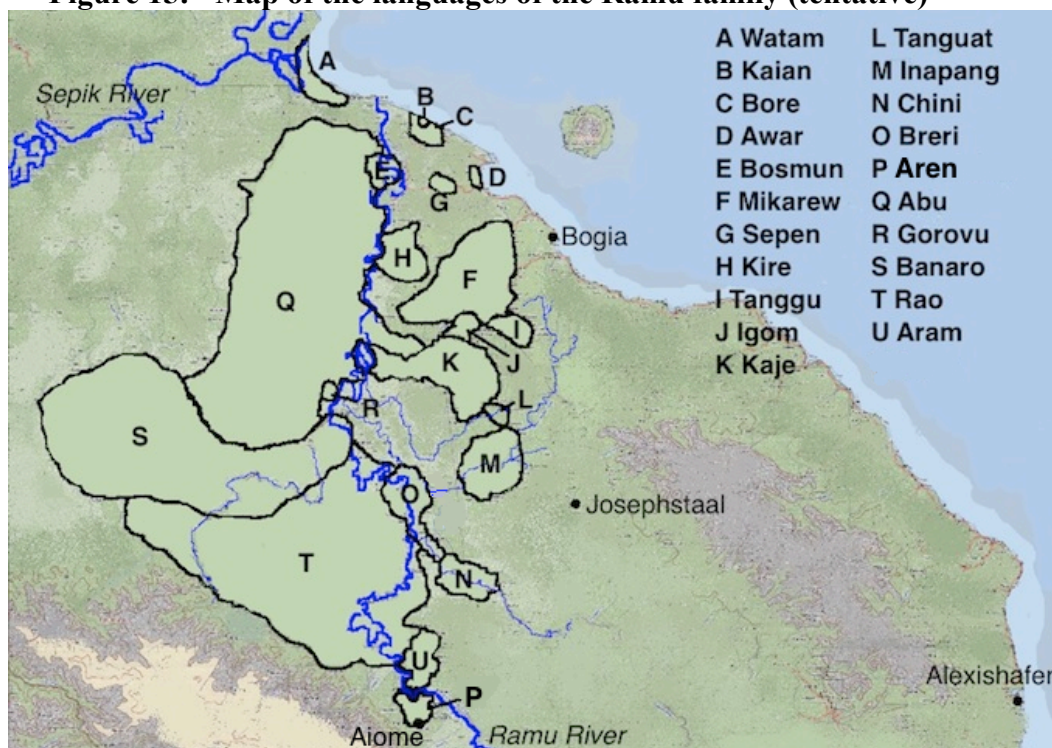
However, it is important also to understand what the extent of the descriptive and documentary materials for these languages is at this point in time. Z'graggen's (1974) comparative wordlist of 380 lexical items (which, for a few languages also includes some brief grammatical information) as well as Capell's (1951) brief sketches are the only source(s) of information for 14 of them. Davies & Comrie (1985) as well as a number of SIL wordlists represent the only good phonetic transcriptions available for some languages and dialects. A wordlist of an otherwise undescribed but nevertheless clearly Ramu language variety is found in Stanley (1922). More substantial descriptive and/or documentary materials are as follows. There is no comprehensive grammar for any Ramu language, though a

---

[35] This map is my own rendering based on a topographical map of Madang Province made by the PNG Survey Haus. The original high-resolution version of the map includes the location of many local villages, so I was able to compare the village names Z'graggen (1971) lists for each respective language and draw the boundaries accordingly. This map is only tentative, however, and should not be taken as a clear indication of the boundaries of any particular language; the area north of Chini along the Guam River area is uncertain as is the empty (i.e., in the map) area west of Inapang.

grammar of Watam is forthcoming (Foley 2017). There are sketch grammars (of diverse accessibility) for Awar (Levy 2002), Bore (Parrish 1989), Rao (Christensen 1977, 1978a, 1978b), and Banaro (Butler 1981a, 1981b). There is also an unpublished dictionary for Banaro (Butler 1988). There are a few transcribed audio recordings for Aren, Aram, and Rao (Daniels 2015) and for Kaje (Brooks 2018). There are journal articles for Kire (Pryor & Clifton 1987), Tanggu (Lotterman 2005), and Watam (Foley 1999). In addition to Capell's (1951) short sketches, of a few languages, there are at least two others (Stanhope 1972 for Kire; Stanhope 1980 for Rao). For Kominimung and Igana, also purported to be Ramu languages, no data are available.

2.5.1 Revising Z'graggen's subgrouping schema for the Ramu family

Most of what we know about the Ramu languages, not to mention many other languages of the Madang region, is due to Z'graggen's original work. There can be little doubt that once the processes of language shift to Tok Pisin are complete throughout this region, the only information for many if not most languages in the Madang region will come from Z'graggen's (1974) comparative wordlist. That said, now as techniques are being refined and more research in the region is underway, it is possible to reconsider the data.

In the Papuanist terminology, Z'graggen (1971:14) (and also in 1975:33-5, altered slightly) argued for a number of 'stocks' (first-order subgroups) and then secondary branchings ('families') within the Ramu phylum he proposed. Importantly, both Z'graggen and Foley have made clear that proposed classifications for Ramu are tentative. I argue that while Ramu as a coherent genealogical group is supported by the data available, there is no sufficient or convincing evidence to support most of the proposed subgroups. For that reason

I will refrain from providing a revised family tree. Z'graggen's original subgrouping schema

for Ramu is seen in Figure 16.

Figure 16: **Z'graggen's Ramu family tree (1971:14)**

```
                    C.  The Ramu Phylum (30,090)

        Stock        Family    Language   Number  Abbreviation  Speakers

                              Watam        47        Wt          400
                              Kaian        48        Ka          230
                              Gamei        49        Ga          930
                     Ottilien
                     2,760    Awar         50        Aw          500
         Ruboni               Bosman       51        Bo          700
         9,920
                              Mikarew      52        Mi         5350
                     Misegien Sepen        53        Se          270
                     7,160    Giri         54        Gi         1540

                              Tangu        55        Tn         2330
                              Igom         56        Ig          930
                     Ataitan  Tanguat      57        Tg          510
                     4,600    Andarum      58        And         830

         Goam                 Itutang      59        It          300
         7,110                Midsivindi   60        Mid         990
                              Akrukay      61        Ak          150
                     Tamolan
                     2,510    Breri        62        Br          720
                              Romkun       63        Ro          350

                     Aian     Anor         64        Ar          450
                     1,070    Aiome        65        Ai          620

              Annaberg Group          Rao         66        Ra        4080
              6,430
                                        Banaro      67        Ba        1280

                              Adjora       68        Adj        2150
                     Agoan    Gorovu       69        Gv           50
                     2,200
                                        Aion        70        An          820

                                      Kambot      71        Km         3610
```

As others have also recently pointed out, there are serious methodological problems

with Z'graggen's historical analyses (Barlow 2018; Foley 2017; Palmer 2017:13). Similar to

the subgrouping schema he proposed for other groups in the Madang region, the evidence for

dividing the Ramu languages into subgroups and sub-subgroups was based primarily on the

lexicostatistical analysis of a mere 63-67 (or, in some cases, less) vocabulary items of the

380-item wordlists he collected (Z'graggen 1971:6).[36] What he did was identify what he

---

[36] Z'graggen also discusses typological evidence, but I share the view expressed in Barlow (2018): "The claims
for typological unity among Ramu languages... are mostly so broad as to include features that are common
among all Papuan languages, if not all the languages of the world... [C]laims of genetic affiliation based on
typological similarities are inherently flawed, since so many of these shared features could just as easily be
explained by areal diffusion and general typological trends in languages generally" (2018:44). There is, of

refs to throughout his works as "probable cognates" within that subset of words. (It is clear, though, that was really involved were lexical look-alikes.) He considered a "probable cognacy" rate (i.e. rate of look-alikes as he identified them) of 81-100% to indicate dialects of a single language, 36-81% a second-order subgroup, 12-36% a first-order subgroup.[37]

There are a number of smaller problems with Z'graggen's methods, though I believe their combinatorial effect is enough to question his results. These include: the phonetic inaccuracy of some of the original transcriptions, in particular for languages like Chini with challenging phonetic structures;[38] the lack of grammatical consistency in the verbs he elicited;[39] multiple issues stemming from the Western and also English bias in the original wordlist.[40] These are conflated by the additional problem that potential cognates are hidden

course, the additional problem that the small amount of elicited data Z'graggen worked with is not sufficient for determining the relevant typological parameters for all of these languages.

[37] At least one subgroup Z'graggen proposed appears to stretch his own methods by quite a bit. Z'graggen includes Rao as a separate branch within the Annaberg subgroup, which also includes Aren (Aiome) and Aram (Anor). He lists Aren and Aram as having 58% cognacy, while Rao has only 13% cognate material with Aram and only 10% with Aren.

[38] Consider the following differences between the phonetic representations (in brackets) of a few Chini words and Z'graggen's original transcription: 'European/white man' [ɑndwɔnɨɹɑŋgɨ] <andoaŋ>; 'green' [mβmi] <pMu>; 'hot' [ɑdmɑɹkɨ] <apmark>; 'urine' [mjæfmɨ] <weamatMo>.

[39] Verbs elicited in isolation pose particular problems in ways that nouns generally do not. Consider the following examples from the Chini part of Z'graggen's (1974) wordlist that illustrate this point. For 'kill pig', Z'graggen lists <akip> for [ɑkipmi], an irrealis-inflected imperfective verb form. For 'work', he has <wabur> for [βaβɹɨ], a nominalized/infinitive form. For 'fight', he has <nja:ki> for [ɲɹɑki], an irrealis verb form of a perfective base (which, moreover, happens to also include the middle voice prefix *ñji-*). For 'buy', he has <ruŋur> for [ɹɨŋɨɹɑ], an imperative form. Upon imagining the possibilities for the different formal means of encoding different verbal categories in all the languages Z'graggen collected wordlists for, assumptions about look-alikes much less actual cognacy as based on these verb forms are rather problematic — there is no way to ensure consistency or accuracy.

[40] (1) The wordlist contains many items from word classes in English such as adjectives and adverbs that are particularly problematic due to the impossibility of predicting the lexical (or even: periphrastic) expression in the relevant languages. (2) Similarly, certain semantic domains, such as color terms, should not be used in wordlists of this sort because we know that color terms are subject to such high variability cross-linguistically. To illustrate how both of these things can become problematic for lexical comparison, consider the following. The Chini word *tmu* [fmu] 'black, scorched' has obvious cognates with words in some of the other languages listed by Z'graggen (e.g., Breri <u:tmu>, Itutang/Inapang <otuma>). But Z'graggen's original Chini consultant produced an alternative expression for 'black' which Z'graggen transcribed as <ñimŋuraŋk>, *ñimiŋi raŋgi* [ɲimɨŋɨ ɹaŋgɨ] 'characterized by darkness (e.g. the weather)' which of course would not have been considered a candidate for a look-alike. (3) The wordlist contains a number of words for non-native concepts or for concepts which originated only in post-contact times. Words for things such as 'noon', 'God', 'soul', 'whiteman' are bound to differ since many of the native terms for these were coined during the colonial era. Other words are problematic because they do not take into enough consideration cultural and areal phenomena (e.g., the words

from view whenever processes of morphologization have obscured the picture.[41] In my view, the total combinatorial effect of these problems is that the rates of look-alikes are likely much higher than Z'graggen identified.

Z'graggen also does not list the actual percentages of look-alikes between languages which he assigned to unrelated subgroups. The reader is left to assume that those percentages must be low enough to disqualify a potential relationship (i.e., according to his methods). If no two such languages had any more than 11% of look-alikes in the lexical items he compared, then this would not be problematic (at least, according to his own methods). This gets at the more basic problem of the general lack of reproducibility of Z'graggen's original methods, since he does not mention which 63-67 words out of 380 he examined for lexical comparisons or which among those 63-67 he identified as look-alikes.

Although we cannot be sure what data Z'graggen considered, we can try to replicate more or less what we know about his methods. Removing from consideration the problematic types lexical items identified above. I compared 55 lexical items from Z'graggen's (1974) list.[42] To be clear, my goal was not to make any claim about possible subgroups within

---

'yam' and 'bamboo' were elicited but languages in Chini's region have many types of yams and many types of bamboo; semantic changes often mean that a word for one type in one language may be cognate with the word for a different type in another language.) Words like 'boy' and 'girl' are also very problematic for New Guinea. Those seemingly 'basic' vocabulary items have so many possible translations in languages of this region which historically practiced initiation rites for boys and girls. My point here is that whatever percentages of "probable cognates" that the inclusion of any of these words would have led to reflect flaws in the original elicitation. They do not tell us anything about actual look-alikes for these terms across these languages, except to suggest that the real percentages of look-alikes in Z'graggen's original wordlist is likely higher (if not much higher) than what he originally calculated.

[41] I allude to this problem also in the previous footnote about the verbs Z'graggen lists, but the principle applies to nouns as well. As just one example, upon considering that -atmɨ in Chini is an old nominalizing suffix, Z'graggen's (1974) transcription <weamatMo> for Chini [mjæfmi] 'urine' (mi-atmɨ) can be seen as cognate with several of the words in the other Ramu languages listed by Z'graggen that have, simply, the form <mi>.

[42] In my analysis, I included the following words from Z'graggen's (1974) list (with the important exception that I relied on my own transcriptions for the relevant Chini words, and not his). I compared: 1SG, 2SG, 1PL, 'head', 'ear', 'eye', 'tongue', 'tooth', 'breast', 'heart', 'bone', 'skin', 'sore', 'excrement', 'urine', 'penis', 'shadow', 'name', 'bird', 'cassowary', 'dog', 'fish', 'mosquito', 'pig', 'crocodile', 'flying fox', 'snake', 'wallaby', 'banana', 'betel nut', 'pepper vine', 'lime', 'kunai (grass)', 'taro', 'yam', 'sago', 'coconut', 'leaf', 'fire', 'fence', 'moon', 'sun', 'bush', 'water', 'bow', 'canoe', 'paddle', 'hand-drum', 'garamut', 'oar', 'yesterday', 'sleep', 'sit down', 'give', 'wash', and 'eat'. Note that I

Ramu. My goal was just to see whether or not the data would produce similar results according to what Z'graggen himself found. In the results I found, the percentages of look-alikes between all languages were either similar to, or much higher than, his original estimates. The base percentage of look-alikes across the whole family was quite high, with no two Ramu languages having less than 16%. Even Watam and Aren, the two most geographically distant Ramu languages, had almost 24%.

The lowest rate (16%) was for Aren and Banaro. In contrast, in Z'graggen's analysis he included these two languages in the same subgroup ('Annaberg'). I also found the opposite problem, where languages Z'graggen considered unrelated turned out in my analysis to have much higher rates of look-alikes than languages he considered closely related. For instance, he lists the Agoan subgroup to which Abu (Adjora) belongs as being unrelated to the other subgroups while he lists Midsivindi as belonging to Goam. In my analysis, Abu and Midsivindi had 55% of look-alikes. 55% is quite a bit more than the 16% cognacy that Z'graggen himself found between Mikarew and Watam (1971:79), two languages he lists as belonging to related second-order subgroups of a single branch. (As it happens, between Mikarew and Watam, I found a cognacy rate of 40%.)[43]

In Z'graggen's defense, in the data I measured, the languages in his proposed Ottilien, Misegian, Goam, Aian, and Agoan subgroups do have significantly higher look-alike rates

---

have used these words only to test whether reproducing the basic idea behind Z'graggen's methods would yield comparable results (and they did not). Because I do not, however, believe in the methods themselves as being any sort of reliable indicators of family-internal subgrouping or other relations, I have opted not to include more information beyond from my own counts of look-alikes based on these 55 words. Any reader with an interest in this sort of method, however, is free to consult the relevant words or conduct their own analysis, and compare with what I or Z'graggen found.

[43] There is more we could say here but, I would point out additionally that the following of Z'graggen's proposals are too at odds with the data that they probably should be discarded (pending future research): the grouping of the Ottilien and Misegien subgroups within the Ruboni first-order sub-group ('stock'); the Annaberg group that includes Rao and provisionally, Banaro; Ataitan as a cohesive and separate second-order subgroup ('family'); Itutang and Midsivindi as separate languages; Breri and Romkun as separate languages.

with each other than with languages in other subgroups. This is true for instance of G[u]am, the subgroup to which Chini purportedly belongs that also includes Inapang (Z'graggen's 'Itutang' and 'Midsivindi'), Breri/Breri-Romkun, Tanggu, Igom, Kaje/Andarum, and Tanguat. The lowest proportion of look-alikes I measured in languages of the Goam subgroup to which Chini purportedly belongs was 62% for Breri and Tanggu, while the highest was 91% for Chini and Inapang.[44]

To make a long story short, Z'graggen's methodology appears to have been quite flawed. In my estimation, the Ramu subgrouping schema he proposes should probably be abandoned except for those languages where more recent work has led us to a deeper understanding of the historical relations (Foley 2005 for Lower Ramu).

It goes without saying that in any scholarly undertaking of the breadth of Z'graggen's, there are bound to be errors and methodological shortcomings. Given how ambitious Z'graggen's research on Madang languages was, it is not surprising that there is something to critique. We should not forget that any discussion on the historical linguistics in the Sepik-Ramu region would not be possible were it not for his monumental work. As Z'graggen himself recognizes throughout his work, his proposals were intended to be tentative, as a starting point for future research — there can be no doubt that he succeeded in doing that.

2.5.2 More complex than the tree model: Chini and its place in the Tamolan subgroup

In this section, I build on the groundwork in the historical relationships for the Ramu family as laid out by Z'graggen (1971) and Foley (2005, 2017). I will suggest here that a number of

---

[44] Chini is not a dialect of Inapang despite the 91% cognacy I measured between them. The Chini recognize that many lexical items in the Inapang dialects are very similar to Chini, something which does not surprise them since their origin story involves an exodus southward from Inapang territory. Chini is not, however, mutually intelligible with the Inapang dialects. This allows us to reconsider the assumptions of the lexicostatistical methods Z'graggen used, since 91% cognacy across two language varieties would in that framework be considered sufficient evidence that they are dialects of a single language.

particularities pertaining just to Chini's own subgroup paint a fairly complex picture, one where the convergences of populations and their language varieties are not entirely amenable to a branching schema.

Of the subgroups that Z'graggen (1971, 1975) originally posited, he called one 'Goam' after the (Guam) River that runs parallel to the Sogeram to the north. 'Goam' includes Chini as well as Tanggu, Igom, Kaje, Tanguat, Inapang (without data), Kominimung (without data), Breri, and Romkun. (Foley (2017) disputes the validity of Goam, however.) In my estimation, future work may end up actually supporting Z'graggen's G[u]am subgroup, since these languages consistently share cognate forms for those words that are less stable across other Ramu languages. These include, for example: 'excrement', 'urine', 'crocodile', 'banana', 'peppervine', 'taro', 'fire', 'sun', 'bow' and especially: 'shadow', 'dog', 'mosquito', 'snake', 'betel nut', and 'garamut'. Additionally, for these 'Guam' languages but no other Ramu languages, there are also phonetically transparent reflexes of what is in Chini the middle voice prefix *ñji-* [ɲɟi]. (This can be seen in the words Z'graggen (1974) jotted down for 'wash' versus 'bathe'.) However, at least in my view, there is still too little data to go on.

Z'graggen then posited a branching of Guam into two further subgroups. One of these he called 'Tamolan'. Tamolan includes Chini, Breri, Romkun, as well as several Inapang dialects spoken in an area that is very difficult to access, north of Chini territory near the Guam River, in Ponoke, Midsivindi, Itutang and other villages. It seems indisputable to me that these languages do indeed constitute a coherent group of sister languages, and so I will follow Z'graggen's original usage (as used also in Foley 2017) in referring to these languages. What I suggest in this section, however, is that Chini in its current form is not simply the result of a clean branching off from an ancestor language, but rather a result of some sort of

admixture between the Inapang and Breri sides of the subgroup in ways that match the geographical location of the respective groups. I also suggest that there is some small influence in Chini of a non-Ramu language of unknown genealogical affiliation, and that the Chini oral historical record points to such a possibility.

The tree model is still used (and useful) to describe the historical relationships for many languages. However, it has also been criticized for a number of reasons including its erasure of contact-induced changes (see Thomason & Kaufman 1988). In a related vein, François (2017) writes:

> [I]l n'est au monde aucune population dont on puisse réduire l'histoire à une simple succession de scissions définitives — pourtant le seul scénario autorisé par le modèle de l'arbre. Certes, il existe des familles linguistiques qui ont connu de tels événements de séparation au cours de leur développement, sous la forme de migrations ou autres catastrophes de ce type ; mais ces divisions, corrélées avec des processus de divergence linguistique, sont toujours précédées ou suivies d'autres modes d'interaction sociale, dont les conséquences linguistiques... ne sont pas compatibles avec une représentation arborescente (François 2017:49).[45]

In New Guinea, one historical possibility is that the modern-day locations belie a greater complexity of historical population movements. Some or many of the latter category may no longer exist or have been subsumed within other societies, but traces of their voices may remain embedded in the structures and lexicons of some Papuan languages. At least for Chini, there is converging evidence that points to Chini having resulted from (some sort of) mixture of codes. We will likely never know the full story, but it is surely worthwhile to consider what can be pieced together.

The oral historical, geographic, and lexical evidence converge to suggest that the grammar of the Chini language is not as conducive to a tree model as other languages

---

[45] "There is no group of people in the world whose history one can reduce to a simple succession of definitive splits — despite this being the only scenario permitted by the tree model. Indeed, there exist language families that have gone through such events of separation throughout their development, via migrations or other catastrophes of this sort; but these divisions, correlated as they are with processes of linguistic divergence, are always preceded or followed by other modes of social interaction, of which the linguistic consequences... are not compatible with an arboreal representation" (my translation).

(perhaps some of the Ramu languages) might be. The local history appears to have involved multiple convergences of populations, some speaking related languages and others not. To be clear, if we narrow our focus on what the 'grammar' of Chini is to pure segmental form, the evidence suggests a convergence of two related Ramu languages of the Tamolan subgroup, Trans New Guinea, and a third, perhaps much earlier, language of unknown genealogical affiliation. (I do not discuss the evidence for morphological substance borrowing from Trans New Guinea here, but refer the reader instead to (8.1.1), where I suggest that Chini borrowed the realis and irrealis clause chain linkers from a Trans New Guinea language of the Sogeram subgroup.)

2.5.2.1 Insights into Chini and its nearest relative, the Inapang dialect continuum

Recall that Z'graggen (1971, 1975) included Chini in the Tamolan subgroup along with the Inapang dialects spoken in Midsivindi and Itutang villages to the north, as well as Breri and Romkun. In the 55 lexical items I compared, the percentages of look-alikes across these language are extremely high, and if we were to believe in the theoretical assumptions of Z'graggen's methods and/or those of lexicostatistics more generally, these languages would all appear to be indisputably dialects of a single language. (They most certainly are not, with the possible exception of Breri and Romkun.) The lowest rate of look-alikes (and, almost certainly, cognates as well) was between Breri and the Inapang dialects, with 45 look-alikes out of 55 lexical items. The highest was between Romkun and Breri (51 out of 55). And, similarly, the Inapang dialect in Midsivindi had 50 out of 55 cognate forms with Chini.

There are many cognates between Chini and the Inapang dialects. Yet there are also enough differences in formal substance, in the lexicon, and in (what little is known about) the grammatical structures to suggest that these might not be dialects of a single language.

Consider the following comparisons of data I elicited from a speaker of Yigavesakama, an

Inapang dialect spoken in Ponoke, Ogi, Bogen and Igavaya villages:

Chini
(5) *añi*   *achigɨ*   *ñjiyẽntmi.*
     añi   achigɨ   ñji-yim-tm-i
     1PL   all   MID-chew_betel_nut-IPFV-IRR
     'All of us are in the midst of chewing/habitually chew betel nut.'

Yigavesakama
(6) [waŋgri   eβα   mαmi][46]
     1PL   all   consume_it
     'All of us are chewing betel nut.' (Elicited example, fieldnotes)

Chini
(7) *ŋgɨgɨ*   *chõrkwa.*
     ŋgɨgɨ   chõrku-a
     village   cool_down-R
     'The village has cooled down.' (common expression)

Yigavesakama
(8) [ɨtʃɨ   tɨɣαβαɣαi][47]
     ɨkɨ   cooled_down
     'The village has cooled down.' (Elicited example, fieldnotes)

Even just these simple examples reveal differences in pronouns, morphophonemic processes,

and the morphology that are significant enough that we might not expect Chini and this

Inapang variety to be mutually intelligible despite the high proportion of lexical look-alikes.

However there is no mutual intelligibility between them. Although their genealogical

relationship is clear, there are major geographic barriers between Chini and the Inapang

dialects and it is rare that anyone from the Guam River or Sogeram River area travels to or

through the other's territory. The lack of continued contact can be seen as having allowed the

two varieties to go their separate ways.

---

[46] N.B. the Chini irrealis form for 'ingest', *ami*, is clearly cognate with the Yigavesakama verb form here.
[47] In this last example from Yigavesakama, the noun *iki* 'village' undergoes consonant mutation (for reasons as of yet unknown) when it occurs in that particular clause and becomes *itʃi*, a phonological process that is absent in Chini.

2.5.2.2 Evidence for early influence of unknown genealogical classification

There are a number of (especially: lexical) differences between Chini and the other Tamolan languages that beg the question of what the origin of those differences is. My logic here is admittedly not fool-proof but is based on the idea that there are suspicious parts of Chini grammar, where segmental and distributional differences are at least suggestive of the influence of a language of unknown genealogical affiliation. This linguistic evidence appears to be supported by evidence from the Chini oral historical record. It is not yet clear what the nature (i.e. whether a substratum or other type of mixture) or extent of the influence might have been, but I believe it is worth pointing out that there appears to be some other genealogical influence in the region.

There are a handful of verb roots in Chini that have no look-alikes whatsoever in any Ramu or Trans New Guinea language (i.e. as far as I know based on extant descriptive materials and in the wordlists from other languages in the area I have collected during my own fieldwork). These verb roots all have the phonological shape of a consonant (or sometimes a complex onset) followed by /u/. Several of these roots belong to similar semantic domains, namely weather, climate, and temperature (e.g. *chu-* 'shine', *nku* 'thunder', *mu* 'dusk', *mu* 'feel cold', *ru-* 'feel hot').[48] Given that Inapang constitutes such a major lexifier, and Breri also to some extent (as discussed in the next section), this begs the question of what the origin could be for these and other Chini elements that have no look-alikes or cognate forms in any local language. Consider the following comparative minimal pairs between Chini and the Yigavesakama dialect of Inapang, perhaps Chini's closest relative:

---

[48] A number of isolated (i.e, not belonging to any other lexeme) imperative forms also have this phonological shape: *gwu* 'hit!', *vgwu* 'cover!', *tu* 'come!'.

Chini
(9) *kuñarkɨ*   *mumu.*
ku=ñarkɨ   mu~mu
1SG.POSS=skin   feel_cold~IPFV
'I feel cold (lit. My skin feels cold).' (common expression)

Yigavesakama
(10) [ndʒere   otʃe]
my_skin   feels_cold
'I feel cold (lit. My skin feels cold).' (Elicited example, fieldnotes)

While the absence of look-alikes/cognates is not itself evidence for outside influence, it is striking that this cluster of lexemes is internally similar while also differing from the rest of the verbs in the language in major ways. Only roots with this phonological shape exhibit certain morphological and semantic irregularities. Specifically, the main difference, as evident in part in the above example, is that these verbs all undergo full root reduplication for imperfective aspect, while the use of the unadorned root indicates perfective aspect (and generally, with a past perfective interpretation). With the exception of *ru-* 'feel hot', these verbs are among the only ones in the language that do not inflect for realis or irrealis. Otherwise, the degree of morphological and semantic eccentricities for these verbs in particular far surpasses other verbs in the language. As just one example of this, consider the form *chuchuchu* of the verb root *chu-* 'shine (sun), light (fire)' below. This verb form is unlike any other in Chini (as far as I know) in that it is subject to double root reduplication. Reduplication in Chini is used to form the imperfective for some verbs, and it is also used for some verbs as an irrealis formation (indicating, among other possible interpretations, futurity). So neither of these is unusual, but to have both for the same verb is unique in the language.

(11) *muchuchuchu.*
      mi=chu~chu~chu
      DIST=light~IPFV~IRR/FUT?[49]
      'It's about to (i.e. shortly).' (Anton Manna, unrecorded utterance, fieldnotes)

There is also some non-linguistic evidence that points to the influence of another language, even though we cannot be entirely sure whether that language contributed these verbs among other possible lexical and/or structural contributions. Chini people know there used to be another language spoken in the village. Anton Manna told me that his mother had recalled that her own grandmother would have known how to say 'sago' in whatever that language was. Anton is around 50-60 years old. If we assume an average age of 20 for mothers around the time of parturition, this suggests that whatever that language was would have been spoken in Chini territory about 150-200 years or so ago, and had at least ceased to be spoken around 120 years ago.

One reasonable possibility based on the information available is that the original language around the area of Andamang and Akrukay was the language spoken by the erstwhile Ɨvɨŋɨ people (2.5.2.2), which was neither Ramu nor Trans New Guinea. It may have then been eclipsed by or perhaps more robustly mixed with the Inapang dialect the newcomers brought with them from the north as the Chini oral historical record also mentions. Given the high degree of cognacy between Chini and the other languages of the Tamolan subgroup of Ramu, it could be then that the Inapang dialect served as a lexifier language. However, there is somewhat more to the story. In the next section I suggest the geographic, genealogical (i.e. individual people's knowledge about their own family's

---

[49] It is not at all clear that the second reduplicated morpheme represents the irrealis inflectional category, because the semantics of *chuchuchu* is (as far as I know) restricted to having a prospective future interpretation. On the other hand, it is not unusual in Chini for realis and irrealis as inflectional categories to have much more limited semantic interpretations when they occur in combination with aspectual markers. (I have not discussed this phenomenon at length in this dissertation, however.)

lineage), and lexical evidence points to an additional influence of a second lexifier language, but one that is also within the Tamolan subgroup itself, namely, Breri.

2.5.2.3 Evidence for prehistoric[50] Breri influence

A close look at Z'graggen's (1974) wordlist as well as O'Rear's (1992) and my own fieldnotes reveals something about the languages of the Tamolan subgroup. Breri and the Inapang dialects share the least amount of cognates (even though the cognacy rates are still very high). But, more importantly, many of the words that *are* cognate between the two language varieties exhibit significant differences in their phonetic substance (i.e. undoubtedly as a result of certain sound changes which cannot be reliably investigated until more phonetically accurate data from Breri become available. This actually makes sense considering the geography of this otherwise small area, which is broken up into smaller pieces due to large swaths of completely impenetrable jungle and swamp. Although I have little knowledge of how far north this impenetrability extends, the space in the middle of the map below without any villages in it suggests at the very least inhabitability. In the map, the kite-shaped area (within the black lines in Figure 17) is not possible to traverse. There is a difficult path north of Limbebu that leads to Araŋɨnam (in Basimba territory) and another northeast of Akrukay. Most Breri villages are located on the west bank of the Ramu: Kwanga, Sotebu, Wengebu. Limbebu is the only Breri village on the Sogeram. The geographic barriers allow us to understand why those varieties might have the most lexical and phonological differences.

---

[50] I use the word 'prehistoric' here not in the colonialist sense of "before white people knew about it and without knowing local people and asking them" but in the more general sense of "predating events that local people (or anyone else as far as I know) knew about it".

Figure 17: **Language varieties in the Guam and Sogeram River areas (map)**[51]
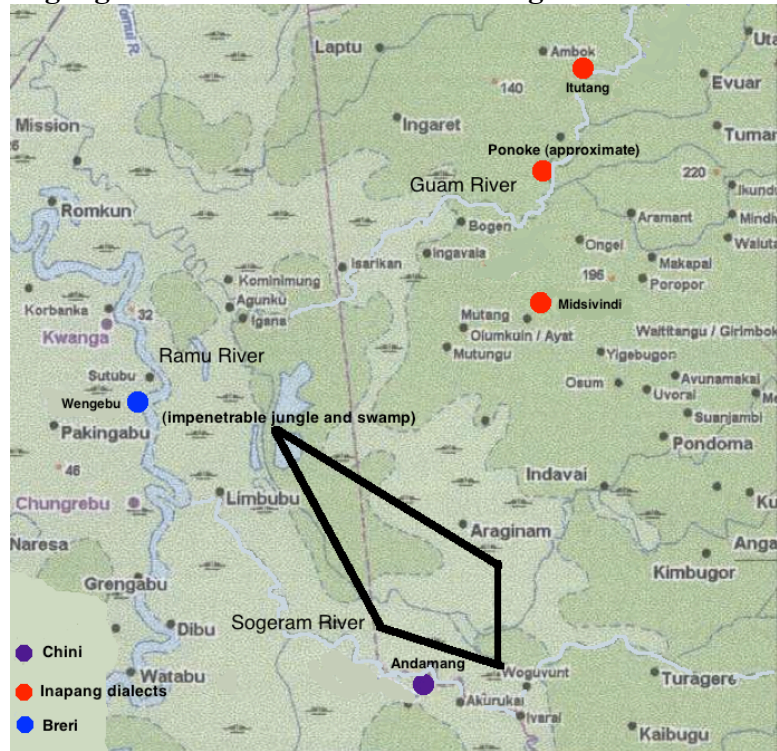
*Map width equivalent to approximately 30-40km

The available lexical data for varieties of these three languages (spoken in the villages identified by colored dots in the above map) suggest that the Chini lexicon has strong Breri as well as Inapang influence. The primary difference in phonetic substance is between Breri and the Inapang dialects (as evident in Table 2). But upon comparing the Breri and the Inapang dialects with Chini, Chini has a near 50-50 split in its lexicon for any item where the Breri and the Inapang differ. For about half of those items for basic vocabulary, the Chini words match the Breri, but not the Inapang dialects. The other half of the Chini words match the Inapang dialects, but not the Breri. This is indicated by the shaded boxes in Table 2.

---

[51] This map is based on the regional map of Madang Province created by the PNG Survey Haus. To my knowledge, that map is the most detailed one available for this region.

Table 2: 25 LEXICAL ITEMS ACROSS FIVE RAMU VARIETIES

Language variety	Breri	Chini	Yigavesakama (Inapang dialect)	*Inapang dialect*	*Inapang dialect*
location (village)	Wengebu	Andamang	Ponoke	Midsivindi	Itutang
original transcriber	Z'graggen or me	me	me	O'Rear or Z'graggen	Z'graggen
2SG**	unu	nu	nu	nu	ndu
'taro'	ɑnmɑ	ɑnamɨ	-	anama	anʌma
'dog'	ɛːri*	ɑɹɨ	ɑɹizjæ	aria	ʌriga
'moon'**	irgi	ɹiɰɨ	heɹɨ	ɛrü	eru
'hand-drum'	inmu*	mβmu	upumɑ	umpumua*	mpuna
'wallaby'	ipi	pɹɨ	epɹɑ	epra	ipra
'sun'	ɑɣɨ	ɰɑɹɨ	ɣɑɹɑ	gara	gʌra
'ashes'**	ibigɔpɔ	ɑβi	ɑβiɑ	aβegwara	abuya
'leaf'**	apa	ɑpɑɹɨ	kɑ	kapara	apʌra
'banana'	ɛŋgini*	ɑŋginɨ	-	akʌna	aŋkuna
'sago'	ɛntʃɪgɨ	ɑɲɹiɰɨ	atʃɨ	ʌntsu*	ɛntsu
'fire'	ugu*	ɰwu	βwo	uβo	ubo
'lesser yam'	amba*	ɹŋu[52]	-	amba*	ambʌ
'yam'	ugŋu	ama-mri[53]	oɹŋɑ	ɔrɛŋa	oruŋa
1PL	ɛɲɨ	aɲi	wɑŋɹi	anyü	añi
'woman'**	mkɨrkɨ	am-ɑɹ-kɨ	ambi	ambi	ambɛ
'cassowary'	rumoŋko	ɑnkamɨ	atiɣama	atəɣama	antugʌma
'pig'	odmo	ɹamɨ	ɹama	rama	rʌma
'betel nut'	ɛmke	mjæ-ɰɨ	mbjæ	mbia*	mbia
'morning'	ubmunku*	bmu-ɹu-pɑ	mɑntiɣa	umatɨga	umantaga
'tomorrow'	ubmuntu	bmakaɲi	-	gumapʌün	umampi
1SG	aŋma	ku	ŋai	gai	ŋgʌi
'pandanus'	ntsomŋo*	bmu	uwuma	oːgiʒa*	oʒika
'fish'[54]	ɛtpɛ*	ŋgu	andʒa	ayiga	ʌzuga
'sweet potato'	itnɛːmŋɛ	aŋgin-ama[55]	ormope	ɔrmopai	kwʌmanba

*As transcribed by Z'graggen (1974) (as opposed to me or O'Rear) **(See footnote)[56]

To recap what I have tried to show in the above discussion, Chini is made up of segmental

substance from at least three primary groups. One is of unknown genealogical origin

---

[52] The light shading is meant to indicate the (albeit marginal) greater segmental affinity of Chini *rŋu* 'lesser yam' with the word for 'yam' in the Inapang dialects as opposed to the cognate Breri form *ugŋu*, which lacks an /r/.

[53] Chini *ama* 'yam' is a bound nominal root rather than a free form.

[54] Of all the words Z'graggen (1974) collected, words for 'fish' are the most unstable across Ramu. There are hardly two languages that share the same word for this lexical item. 'Yam' is also unstable, in part because there are so many types of yams and also the local/regional difference between 'lesser' yams (Tok Pisin *mami*) and regular yams (Tok Pisin *yam*).

[55] There are some things that this table of lexical items is unable to show. The Chini word *aŋginama* 'sweet potato' is transparently a nominal compound meaning 'banana-yam' (aŋgini-ama), where *aŋgini* 'banana' is cognate with the Breri *ɛŋgini*, and *ama* 'yam' is cognate with the Breri word for 'lesser yam' *amba* as well as the words in the various Inapang dialects for 'lesser yam'. It goes to show that even the seemingly most straightforward, concrete, and culturally basic lexical items are not always good candidates for lexical comparison. More broadly, in the case of words for 'yam' and 'lesser yam', the Chini words are in fact cognate with the lexical items in all the other dialects listed in this table — it is just that, for reasons unknown, the meanings got switched around.

[56] Forms for these particular lexical items are among the most stable across the Ramu languages.

(possibly though not for certain corresponding to the obsolete language of the Ɨvɨŋɨ people and earlier proprietors of what is now Chini territory). The other two are both Tamolan languages, but from its most divergent members: Breri and Inapang. The Inapang-speaking settlers came down north from Arwãŋgɨ in the Guam River region, as we know from Chini oral history and from the high cognacy rates and abundant lexical similarities. The social and linguistic story of how Breri came to have an influence that extended to much of the basic vocabulary is unclear, but it does seem that this situation would be explicable by the wave model originally proposed by Schmidt (1872). At least in modern times, there are high intermarriage rates between Breri and Chini people. There is also oral historical evidence that Breri people have old historical ties with Chini people. A number of individuals in Andamang village, namely Paul Guku and his brother Max Amborkɨni, are fully and undeniably autochthonous, yet also trace their ancestry to the Breri of Limbebu village located just downriver from Andamang on the Sogeram River. We cannot know for sure if it was intermarriage per se that resulted in Breri influence in the Chini lexicon, but it is a possibility.

Finally, there is one non-linguistic factor that offers a historical explanation for why the Chini language seems to be comprised of Inapang, Breri, and unknown elements, if what was involved historically was the convergence of speakers of these languages in modern-day Chini territory. That factor, as discussed in (2.2) but repeated in paraphrase here, is that Chini territory is 'prime real estate' to the envy of all neighboring groups. More than anywhere else for a great distance, the particular stretch of the Sogeram River in Chini territory is given to an ever-changing meander belt, one that can shift dramatically from one wet season to the next. It twists and it turns like a slinky, and carves straight into chunks of bush — including

ones that seemed well outside of risk of being carved through. This has the geological effect of leaving short stretches of its former path that are cut off from the new path it takes. Those short stretches constitute oxbow marshes. During the wet season, they remain connected to the Sogeram through small streams where fish and crocodiles travel to and fro as they please. Chini territory, and that of Andamang in particular, is especially replete with oxbow marshes, making them the envy of the Rao and Breri, and everyone else for kilometers around. The marshes can be fished at almost any time. However, when the wet season ends, and the water levels of the Sogeram drop to dramatic lows, the fish become trapped in the marshes, making the period from May to October an especially good time to be in Chini country. The fish are plentiful and easy to catch. Finally, once the dry season has caused most of the water in the marshes to dry up, all one need do is wade into the marshes with a bag to collect all the fish. At this point, around August or so, the Chini people gather all the fish in this way and smoke them. This allows them to preserve the fish for longer, so that they can continue to eat as well as trade them. It is not a bad time to be in Andamang, and the smoked *makau* is especially tasty.

Figure 18: Anton Manna looking out over Rumtwamrɨ, an oxbow marsh

Figure 19: Kati Frank and Adolfa Peter fishing in Rumtwamrɨ (video still)

Figure 20: Tresita Manna about to smoke fish at end of dry season

The rich fishing culture the Chini have cultivated helps us understand why multiple groups may have converged on this particular place (and which clearly still do so to this day, as evident in the four foreign hamlets in western Andamang territory). It is prime real estate, with no comparison in the area. This in turn helps inform our understanding of the historical linguistics of this part of the Ramu family. It appears that there were not only multiple historical divergences but also multiple historical convergences, and so we can understand why the tree model only gets us so far.

Chapter 3
Research Background

In this chapter I discuss my research methods as they pertain to the original documentation as well as certain fundamental aspects of the analysis. In (3.1) I discuss previous research on Chini. In (3.2) I discuss various aspects of documentation practice and methodology used in my research. Finally, in (3.3) I describe various aspects of my own approach to linguistic data and language documentation, since those aspects feed into the present work and the theoretical claims I make throughout it in certain ways.

3.1   Previous research on Chini

The first documentation of Chini consists of the 380-item wordlist of the Akrukay dialect that Z'graggen (1974) collected, as he did for most languages of the Madang region. Much later, during his research on the Manat language of Paynamar village, Daniels (2010) recorded and transcribed a short text in Chini by Frank Manna, in which Frank requested Daniels send one of his *wanskul* (classmates) to Andamang. This is what enabled me to begin conducting my current research there.

3.2   Documentation practice and methodology

This work is the result of a language documentation project funded by two ELDP grants (SG0243 and IGS0294) during a period of 9 months of research based in Andamang village, Middle Ramu District, Madang Province, Papua New Guinea. There were 3 visits: in 2012, 2014, and 2016. All materials are archived with the Endangered Language Archive (ELAR), and are openly accessible to registered users. Specific details on the documentation methods as well as metadata can be found on the ELAR page for Chini

(https://elar.soas.ac.uk/Collection/MPI1014225). I am continually updating the information there.

My general methodological approach has changed somewhat across the three research trips. In general my methods follow the basic ethos of documentary linguistics as originally laid out by Himmelmann (1998) and Woodbury (2011). In particular, the way in which documentary linguistic methods center the recording of communicative events with a minimal role for the linguist's manipulation of the data, speaks to my belief that the most intellectually sound theories are ones based on empirically sound, original linguistic data.

I began in 2012 by making audio recordings of traditional folktales in order to understand the grammatical structures used in Chini narrative discourse. In 2014 I began recording conversations as well as continuing to record narrative. During the latter part of my 2014 trip, the documentation transitioned to the audiovisual mode. In 2016, most of the recordings were audiovisual, and this was received positively by community members, many of whom became interested in the documentation only at that point.

Figure 21: **Family scene in Dorothy Paul's kitchen (video still)**

Other basic elements of my methodological approach are described as follows. I relied on traditional analytical methods at the beginning of the research. I used ground-up linguistic analysis to understand the phonetics, phonology, basics of morphology and syntax by transcribing isolated words and phrases, with some elicitation of wordlists and short phrases. Everything was transcribed by hand in notebooks. After each trip, I would compose a list of constructions to elicit, according to those areas of structure that seemed most amenable to that method and/or which I knew to be under-represented in the transcribed data. Following Mithun (2001) and Mosel (2012) and my own prior experience, translational elicitation was used sparingly, with skepticism, and not generally for areas of grammar like clause combining, where it can distort the analysis of the language.

In the following sections I describe some of the basic approach and methodology of this project, with a focus on those parameters outlined in Gawne et al. (2017).

3.2.1 Commitment to upholding ethical principles

The research on which this dissertation was based was reviewed by the Office of Research at UCSB. This means that the research was informed by ethical principles of informed consent, reciprocity, benefits to the community, and mitigation of coercion. Throughout the research period, I worked to inform myself as much as possible about my ethical obligations to the people with whom I work, keeping in mind the idea that privilege can prove a major obstacle to understanding the intricacies of inequality — and thus the perspectives of the people with whom I work. As much as possible, this project has been grounded in a commitment to understanding community members' expectations and goals (Dobrin 2008; Rice 2011; Dobrin & Schwartz 2016).

Although there is much more to say on the matter, one of the primary ways in which I have sought to engage in a culturally-appropriate way with people in my research context is by developing positive exchange relations. Secondly, the shift in my research methodology from an audio-only to an almost exclusively audiovisual documentation led to what I see as increased ethicality of the project as a whole. People suddenly saw benefits and agentive roles for themselves in the documentation where they had not done before. The visual mode of documentation allows people to engage their interests and creativity, to see the research as having benefits for them. In sum I see ethics in language documentation as being not so much something that one either succeeds or fails at, but rather a mindset that is relationship-driven and culturally-sensitive, where vigilance of one's capacity for error is required every step of the way.

3.2.2 Participants

The corpus includes a great many people; with one or two exceptions, every Chini person appears at least once though only a subset figure substantially. Table 3 provides basic metadata for the main participants whose speech was used for this study.

Table 3: MAIN PARTICIPANTS IN THE CORPUS

Name	Age (approximate)	Village	Hamlet
Anton Manna	55	Andamang	Akapmiŋgi
Emma Airimari	50	Andamang	Akapmiŋgi
Dorothy Paul	45	Andamang	Akapmiŋgi
Frank Manna	40	Andamang	Akapmiŋgi
Joseph Manna	48	Andamang	Aŋgwanmiŋgi
Paul Guku	60	Andamang	Akapmiŋgi
Alfons Garimbini	45	Andamang	Avendvi
Dominika Alfons	45	Andamang	Avendvi
Ros Njveni	40	Andamang	Ravindi
Agusta Njveni	35	Andamang	Ravindi
Gordon Dingaram	45	Andamang (from Akrukay)	Aŋgwanmiŋgi
Veronika Añjirovim	65	Akrukay	Aviyipotu
Roy Mayapar	35	Akrukay	Akambiŋ

3.2.3   Recording and annotation technology

Best practices in audio and video recording were upheld as much as possible. Audio was recorded in .wav format at a 44.1kHz sampling rate with a quantization rate of 24 bits per sample. Audio-only data were recorded primarily with a Zoom H2n digital device, and a Zoom H4n was used to a lesser extent. Audiovisual data were recorded using a Handycam hdr-cx550. The main microphone that I have used for recording video is the Røde NTG2 Condenser Shotgun microphone. Annotation software programs used in the field are ELAN and SayMore. At my home university, I relied on ELAN for the time-aligned recordings and then FLEx for the lexicon. I also used PRAAT for phonetic analysis.

Transcription was conducted in the village during the early morning hours, before the sun became too hot for such work. The vast majority of transcription was done with Anton Manna, and to a lesser extent also with Emma Airimari, Dorothy Paul, Frank Manna, and Joseph Manna. For narrative discourse, in general whoever recorded a particular narrative was the same person I transcribed that same narrative with. The few narratives I recorded during 2012 were transcribed by hand in notebooks, and I relied on the playback function of the Zoom H2n recorder that I used. In 2014, I had planned to use a generator to power my computer, but the generator had a power surge that destroyed the powercord. I was able to transcribe about 40 minutes of connected speech in ELAN, but then had to rely on transcribing by hand in notebooks for the rest of that visit. In 2016, I used a solar panel to power the laptop battery, and transcribed the data using the program SayMore, which automatically creates an ELAN output file. The transcriptions and degree of annotation (i.e. morphological parsing and glossing in ELAN are still a work in progress at this time.

3.2.4 Overview of the corpus

The materials deposited from my ELDP grants are combined into one collection, 'Documentation of Chini language and culture', located at the following web address: https://elar.soas.ac.uk/Collection/MPI1014225. Much more detailed metadata about the documentation can be found there. The metadata there are periodically updated.

So far I have deposited 13h of audiovisual and 9.5h of audio recordings of primary data. Of those, 16h are primarily in Chini, the remainder in Tok Pisin or without much speech. 10.5 hours of the Chini data have been transcribed and translated, and it is those data that form the primary basis for this dissertation. The collection is diverse with respect to settings, discourse types, and genre — these are described below:

There are about 5h of audiovisual and 1h30m of audio recordings of community events: a Catholic mass, a reconciliation feast (Tok Pisin *wanbel kaikai*), women and children fishing, a boys' soccer practice, and village meetings concerning four foreign settlements in one of the two Chini villages.

The are just over 2h of audio and about half an hour of audiovisual recordings of monologue: traditional folktales, oral history and genealogy, autobiography and tellings of recent events; and other text types (procedures, explanations, local taboos, and pear story narrations). There are also 2h20m of audiovisual recordings of trips through Chini territory, including a bush walk, a garden walk, and a canoe ride on the Sogeram River.

There are 5h20m of audiovisual and 4h20m of audio recordings of conversational Chini, with anywhere between 2 and 5 people interacting in diverse settings. These settings include for instance casual afternoon chats, a family interaction over a morning meal, women cooking together, and male in-laws chewing betel nut gossiping and telling stories.

A number of other types of recordings are also included in the corpus. These include: audio recordings of consent, audio recordings of transcription sessions and text-based elicitation sessions, and recordings of wordlists geared toward phonetically complex structures such as the prestopped nasals and complex onsets.

Finally, throughout the entire fieldwork period, I have kept rigorous notes, and as my ability to understand the language increased, I was sometimes able to scrawl down uses I did not recall having encountered during transcription. There are many examples from unrecorded interactions that are scarce or absent in the recorded data. The notebooks also contain other information — genealogies, kinship terms, words for flora and fauna, lexical items that differ across the Andamang-Akrukay dialect divide, wordlists from other nearby languages, among other things.

3.3   Approach to data

Here I discuss my own approach to linguistic data and the way I intend the data in this study to be considered.

3.3.1   A note on bilingual linguistic fieldwork and data presented in translation

I have worked to transition to bilingual linguistic fieldwork (i.e. Tok Pisin and Chini) throughout the research period. (Monolingual fieldwork would at least in Andamang not only be impractical in the context of language shift to Tok Pisin, but also socially implausible, since many of my interactions and especially those with younger people are in Tok Pisin.) Those villagers who speak Chini have insisted that I increase my level of competence in their language in addition to transcribing it, however, and I have done that as much as possible.

Where transcription is concerned, texts transcribed early on in fieldwork were approached exclusively through Tok Pisin. As time went on, increased competence in Chini

allowed me to transcribe with less reliance on Tok Pisin, though I still rely primarily on Tok Pisin for challenging parts of texts. Learning Chini has allowed me to ask more astute questions during the transcription process, and to understand some of the pitfalls of Tok Pisin as a translational medium. The recording of most transcription sessions for conversational data has helped mitigate the potential for the Tok Pisin translations to influence the analysis. For some examples in this dissertation, I have included the Tok Pisin translations of the original data, and I leave it up to any interested readers who know Tok Pisin to see to what extent various shades of meaning are expressed in the Tok Pisin versus the Chini. The English translations are generally geared toward coming as close to the original Chini as possible.

3.3.2   Data from natural language use

At this point in time, developments in discourse-functional linguistics, documentary linguistics, interactional linguistics, linguistic anthropology, conversation analysis and everything in between have come to share a view that natural language use and interactive conversation in particular deserves the serious attention of our theories (and thus, for linguistics, also our documentations and our descriptions) (Couper-Kuhlen et al. 2001; Kulick 1992; Mithun 2014, 2015; Ochs et al. 2001; Sacks 1992; Staples et al. 2015; Thompson et al. 2015, among others). The shared emphasis across these diverse approaches on methods regarding interactive data and their rich potential to inform our theoretical understanding about language is one that I share.

With that general theoretical background in mind, the documentation I have been working to build with people in Andamang and Akrukay is one that aims to represent how people in Andamang and Akrukay speak to one another naturally. It also includes forms of

endangered discourse, for instance Chini folktales which are no longer taught in the way they used to be, as well as oral historical and autobiographical texts. To the extent that the documentation aims to show what people's everyday lives are like, it aims to answer Kulick's call to action in his (1992) groundbreaking study of language shift in Gapun village:

> Although the information that we have on Melanesian societies is exceptionally rich and varied, one area about which we know comparatively little is that of discourse and patterns of language use. Although we now know a substantial amount about the structure of New Guinea languages, and although it is common in anthropological studies to be presented with summaries of myths, snippets of villagers' conversations with anthropologists, and with decontextualized words and sentences, it is still quite rare to be given extensive data about how Melanesians actually talk to one another. Whenever speech in these communities is presented, it is usually in the form of political oratories delivered by (big) men. Everyday, mundane talk is usually not examined, and, as Goldman (1986) recently pointed out, female discourse and speech patterns have been almost totally ignored by linguists and anthropologists (Kulick 1992:22).

The documentation of naturally-occurring communication requires careful consideration of the role of the community members in the project and of the potential for the researcher to influence the documentation in undesirable ways. When I look back on some of the documentary methods I used, I see some of them as being rather problematic, even when they followed what we might call best practices in language documentation. I will briefly illustrate some of what I mean in reference to the Chini collection. In one (audiovisual) recording, I asked Nwamim Airɨmarɨ to narrate how lime for betel nut chewing is made (afi221016i). At my request we went to the quietest, most controlled setting in the village. Her prosody is deflated, she hardly gestures. This is a 'researcher-focused genre of procedural text'. During another recording, of Anton demonstrating how the ancestors made fire (afi271016ii), Nwamim arrives unexpectedly and (around 5:02) spontaneously starts narrating the fire-making procedure to me. The setting is uncontrolled, there is noise and interruptions. But her prosody is natural, she gestures, her personality comes out. It is when people are left to their own devices that some of the most complex of those practices —

whether clause combining or gesture etc. — are flexed to their full potential (see also Hale 1968; Mithun 2001).

3.3.3   Realis and irrealis constructions in conversational data

One intended contribution of this dissertation is to show that documentary corpora with robust data from conversation are well-positioned to inform and advance our understanding of realis/irrealis distinctions. Casual conversation and other forms of highly interactive discourse are where modal categories and constructions 'live' (so to speak). Recently, other scholars have shown that the original types of data included in the documentation can either limit or expand what we are able to learn about particular areas of grammar. In their recent study of evidentiality, Hintz & Hintz (2017) discuss how multi-participant data reveal the existence of an evidential category of mutual knowledge in Quechuan languages — something that single-participant data do not reveal.

This study would not have been possible had I relied on decontextualized elicited sentences. It would also not have been possible had I relied solely on data from narrative discourse. Though important in their own right, those data just do not contain the diversity of interactive contexts necessary to understand how realis and irrealis constructions in Chini are actually used.[57] Most examples in this study come from interactive conversation.

3.3.4   The limitations, and subjectivity, of the documentation

It is also worth considering bigger questions about the data and what exactly they represent. In the grand scheme of things, documentary corpora are for the most part partial representations of synchronic language use of a particular point in time. The static nature of

---

[57] Some evidence for this claim can be seen upon comparing the use of realis and irrealis constructions in the three texts in the Appendix. One is from narrative and the other two are excerpts from conversation.

the data they contain can make us forget the more dynamic aspects of language, especially how it changes over time. In that regard I find Croft's view of the bigger picture to be compelling:

> A typologist... accepts that all things in grammar must pass. Language is fundamentally dynamic, at both the micro-level — language use — and the macro-level — the broad sweep of grammatical changes that take generations to work themselves out. Synchronic language states are just snapshots of a dynamic process emerging originally from language use in conversational interaction (Croft 2001:8).

From a broader perspective, then, the data we are able to see reflect one slice of synchrony, a snapshot that is furthermore constrained by the myriad limits of the original documentation rather than a wholistic representation of the full range of uses of any particular construction, much less that of the linguistic practices of a community.

It is also worthwhile to consider the limits of the original documentation. Documentary corpora are always limited by the constraints of relationships with people in the community, the time it takes to transcribe recordings, among other factors both predictable and unforeseeable. Each corpus is also limited by the types of data it includes. We do not really have an understanding of what quantity of data and of what types would need to be documented for a truly full picture of the grammar to be describable. Such a possibility may be beyond the limitations of what documentation is generally able to do, since the richness of linguistic practices in a single community (even if the focus is just one of multiple languages used in that community) is not something the researcher will ever have the mental capacity to understand in full. Documentary corpora including that of Chini are thus representations: representative, accurate, but inherently partial and deeply incomplete by their nature. The data upon which this dissertation are based draw primarily from about 10.5 hours of transcribed connected speech, most of which is casual conversation. More Chini speech occurs in a single day in Andamang and Akrukay than in the corpus built over a

102

period of many months. Whereas Thieberger (2014) reminds us that linguistic descriptions are never objective representations of any language but rather subjective analyses of documentary corpora, it is also important to point out that the corpora are products of the researcher's and local people's documentary goals. They are not objective records per se of a language, even if the data they contain *represent* uses of that language by its users.

Separately but relatedly, the role of the research context and the role of linguist-community relationships are determining factors in the products of the documentation, even though this can be easy to forget (see Bauman & Briggs 2003). In her article, Dobrin (2012) challenges the pervasive view in documentary linguistics of texts as "collections of grammatical features [that serve] to support the more highly valued documentary projects, grammars and even lexica, whose substantive generalizations the texts illustrate or "contain"." (2012:2). She goes on to make the convincing argument that we must move well beyond structuralist assumptions about the texts we collect, in order to understand them as products that are deeply embedded in the relationships they came out of. The relationship between the outside researcher and the person(s) speaking in any given recording can be seen to structure the actual content of those texts. As Dobrin writes:

> [E]ven the most seemingly monologic of texts in fact embedded signs of its social production. Here, too, it was evident that I as a researcher had unconsciously given shape to documents that were ultimately intended to represent the language and culture of others (Dobrin 2012:4).

> The texts we collect when we document a language represent more than the speaker's knowledge of particular grammatical systems and the stable cultural content they can convey; they are always also forms of interaction that carry along with them contexts, messages, aspirations for contact, and addressees [...] Speakers are never just talking; they are always also representing themselves to someone (Joseph 2004) (Dobrin 2012:22).

It is with this sort of view in mind that the Chini corpus and data from it (e.g. as used in examples throughout this dissertation) should be considered. The corpus simultaneously represents people when left more or less to their own devices, where people are essentially

"being themselves" — while at the same time the data those people produced were always in the specific context of a documentation project they know to be about them and about their vernacular language. The relationship(s) they have with me and the role of the documentation project in those relationships, have various effects on the things they say when recorded and the data they produce, sometimes in obvious ways and sometimes in subtle ways.

3.3.5 Data citation

At the time of this dissertation there have been new developments underway regarding linguists' accountability for data used in scholarly publications. Linguistic data are increasingly becoming more resolvable to their original source(s) through the practice of data citation, either to archived corpora for primary data collected by the author or to the original sources of publication where secondary data are concerned. This is a result of increased emphasis on greater resolvability of linguistic claims to the data underlying them (Miner 1979; Thomason 1994; Thieberger 2009; Good 2012; Berez 2015; Berez-Kroeker et al. 2017; Gawne et al. 2017), as reflected also in a number of recent linguistic descriptions and other works where the data are resolvable to an archive and/or sound files (Brochie 2009; Cutfield 2012; Meakins & Nordlinger 2014; Morey 2005, 2010; Thieberger 2006, among others).

In this dissertation, data from secondary sources are cited to their original source. Those data and the original author's analysis remain unaltered by me unless otherwise mentioned. The Chini data are resolvable to the primary or notebook data in the corpus and can be accessed by registered users of ELAR. An explanation of the data citation conventions used for Chini examples can be found at the beginning of the dissertation on page xxi.

Chapter 4
Fundamentals of Chini Segmental Structure and Verb Morphology

Here I describe the basic morphological structures of the Chini verb and the formal aspects of the constructions in which the various verbal categories in the language are marked. The purpose of this chapter is to contextualize the inflectional realis/irrealis distinction with respect to the structures and categories of the verb morphology. A main point concerns the high functional load of inflectional realis and irrealis categories relative to all other inflectional categories of the verb (see also 5.4).

The structure of this chapter is as follows. First I briefly discuss two preliminary parts of the grammar: the phonemic inventory (4.1) and the proclitic template for the verb complex (4.2). In (4.3) I describe the basic workings of the aspectual, negative, and modal verb bases to which the inflectional categories attach. In (4.4) I discuss covert perfective/imperfective root aspect as a fundamental distinction in the verbal lexicon as well as the derivational aspectual devices that permit roots of one aspect type to be derived into the other class. Finally, because it is such a central property of the Chini verb, I discuss morphological harmony in verb forms built on the aspectual base (4.5). Liberal footnotes are included to add extra detail or in some cases, cautionary notes about the analysis.

4.1   Phonemic inventory and orthographic representation

The tables below show the consonant and vowel inventories for Chini. Marginal phonemes are indicated between parentheses. Orthographic conventions are indicated in arrow brackets: < >. Note that the orthographic conventions are not entirely phonemic and do not follow the standard usage among Papuanists in representing prenasalized stops according to their oral components (e.g. /nd/ as <d>). This is due primarily to the presence of the marginal phoneme

/d/ and the velar approximant /ɰ/ which I represent orthographically as <d> and <g>, respectively.

Table 4: CONSONANT INVENTORY AND ORTHOGRAPHIC REPRESENTATION

	Bilabial	Alveolar & Postalveolar	Palatal	Velar	Labio-velar	Palato-bilabial
Voiceless stop	p <p>	t (d) <t> <d>		k <k>		
Prenasalized stop	ᵐb <mb>	ⁿd <nd>	ᶮɟ <ñj>	ᵑg <ŋg>		
Prestopped nasal	ᵝm** <pm>			ᵏŋ** <kŋ>		ᶜᵝm** <cpm>
Nasal	m <m>	n <n>	ɲ <n>	ŋ <ŋ>		
Nasal (ingressive airflow)	(m**) <mh>			(ŋ**) <ŋh>		
Fricative	(ɸ*) β <f> <v>					
Affricate		tʃ <ch>				
Approximant		ɹ <r>	j <y>	ɰ <g>	w <w>	

*Andamang dialect only

**N.B. The IPA symbols do not distinguish the ingressive airflow component of these phonemes

Table 5: VOWEL INVENTORY AND ORTHOGRAPHIC REPRESENTATION

	Front	Central	Back
High	i <i>	ɨ <ɨ>	u <u>
Close-mid	(e) <e>		(o) <o>
Open-mid			(ɔ*) <a>
Low			ɑ ã* <a> <ã>

*Andamang dialect only

4.2   The proclitic template

One area of the grammar that is important for Chini clause structure is the proclitic template for the verb complex. The relevant proclitics have nothing to do with the workings of the

realis/irrealis distinctions in the language; however, they do appear in many examples in this dissertation and so are worth mentioning.

Information about participants (and other types information such as directionality) is indicated by proclitics that attach to the verb complex. These clitics lack lexical meaning, do not occur in isolation, and occur in a fixed order relative to one another. This order is generally immutable, irrespective of whether the clitics attach directly to the verb or to another syntactic word in the verb complex. The table below provides an abstract representation of the proclitic template for the Andamang dialect.[58]

Table 6: TEMPLATE FOR VERB COMPLEX PROCLITIC CONSTRUCTIONS[59]

1	2	3	4	5	6	7	8	9	10	11
kɨ	*nɨ*	*ga*	*ma*	*nɨ*	*(var.)*	*vɨ*	*nɨ*	*(var.)*	*bmɨ*	*mɨ*
								mɨ=[60]	*nɨ*	
									mhi	
PROX	REP	RETURN	FOC	INS	DU object pronoun	BEN	NEW.P /ALL	SG & PL object pronouns	SUC	ALL
								TOP	GER	
									FOC.ALL	

---

[58] N.B. There are differences in the templates and in the possible co-occurrences of proclitics (i.e. in a single clause) between the two dialects. These need not concern us here, however.

[59] Only infrequently do two or three clitics co-occur in a single clause, and in fact a much larger corpus would be required in order to understand the full extent of the relationships between different proclitic constructions. For this reason the template I have provided should be considered as preliminary; more data may necessitate revisions. One slight complication concerns examples in which more than one formally identical clitics occur in the same clause. So, in the sentence: *nu **nɨ**=mbarɨ **nɨ**=ñjagigi **nɨ**=agapmichi?* 'Are you heading back upriver paddling by canoe?', we might assume that the first *nɨ=* is indeed the repetitive *nɨ=*, the second the instrumental *nɨ=*, and the third the gerund marker *nɨ=*, but it is difficult to know without any doubt that this is so, since the forms are the same. It is only upon comparison with multiple other examples, that we can assume the functional identity of each one in an example like this one.

[60] Because the proclitic form '*mɨ=*' is so ubiquitous in the language, its functions including its distinct function here (as a topic marker) are worth mentioning. When it occurs in the ninth slot in the template relative to the other proclitics, the form *mɨ=* refers to an nonhuman referent represented as topic-worthy, always in a multivalent clause. In this function (as distinguished in the grammar), I have glossed it as 'TOP'. But this form also has a rather similar function in the language but one that is outside the structure of the proclitic template entirely. In this related function, which I gloss simply as 'DIST', *mɨ=* is simply a distal deictic pronoun. Unlike TOP *mɨ=*, DIST *mɨ=* occurs in mono- as well as multivalent clauses and need not represent a pragmatically marked referent. It is generally used only for non-human referents, but may be used for human 'super topics', i.e. where one out of multiple human referents is represented as highly topical throughout a stretch of discourse. That DIST *mɨ=* occurs outside the template constructions can be seen when multiple proclitics occur in certain syntactically complex verb phrases, in which DIST *mɨ=* attaches consistently to the constituent that is semantically relevant to it rather than in any particular order relative to the other proclitics.

As a brief illustration of how the proclitic template works in actual speech, consider the following example in which 3 proclitics are used. The speaker uses proclitics from slots 9, 10, and 11. They occur in order as expected, and in this example they happen to attach directly to the verb itself, i.e. in the absence of adverbs or other words in the verb complex:

(12) *...ñimhimɨkinɨmarkɨ*
ñi=mhi= mi=kɨ-nɨmar-kɨ
PL=FOC.ALL= ALL=propel-TLOC.PL-R
'(the men) threw (the skulls) down to THEM (the women, to whom the skulls belonged).' (Anton Manna, afi220414iii_34:55)

Also as expected according to the template, in the example below the instrumental proclitic *nɨ=* from slot 5 precedes the topic marker *mɨ=* from slot 9 in the first clause. In the second clause the focused patient marker *ma=* from slot 4 precedes the instrumental proclitic *nɨ=* (again, from slot 5) (both happen to refer to the same referent, *ayi pirkɨ* 'something bad (here: cannabis)':

(13) *augra   ñi   ayi   ara   ..nɨmiɨñinda.*
[augra   ñi   ayi   ara   **nɨ=mɨ**=ñi-nd-a]
money   PL   something   good   **INS=TOP**=get.IRR-PFV-R
'The money, they didn't get it in a good way;'

ayi   pirkɨ   añi   manɨmɨñi.
[ayi   pi-r-kɨ   añi   **ma=nɨ**=mɨ=ñi]
something   bad-ADJ-PC   1PL   **FOC=INS**=DIST=get.R.PC
'it was by something bad (by selling cannabis) that we got it.'
(Frank Manna, afi040814iii_42:05)

The next example shows that the syntactic domain to which the proclitics attach is the verb complex/phrase (and not just the verb) and that the most verb-adjacent clitic, the allative marker *mɨ=* in slot 11, is indeed a proclitic (and not a prefix). In the first clause, the verb complex consists just of the verb, so *mɨ=* attaches to the verb. In the second clause, the verb complex consists of the verb and an adverb, and *mɨ=* attaches to the adverb:

108

(14) *ku*   *Amɨŋarɨ*   *mayikɨ*
     [ku   Amɨŋarɨ   **mi**=ayi=kɨ]
     1SG.NOM   Ramu_river   ALL=go/come_upriver.IRR=CNT.R

     achikɨ   *tiŋɨ*   *mayuku*   *yu.*
     [achikɨ   tɨ=ŋɨ   **mi**=ayuku   yu]
     upriver   road=ADESS ALL=quickly go/come.IRR
     ' "I'll go upriver along the Ramu, going quickly along the upriver road." '
     (Dorothy Paul, afi260814v_29:03)

The next and last example shows that the attachment of the clitics to words in the verb complex other than the verb itself does not affect the ordering of the clitics. Their templatic order remains the same irrespective of how they are broken up through within the verb complex/phrase. The 3 clitics, from slots 4, 8, and 11, occur in their expected order:

(15) *atavɨ*   *urkwachi*   *añi* *manɨmpmɨ*   *miŋgɨga.*
     atavɨ   urku-achi   añi **ma**=**ni**=mpmɨ   **mi**=ŋgɨ-ga
     pearl_perch coldfish-DIM.PL 1PL FOC=NEW.P/ALL=bamboo ALL=stuff-R
     'It's the pearl perch (fish), and also the little coldfish, we stuffed into bamboo (to roast).' (Paul Guku, afi011116iv_17:30)

4.3   The three verb bases

Verbs can be built on one of three types of 'bases'.[61] I call these the 'aspectual', 'negative' and 'modal' bases, according to the types of meaning each base is specialized for, and distinct categories each of the three bases can be marked for.[62] The morphological forms that derive any given base from a root are lexically conditioned. That allomorphy may involve suffixation, root reduplication, root suppletion, double exponents of those, or a null morpheme. Some lexemes have syncretic lexically-conditioned forms for the negative and modal base derivations. What results from all this is a very heterogeneous distribution of

---

[61] Note that the prefixes also constitute part of the base for some lexical verbs, especially the middle voice *ñji-* and also the partitive *mɨ-* constructions. I have not included them here, since they have no determining role in the suffixal morphology of the verb.

[62] Among other caveats, note that the modal stem exhibits certain internal complexities that could be seen as arguments against the modal stem as I have posited it. There are also a few low frequency verbal categories or alternations I have not represented here.

forms for a very small set of grammatical functions.[63] I will on occasion refer to verb 'stems'
by which I mean an inflected (generally: for realis or irrealis meaning) form of a base to
which a (generally derivational) suffix attaches afterward. (However, due to potential
confusion between 'base' and 'stem', I will avoid this whenever possible). The three bases are
described, diagrammed, and briefly exemplified below. The reader should keep in mind that
what I describe here is cursory and tailored to the larger purpose of this dissertation, and so
there is much I have left out here. The description I present here is an overview.

In regard to the examples encountered throughout this dissertation, the reader should
keep in mind that lexically conditioned allomorphy is no minor matter in Chini. The most
frequent inflectional and derivational categories are almost all formed in this way, and so
Bybee's (1985) insight about the most frequent morphological substance as rote-based and
the less frequent substance as rule-based applies in an almost radically clear way to Chini
verb morphology. The means of formation for lexically conditioned allomorphy include:
suffixation, partial or full root reduplication, degrees of (weak and strong) root suppletion,
various combinations thereof, bare roots ('zero-marking'), and, in infinitive forms, infixed
partial reduplication (of root consonant) and, separately, partial root reduplication infixed
into the suffix -aCkɨ. As a reference, the distribution and formal realizations of lexically-
conditioned allomorphy are summarized in the table on the next page.

---

[63] Virtually every lexical verb presents at least one if not multiple formal idiosyncrasies, some of which can
resemble patterns in other lexical verbs or which can be unique to that verb. There is one exception, the
indeterminate pro-verb *kɨyim-* 'do whatsit/you-know-what (often: cause, exert agency over, negatively affect)'.
Without exception, its various possible combinations of aspectual categories are all built neatly on the base of
the bare (perfective) root *kɨyim-* or the derived imperfective base *kɨyimam-*; its negative categories all built
neatly on the negative base *kɨyimigɨ-*; its modal categories all built neatly on the modal base *kɨyimri-*. The
reason for the morphological tidiness of this verb may be due to the fact that it is a derived form of the
indeterminate inanimate pronoun *kɨyi* 'whatsit, whatsitcalled, a you-know-what, thingy'.

Table 7: LEXICALLY-CONDITIONED ALLOMORPHY IN THE CHINI VERB[64]

Base	Verbal category	Allomorph formation	Examples verb root	allomorph
Aspectual	basic realis* (PFV bases only)	bare root ('-Ø')	*aku-* 'fold together'	*aku*
		suffixation	*am-* 'eat' *ar-* 'catch fish' *kiyim-* 'do whatsit'	*am-a* *ar-ga* *kiyim-kɨ*
		weak root suppletion	*ndɨ-* 'light, kindle'	*nkɨ*
	basic irrealis (PFV bases only)	bare root ('-Ø')	*ñi* 'get, retrieve'	*ñi*
		suffixation	*am-* 'eat' *ar-* 'catch fish' *ndɨ-* 'light, kindle'	*am-i* *ar-yi* *ndɨ-ñi*
		strong root suppletion	*aŋɨ-* 'go/come' *kɨ-* 'tell'	*yu* *chi*
		weak root suppletion (*a*-initial roots)	*agɨ-* 'go/come upriver' *agwu* 'put inside' *aku-* 'do exchange dance'	*ayi* *ayu* *achu*
		'half' root suppletion + suffix	*chi-* 'get up, rise' *ŋgu-* 'go out (fire)'	*cpmichi-yi* *mhuŋgu-rgi*
		root reduplication	*ndi* 'cease, dislike' *pa* 'go first, ahead'	*ndi~ndi* *pa~pa*
Negative	base derivation	bare root ('-Ø')	*ri* 'go/come down'	*ri-*
		suffixation	*ndɨ-* 'think'	*ndɨ-gɨ-*
		full root reduplication	*ndi* 'cease, dislike'	*ndi~ndi*
Modal[65]	base 1 derivation* (imperative)	bare root ('-Ø')	*aŋɨ* 'go/come'	*aŋɨ*
		suffixation	*kiyim-* 'do whatsit' *añi* 'give'	*kiyim-rɨ* *añi-ŋɨ*
		weak root suppletion	*mu-* 'go inside'	*mbugu*
		full root reduplication + suffix	*chu-* 'shine, be light'	*chu~chu-ru*
Root	infinitive	full root reduplication	*ŋgin-* 'perceive' *agɨ-* 'go/come upriver'	*ŋgini~ŋgini* *agɨ~agɨ*
		partial root reduplication	*chagɨ-* 'emerge' *anu-* 'die'	*chagɨ~agɨ* *anu~nu*
		suffix fused with root	*yɨm-* 'chew betel nut'	*yẽn-tmɨ*
		suffixation	*amu-* 'seize, hold' *ku-* 'run'	*amu-rgi* *ku-arkɨ*
		full or partial root reduplication + suffix	*añi-* 'give' *ayi-* 'sneeze' *ye-* 'scatch' *av-* 'descend' *mbu-* 'cut open'	*añi~ñi-ŋɨ* *ayi~yi-ri* *ye~y-kɨ* *av~av-kɨ* *mbu~mb-ru*
		infixed partial reduplication (of initial root C)	*var(i)-* 'garden, work' *riŋ(i)-* 'exchange, buy' *piŋ(i)-* 'push aside'	*va~v~ri* *ri~r~ŋɨ* *pɨ~mp~iŋɨ*
		partial reduplication (root C) infixed in suffix (*-aCkɨ*)	*and-* 'make hole' *kiyim-* 'do whatsit'	*and-a~n-kɨ* *kiyim-a~m-kɨ*

---

[64] N.B. Some lexically conditioned allomorphs in the asterisked constructions are subject to phonological conditioning, though I have not described this here. Also note that what appears to be a very wide range of lexically conditioned allomorphs for some constructions is not so wide as just the surface forms suggest, because some are affected by certain morphophonemic processes.

[65] Modal base derivations 3 and 4 are also formed to some extent by lexically conditioned allomorphy. For a number of reasons I have not included them here, however.

4.3.1　The aspectual base construction

In Chini discourse, the vast majority of verbs in main clauses — just over 78% according to a count of 30 minutes conversational data — are built on the aspectual base (see discussion at the beginning of Chapter 5). Apart a few minor exceptions, verbs built on the aspectual base are obligatorily marked for either realis or irrealis. So, the import of this section in this dissertation is to gain a foothold on the totality of verbal constructions in Chini, in order to understand the powerful functional load that the realis/irrealis distinction has in the context of other verbal categories that express various other types of meaning.

In contrast to the negative and modal bases built on derived forms of the verb root, roots in the aspectual base do not undergo derivation to serve as a base.[66] The aspectual base is thus the 'primary' base (in addition to being by far more frequently used than the others). The categories that attach within the aspectual base span the continuum from inflection to derivation, and are all marked by suffixes within the template in Figure 22.[67]

---

[66] Lexically-conditioned allomorphy in the form of a zero derivational device for some lexemes can obscure the fact that these are complex bases. However, upon consideration of the lexicon as a whole, it becomes clear that they are indeed complex and that the positing of a derivational zero is motivated.

[67] N.B. Although the representation of Chini verb morphology as templatic accounts for many verbs, the full distribution of suffixes as evident in the corpus is not always conducive to templatic representation. Note also the two-tiered representation for the contrastive (or, alternatively: counterfactual) -*ambia* realis construction, which does not fit entirely neatly within the template of the aspectual base. As far as I am aware those forms never take nominalizing morphology. To be clear, I intend these templates only as analytical tools to help introduce the morphology.

Figure 22: **Templatic diagram for the aspectual base**[68]

(Prefix)		1	2	3	4	5	6[69]	7	8
middle voice	PFV or IPFV	aspect	basic R/IRR	NMLZ₁ }	IRR	PFV	R	NMLZ₂ }	Q.R/ Q.IRR }
	verb root	or: translocativity[70]	R	CTRST			IRR		

The following forms from the corpus give some idea of what verbs built on aspectual bases resemble and what meanings they are used to convey:

> e.g.,
> akam-kɨ-yi
> speak[PFV][71]-R-NMLZ
> '(that which) was said'
>
> ri-ga-ambia-nd-i
> go/come_down[PFV]-R.PL-CTRST-PFV-IRR
> 'would have all not come downriver'
>
> *ŋgini-m-apa-y-i-nd-a-n-i*
> perceive.DIST[PFV]-IPFV-R-NMLZ-IRR-PFV-R-NMLZ-Q.IRR
> 'was not seeing?'
>
> ñji-yim-tm-i-ch-i-nd-a-n-i
> MID-chew_betel_nut-IPFV-IRR-NMLZ-IRR-PFV-R-NMLZ-Q.IRR
> 'do(es) not habitually engage in betel nut chewing?'

4.3.2   The negative base construction

The negative base is a derived or 'complex' base. The derivational base formations are lexically-conditioned. Allomorph formation can involve zero derivation, suffixation, full root reduplication or weak or strong root suppletion. Essentially two main constructions are built on this base, negative realis and irrealis and the prohibitive.

---

[68] The thick border lines in the template indicate bi-suffixal complexes, suffixes that always come in pairs in their respective constructions. Suffixal slots with a corrugated left boundary never occur on their own but always come paired with a nominalizer.

[69] The realis/irrealis alternation in slot 6 is, as far as I know, purely distributional rather than functional. Only relevant tokens of the contrastive *-ambia* construction may be marked for irrealis in that slot in the template after the derivational perfective suffix *-nd*. There are, however, a number of lexicalized forms that counter this generalization, but those need not concern us here.

[70] The translocative derivation is restricted to a subset of lexical verbs, most but not all of which have straightforward meanings involving translocative motion of some kind (*ku-* 'traverse', *pu-* 'grab', *ki-* 'propel, throw, kick', *ñor-* 'chase' but: *ayi-* 'wait'). Paucactional/pluractional verbal number is also distinguished in the form of the translocative suffix for most verbs. The translocative derivation may not co-occur with any aspectual derivation as far as I am aware.

[71] The bracketed glosses for aspect indicate covertly-specified root aspect (*ri-* 'go/come_down[PFV]'). I have done this only in this chapter but have refrained from doing so throughout the rest of the dissertation, in the interest of keeping the glossed lines no more complex than necessary.

113

Figure 23: **Templatic diagram for the negative base**

(Prefix)		1	2	3
middle voice	Verb root	negative base derivation	R/IRR	NEG
			PROH	

The following forms from the corpus give a fairly complete idea of what verbs built on the

negative base are like:

> e.g.,
> kɨyimɨ-gɨ-ma-ti   kɨyimɨ-gɨ-ndɨ
> cause[PFV]-NEG-R-NEG   cause[PFV]-NEG-PROH
> 'not cause (lit. do whatsit) (REALIS)'   'don't cause (lit. do whatsit)!'
>
> ri-Ø-ra-ti   ri-Ø-ndɨ
> go/come_down[PFV]-NEG-IRR-NEG   go/come_down[PFV]-NEG-PROH
> 'not head downriver (IRREALIS)'   'don't head downriver!'

4.3.3   The modal base construction[72]

Like the negative base, the modal base is a derived or 'complex' base. The morphological

patterns in modal constructions are characterized by a templatic-like distribution represented

below. Modal base 1 marking is lexically conditioned. Allomorph formation for Modal base

1 can involve zero derivation, suffixation, full or partial root suppletion, or root suppletion or

suffixation. Modal base 2 is marked consistently by -rɨ. The diverse suffixal forms of modal

bases 3 and 4 pattern in various ways that depend on the form of the modal 1 allomorph for

each lexeme. Across these constructions and not counting suppletive forms, the modal

derivations nearly always contain the segments <r> [ɹ] and/or <g> [ɰ].[73]

---

[72] Some (but not all) verbs have no imperative forms and furthermore do not make any use of the modal base construction. When these verbs occur in directive speech acts with positive polarity, they make use of the irrealis -ra construction formed in the negative base construction (that is, without the negative suffix -ti). The suffixes for the other modal categories attach to the negative (rather than the otherwise expected modal) base just for this handful of lexemes which include: ŋginɨ- 'perceive/know from a distance, discern'; ndɨ- 'think'; aku- 'perform exchange dance'; ar- 'catch fish'. Separately, even verbs that form their imperatives on the modal base may on very rare occasion still make use of the irrealis -ra construction in the negative stem (and again, without the negative suffix -ti). But when these more regular verbs make use of that construction in directive speech acts, they are interpreted as having *negative* rather than positive polarity, e.g., *nu ŋgara ɨrkŋɨŋgɨ nu mɨkɨyimɨgɨra!* 'You shouldn't whatsit (speak) with Tok Pisin!'

[73] N.B. With the exception of the imperative category, there are several formidable obstacles simply in documenting the modal constructions and the forms that different verbs take. In discourse, these categories are highly infrequent, and they are all but impossible to elicit. (My own attempts to do so regularly produce verb forms that other speakers end up earnestly contesting later on). The most extreme case is that of the uncertain

Figure 24: **Templatic-like diagram for the modal base**

(Prefix)		1	2	3
middle voice	Verb root	modal base derivation 1 (imperative)		immediate imperative
				anterior future
				delayed future
			modal base 2	
				potential
			modal base 3	
				uncertain future
			modal base 4	

The imperative category is formed by the bare root and modal base 1. The immediate imperative -*nda* and the anterior future -*ndatɨ* attach to modal base 1. The delayed future, potential, and uncertain future have specialized modal base forms. The delayed future is formed either by modal base 1 or by the attachment of the modal base 2 suffix -*rɨ* to the modal base 1 form. Like modal base 2 for the delayed future, the potential and uncertain future also have their own specialized derivational base forms. Some verbs require the suffixes of those categories to attach to the specialized base while others require them to attach to modal base 1. Some verbs exhibit various formal idiosyncrasies.

The following examples give some impression of what verbs built on modal bases are like. Though I have not done so elsewhere in this dissertation, here I have included subscript numbers to clarify which modal base(s) these verbs rely on for the respective modal categories.[74]

Imperative	**Delayed future**	**(Miscellaneous)**
kɨyim-rɨ	kɨyim-rɨ-ndɨkɨ	kɨyim-rɨ-ru
cause[PFV]-IMP$_1$	cause[PFV]-**MOD$_1$**-D.FUT	cause[PFV]-**MOD$_1$**-POT
'cause!'	'will cause in a bit'	'might cause'

---

future. In 9 months of fieldwork and documentation I have come across less than a dozen examples. It is as far as I know used only for non-human agents, e.g., the weather, geological occurrences, and pigs, and so any lexical verb whose use is constrained toward the actions of human agents cannot be marked for this category. The functions of these categories have little to do with semantics; their use is pragmatic. The delayed future, for instance, is used primarily to deflect away from the present context in some way, for instance some action presented in the immediately preceding discourse by the addressee.

[74] It is only in this subsection that I provide fine-grained glosses for modal base stems according to the number of the modal base; in the rest of this dissertation, the relevant morphemes are glossed only as 'MOD'.

auru-agrɨ	auru-agrɨ-ndɨkɨ	auru-gru -ri
wash[PFV]-IMP₁	wash[PFV]-**MOD₁**-D.FUT	wash[PFV]-**MOD₄** -UFUT
'wash!'	'will wash in a bit'	'may or may not wash (rain)'

chi-gɨ	chi-gɨ-ri-ndɨkɨ	chi-gɨ-nda
get_up.PC[PFV]-IMP₁	get_up.PC[PFV]-**MOD₁**-**MOD₂**-D.FUT	get_up.PC[PFV]-**MOD₁**-IMM.IMP
'get up (PC)!'	'will get up in a bit (PC)'	'get up now (PC)!'

To summarize this chapter thus far, all inflected verb forms in Chini are built on one of three bases, each of which is characterized by its own internal structure. Second, realis and irrealis are distinguished prominently in the aspectual base and in the negative base. The vast majority of verbs in Chini discourse are built on the aspectual base, of which the minimal form is obligatorily marked for basic realis or irrealis. Based on a sample of 30 minutes of conversational data, tokens of the basic realis and irrealis constructions comprise about 78% of all inflectional marking. The use of negative realis and irrealis constructions account for another 4%. So, in Chini discourse, inflectional realis and irrealis account for about 82% of all inflected verb forms. Realis and irrealis represent the lens through which the overwhelming majority of situations are expressed.

4.4   Covert root aspect and derivational aspect in the aspectual base

There is robust internal evidence that all verb roots in the language are covertly specified for either perfective or imperfective aspect, where 'covert' refers to the absence of any aspectual marking on the root. Most verb roots, numbering in the hundreds, are perfective, while about a dozen or so are imperfective. Perfective-specified verbs correspond mostly to dynamic situations (e.g., *pɨ-* 'sit down',) while the lexical semantics of imperfective-specified verbs corresponds to static ones (e.g., *ɨvk-/pirk-* 'sit, be sitting (PC/PL)', *mk-* 'stand, be standing (human, PC)). A number of imperfective bases and a smaller number of perfective ones are multimorphemic as a result of certain processes of lexicalization.

116

The dynamic-static semantic distinction across lexemes is matched by strong morphological evidence in support of a covert perfective-imperfective distinction across all verbal lexemes in the language. The perfective versus imperfective derivational devices (that occur in suffix slot 1 of the aspectual base) — that is, those that are still productive — attach solely to roots specified for the other aspectual category.

Perfective roots derived as phasal imperfectives ('-*M*'):
agwɨ-pm-   *apɨ-pm-*
put_inside[PFV]-IPFV-   orient_toward[PFV]-IPFV-
'put inside (IPFV)'   'orient/face toward (IPFV)'

Perfective roots derived as stative imperfectives (-*gɨ*):
apɨ-gɨ-
orient_toward[PFV]-STAT-
'be facing toward'

Imperfective roots derived as perfectives (-*ɨ*):
ivk-ɨ   *mk-ɨ*
be_sitting.PC[IPFV]-PFV-   be_standing.PC[IPFV]-PFV-
'sit (PFV) (few people)'   'stand (PFV) (few people)'

More detailed information for these primary aspectual devices as well as three unproductive, more marginal ones can be seen in the table below:

Table 8:   SIX DERIVATIONAL ASPECTUAL DEVICES[75]

		Aspectual devices (slot 1 in aspectual base template)					
		IPFV				PFV	
		phasal IPFV	stative IPFV	IPFV	phasal IPFV	PFV	gradual process PFV
		-*M**	-*gɨ*	-*ni*	root reduplication	-*ɨ*	root reduplication
patterning with root aspect	PFV	all	some	very few	very few	-	very few
	IPFV	-	-	very few	-	all	-
productivity		high	low	very low	very low	low	very low
marking of basic R/IRR ?		yes	yes	yes	some lexemes only	no	some lexemes only

*Forms determined by consonant harmony (see Table 9)

---

[75] These aspectual derivations should not be confused as being in any way on par with the negative and modal base derivations, even though all of these derivational devices attach directly to the root. The former differ from the latter in a number of ways. One is that the aspectual derivations all make major semantic contributions to the verb stems they help construct, while in contrast the semantic contributions of the negative and modal base derivations ranges from minimal to non-existent. Secondly, while the negative and modal bases are derived via a variety of morphological formations attributable to lexically-conditioned allomorphy, the aspectual derivations are formed by regular processes of suffixation or reduplication.

The imperfective *-M* construction deserves some additional mention for the morphophonological process that determines its formal realization (in the Andamang dialect: *-pm*, *-tm*, *-nm*, *-m*, *-mpm*, *-ndm*, *-cpm*), reflecting Jakobson's (1938 and 1939 in Flynn & Fulop 2012:1) insight about the possibility for consonantal phenomena to pattern according to a 'grave' (labial and velar) versus 'acute' (dental-alveolar and palatal) distinction.[76] Here what is involved is a type of consonant harmony controlled by the place of articulation of the root consonant. Bilabials and velars pattern together and then, separately, alveolars and palatals pattern together. When *-M* attaches to certain multimorphemic bases, however, its form is no longer controlled by the root consonant but is instead morphologically-conditioned: roots consisting of compounds (and a few multisyllabic roots) consistently take *-m*, while lexicalized bases formed by the combination of a root and the imperfective suffix *-nɨ* consistently take *-cpm*. The patterns are seen in the table below:

Table 9: Consonant harmony and the imperfective suffix '*-M*'[77]

Root consonant	Oral consonants (monosegmentals, affricates	Nasal consonants (monosegmentals, prestopped nasals)	Prenasalized stops	Root compounds	Lexicalized bases (ROOT-*nɨ*)
Bilabials[78] & velars	*-pm*	*-m*	*-mpm*	*-m*	*-cpm*
Alveolars[79]	*-tm*	*-m*	*-ndm*		
Palatals		*-nm*			

---

[76] I am indebted here to Caroline Crouch for helping me to understand Jakobson's acute/grave distinction in phonological theory and its relevance to the Chini *-M* construction.

[77] The main exceptions I know of (and notwithstanding certain historical sound changes that obscure the patterns for some verbs) are: *ambia-* 'boil (intransitive)' which patterns with *-ndm* (forming *ambiandm-*) and; *amu(r)-* 'seize, hold' which patterns with *-pm* (forming *amrupm-*). A few monomorphemic but bisyllabic roots exhibit some idiosyncrasies, e.g., the first rather than the (expected) second consonant for the root *akam-* 'speak' controls harmony and patterns with the imperfective form *-pm* (and not *-m*).

[78] One exception to this is verb roots that contain /β/, which is the only fricative in the language. Perhaps by virtue of being the only fricative in the language, this means for whatever reason that it was lumped with the nasals and prestopped nasals rather than the orals and affricates. It patterns with the *-m* (and not *-pm*) form of the imperfective.

[79] In the Akrukay dialect, verb roots with a voiced oral or nasal alveolar consonant take the *-dm* form of the imperfective (e.g., *aurwa-tm-i* (Andamang) versus *aurwa-dm-i* (Akrukay) 'wash-IPFV-IRR').

In the next section I discuss some of the evidence showing that perfectivity and imperfectivity (regardless of how or where they are encoded), exhibit distinctive patterns of morphological harmony in other parts of the template.

4.5 Morphological harmony in the aspectual base

Verbs in the aspectual base are subject to a morphological process I refer to as 'morphological harmony' whereby the forms of 3 sets of verbal suffixes alternate not to indicate an alternation in function. but only as a meaning of harmonizing with the grammatical type of stem to which they attach.[80] By 'type of stem' I refer to their alternations according to the two most central grammatical distinctions in the language: realis/irrealis and perfective/imperfective.[81] Since over 90% of verbs in Chini discourse are built on aspectual base forms and all aspectual base forms are marked for at least 1 of the 3 harmonizing sets, morphological harmony can be said to be a central property of the Chini verb.

Recall that with only a few marginal exceptions, verbs built on aspectual bases are marked for either the basic realis or basic irrealis category. As it happens, the basic realis/irrealis marking itself represents one of the three morphological harmony constructions, though here the question of form is more complex than in the other constructions I discuss below. Simply put, however, the forms of the basic realis/irrealis morphemes harmonize along the lines of the aspectual distinction (perfective versus imperfective) of the base to which they attach — regardless of whether (im)perfectivity is indicated covertly in the root or by a derivational form. This applies across the entire lexicon.

---

[80] Thank you to Megan Lukaniec for suggesting to me the concept of morphological harmony as it relates to these constructions.

[81] There are very few exceptions to this generalization. A small number of verb roots that are generally derived as translocatives are able in certain constructions to take either suffix regardless of the aspectual distinction of the base. So, for these verbs and these verbs only, the suffixes cannot be seen in terms of morphological harmony, but rather indicate subtle semantic nuances. These are, however, so rare in discourse and so unamenable to elicitation through Tok Pisin that the exact nature of the nuance is still unclear at this time.

So, all imperfective bases (derived or underived) take the basic realis suffix -*apa* and the

basic irrealis suffix -*i*.[82] In contrast, the same realis and irrealis categories for perfective bases

are marked by lexically-conditioned allomorphy.[83] Despite the formal complexities resulting

from lexically-conditioned allomorphy, however, the general principle of morphological

harmony can be seen upon comparison of the following forms of the basic realis category:

<div align="center">

Harmony Rule 1
Basic realis/irrealis forms harmonize with aspect of verb base

</div>

Underived imperfective bases *ivk*- 'be sitting (PC)' and *pirk*- 'be sitting (PL)'

ivk-**apa**	pirk-**apa**
be.sitting.PC[IPFV]-**R**	be.sitting.PL[IPFV]-**R**
'be sitting (few people) (REALIS)'	'be sitting (many people) (REALIS)'

Underived perfective bases *akam*- 'speak' and *ar*- 'catch fish'

akam-**ki**	ar-**ga**
speak[PFV]-**R**	catch_fish[PFV]-**R**
'speak (REALIS)'	'catch fish (REALIS)'

Derived imperfective bases *akãmpm*- 'be speaking' and *aritm*- 'be catching fish'

akam-pm-**apa**	ari-tm-**apa**
speak[PFV]-IPFV-**R**	catch_fish[PFV]-IPFV-**R**
'be speaking (REALIS)'	'be catching fish (REALIS)'

This harmony construction can also be seen as having the effect of deriving imperfectives

into a single class from perfective roots: underived imperfective roots and derived

imperfectives alike take the same realis and irrealis suffixes (but not so the perfective

counterpart for the same lexical verb).

---

[82] Note, however, that while -*i* is without exception the only basic irrealis form possible for imperfectives (and thus can be said to harmonize with imperfective bases), the lexically-conditioned basic irrealis allomorph for a number of perfective roots is also -*i*. This, in my view, does not represent so much a problem for the analysis as it does an instance of the 'messiness' of grammar, or at least the notion that "all grammars leak". In contrast, -*apa* is at once the only basic realis form possible for imperfectives and never occurs in any perfective form (unlike its more promiscuous irrealis partner).

[83] Note one additional complexity is that imperfective roots derived as perfectives (either in the reduplicative construction or via the more productive device reliant on the suffix -*i*) may not be additionally marked by basic realis or irrealis. This represents the main construction type within the aspectual base template where the basic realis/irrealis distinction is not relevant. Though the -*i* derivational construction is productive across all imperfective roots, it is nevertheless used very rarely in discourse and can thus be considered a fairly marginal construction in the language.

The second and third harmony rules concern the forms of the nominalizers -*y*, -*n*, and -*ch*. Except for their use in relative clauses, these nominalizers have little actual function other than as markers of the various clause types in which they always occur: standard negation (see also 6.3), standard interrogatives (see 6.2 and 6.4), relative clauses (see 6.5), copular complements, one of the six medial clause constructions in clause chaining (see 7.2.3), and in a clause type used for both introducing reported speech/thought and oppositional contrast.

The second harmony constructions concerns imperfective bases only. I will simplify somewhat here, since some of the details involved in this construction do not affect the analysis in any way. For imperfective bases, a nominalizer is required in the formation of the standard negation construction. The form of the nominalizer harmonizes according to the realis inflection (harmonized form -*y* of the nominalizer) or the irrealis inflection (harmonized form -*ch*). (Only so as to avoid confusion I have simplified the glosses for the negative form -*nda* because they are irrelevant to this harmony construction; see (6.3) for more in-depth discussion of standard negation). The formal alternation the nominalizer undergoes makes no semantic contribution to the verb form; in other words, here -*y* and -*ch* are in total complementary distribution for realis-inflected and irrealis-inflected imperfective bases, respectively:

Nominalizer forms -y/-ch harmonize with realis vs. irrealis stems
(imperfective bases only)

apɨ	-pm	-apa	-y	-i	-nda	(Realis stem)
orient_toward[PFV]	-IPFV	-R	-NMLZ[84]	-IRR	-NEG	

'was not facing toward' [simplified translation]

apɨ	-pm	-i	-ch	-i	-nda	(Irrealis stem)
orient_toward[PFV]	-IPFV	-IRR	-NMLZ	-IRR	-NEG	

'is not facing toward' [simplified translation]

Note that other imperfective constructions count as imperfective for the sake of Harmony Rule 2 (not just the *-M* derivational imperfective). For instance, these include the *-gɨ* stative imperfective:

apɨ	-gɨ	-apa	-y	-i	-nda	(Realis stem)
orient_toward[PFV]	-STAT	-R	-NMLZ	-IRR	-NEG	

'was not facing' [simplified translation]

apɨ	-gɨ	-i	-ch	-i	-nda	(Irrealis stem)
orient_toward[PFV]	-STAT	-IRR	-NMLZ	-IRR	-NEG	

'is not facing' [simplified translation]

Imperfective roots (i.e. covertly-specified as discussed in 4.4) pattern in the exact same way:

ɨvk	-apa	-y	-i	-nda	(Realis stem)
sit.PC[IPFV]	-R	-NMLZ	-IRR	-NEG	

'was/were not sitting' [simplified translation]

ɨvk	-i	-ch	-i	-nda	(Irrealis stem)
sit.PC[IPFV]	-IRR	-NMLZ	-IRR	-NEG	

'is/are not sitting' [simplified translation]

Harmony Rule 2 thus has the grammatical effect of forming a single 'big tent' class of imperfectives out of multiple — and otherwise morphologically unrelated — constructions (covertly-specified imperfective roots, phasal imperfective *-M*, and stative imperfective *-gɨ*).

---

[84] The relevant suffixes for Harmony Rules 2 and 3 (*-y*, *-ch*, and *-n*) function as *bona fide* clause nominalizers most clearly in subordinating constructions like relative clauses and complements of the copular verb (for some further discussion see 6.5 and 7.3, respectively). But as the examples in this section show, these same 'nominalized' forms also occur in a few clause types that we might not normally think of as nominalized per se. To some extent, this distribution is the result of historical processes, e.g. where what were once free nominalized verb forms like *apɨpmapayi* and *apɨpmichi* subordinated to the (old) realis form *nda* of the verb *nd-* 'cease' (*apɨpmapayi nda 'ceased facing toward' and *apɨpmichi nda 'cease/s facing toward'), became grammaticalized constructions. Interrogatives represent another clause type where the nominalizers do not really have any clear nominalizing function synchronically but are maintained in the synchronic forms as the result of how they arose diachronically.

Harmony Rule 3 is an elaboration on the second in that one of the alternating forms is the same *-ch*. However, while *-y/-ch* involves harmony with the realis versus irrealis inflection of the stem, here *-ch* alternates with *-n* to harmonize with (respectively) the imperfectivity versus perfectivity of the stem.[85]

<div align="center">

Harmony Rule 3[86]

*Nominalizer forms -ch/-n harmonize with imperfective vs. perfective stems
(irrealis-inflected stems only)*

</div>

ɨvk		-i	**-ch**	-i	(Imperfective stem)
sit.PC[IPFV]	-IRR	**-NMLZ**	-Q.IRR		

'is/are sitting (few people)?' [simplified translation]

apɨ	-gɨ	-i	**-ch**	-i	(Imperfective stem)
orient_toward[PFV]	-STAT	-IRR	**-NMLZ**	-Q.IRR	

'is not facing?' [simplified translation]

apɨ	-pm	-i	**-ch**	-i	(Imperfective stem)
orient_toward[PFV]	-IPFV	-IRR	**-NMLZ**	-Q.IRR	

'is not facing?' [simplified translation]

Here we can see that the same principle in Harmony Rule 2, where otherwise diverse constructions all count as imperfectives for the sake of harmony, applies. The twist in Harmony Rule 3 is that two otherwise unrelated perfective constructions both count as perfectives in the same way for the sake of harmony. The two constructions in question are

---

[85] There is one complication in the distribution of the nominalizer form *-n* that bears mentioning. Recall that the vast majority of irrealis allomorphs consist of or end in /i/. Verb forms whose lexically-conditioned realis allomorphs happen to end in /i/ also take *-n* (and not *-y*, which would be the expected nominalizer form for realis-inflected verbs according to harmony rule 2). So, the distribution of the nominalizer *-n* is mostly determined by morphological harmony but, for some realis verb forms, is phonologically determined. The verbs that are affected are primarily those lexemes that exhibit a verbal number contrast in their realis construction. For many such verbs, the realis paucactional form is *-yi*.

[86] To some extent, what I describe for Harmony Rule 3 is a simplification. Diverse clause types undergo alternations according to Harmony Rule 3, but there are also major differences across the various relevant clause types. The apex of complexity is reached in '*-e*' verb forms that are used in two clause types, to introduce either quoted speech or an oppositional constrastive clause. Here a six-way harmonic distinction is indicated: *-ye* (all realis-inflected verb forms), *-ne* (irrealis-inflected perfectives), *-che* (irrealis-inflected imperfectives), *-ñe* (irrealis-inflected translocatives), *-re* (imperatives), and *=pe* (lexical nouns and nominalized forms).

(covertly-specified) perfective roots and the use of the perfective suffix *-nd(a)* as part of the

standard negation construction.[87]

akam	-i	**-n**	-i	(Perfective stem)
speak[PFV]	-IRR	**-NMLZ**	-Q.IRR	
'will speak?'				

akam	-i	-nda	**-n**	-i	(Perfective stem)
speak[PFV]	-IRR	-PFV	**-NMLZ**	-Q.IRR	
'will not speak?'					

The grammatical effect of *-nd(a)* to create a new perfective stem can be seen in its

distribution across all lexemes, irrespective of any other aspectual derivations of the stem to

which it attaches. The stem *akam-pm-i* 'is/are speaking' is imperfective (*-pm*), but the

attachment of *-nda* derives the nominalized form of that stem (*akam-pm-i-ch-i*) as perfective.

This counts as perfective for Harmony Rule 3, which can be seen in the patterning of *-n* in

questions (as well as certain other clause types):

akam	-pm	-i	-ch	-i	-nda	**-n**	-i	(Perfective stem)
speak[PFV]	-IPFV	-IRR	-NMLZ	-IRR	-PFV	**-NMLZ**	-Q.IRR	
'is/are not speaking?'								

Similarly, *-nda* may also create a new perfective stem irrespective of the covert aspect of the

root. The root *ɨvk-* 'sit (PC)' is imperfective but the attachment of *-nda* to its nominalized form

(ɨvk-i-ch-i) results in a perfective derivation. Again, this form then counts as perfective

where Harmony Rule 3 is concerned, and *-n* attaches here too:

ɨvk	-i	-ch	-i	-nda	**-n**	-i	(Perfective stem)
sit.PC[IPFV]	-IRR	-NMLZ	-IRR	-PFV	**-NMLZ**	-Q.IRR	
'is/are not sitting?'							

The three morphological harmony constructions are summarized in Table 10.

---

[87] Again, the standard negation construction is rather complex in its morphology and form-function relationships; here I am providing a "slightly less simplified but still simplified" gloss out of a desire not to further complicate an already complex matter. See (6.3) and, for negative interrogatives, (6.4). For our purposes here, all that is relevant is the patterning of *-ch* versus *-n* for irrealis-inflected verb stems.

Table 10: MORPHOLOGICAL HARMONY IN THE ASPECTUAL BASE

Harmony type	Perfective-Imperfective				Realis-Irrealis	
Construction	1		3		2	
Harmony categories	PFV	IPFV	PFV	IPFV	R	IRR
Harmonizing suffix	LCA*	*-apa/-i*	*-n*	*-ch*	*-y*[88]	*-ch*
Function of harmonizing morphemes	basic realis/irrealis		some constructions: nominalizers others: residual, due to historical processes		some constructions: nominalizers others: residual, due to historical processes	
Clause types where harmony is distinguished	most aspectual base verb forms (diverse clause types)		irrealis-inflected stems (diverse clause types)		imperfective stems (diverse clause types)	

*'Lexically-conditioned allomorphy'

This brief description gives an initial impression of the system. Note that these constructions, far from being peripheral in the grammar, can be found throughout many if not most examples in this dissertation. The discussion of all three also suggests that some verb forms exhibit the maximal morphological complexity where harmony is concerned, i.e. where three morphemes that alternate in form according to harmony all co-occur in a single verb form. This possibility can be seen in the example below. The realis suffix *-apa* harmonizes with the imperfectivity of the (derived) base (*ŋgɨnɨm-*). The nominalizer *-y* harmonizes with the realis inflection of the imperfective stem (*ŋgɨnɨmapa*). Finally, the nominalizer *-n* harmonizes with the perfectivity of the irrealis stem as derived by *-nd(a)*:

(16) *nu pamuŋu   Aŋgrutamrɨ mɨŋgɨnɨmapayindani?*
    nu pa=nɨŋɨ   Aŋgrutamrɨ mɨ=ŋgɨnɨ-m-**apa-y**-i-nd-a-**n**-i
    2SG before=TRANS Aŋgrutamrɨ DIST=perceive.DIST[PFV]-IPFV-**R-NMLZ**-IRR-PFV-R-**NMLZ**-Q.IRR
    'Did you not use to see it (a type of fish) before in Aŋgrutamrɨ marsh? [rhetorical question]' (Paul Guku, afi011116iv_26:50)

---

[88] The distribution of *-y* is more complex than for *-n* and *-ch*. The degree to which *-y* is controlled by harmony is muddled to some extent, in particular in a range of verb forms where it can be seen to take on diverse functions in a way that is lexically- and construction-specific. Though I do not discuss this in detail, *-y* harmonizes for realis (regardless of the aspect of the base or stem) in some constructions, for perfectivity (regardless of the reality status of the stem) in other constructions, or in other constructions, for both. The dual perfective-realis loyalty of *-y* and its separate life as a harmonizing nominalizer result from historical developments which I do not discuss here.

As I have argued, the distributional properties of the harmonizing forms attest to the language-specific unity of what might otherwise be analysed as unrelated perfective and imperfective constructions. The nominalizer form *-n* patterns with irrealis-inflected verb forms built on either: (underived) perfective-specified root bases and; stems derived by the perfective suffix *-nd*. The nominalizer form *-ch* patterns with irrealis-inflected verb forms built on either: (underived) imperfective-specified root bases and; imperfective-derived *-M*, *-gɨ* (and also *-nɨ*) stems.

4.6   Summary of chapter 4

The fundamental aspects of Chini verb morphology as I have described them in this chapter can be summarized as follows. First, every inflected verb in the language is built on one of the three bases: aspectual, negative, or modal. Secondly, all verb roots in the language are covertly specified for perfective or imperfective aspect. There are various means for deriving roots of one aspect into the aspectual class of the other (the imperfective *-M* construction being the most productive and frequent of these). Lastly, certain suffixes — in particular the nominalizers *-y*, *-ch* and *-n* — do not code any meaning of their own but merely alternate according to principles of morphological harmony. What determines harmony is the perfectivity versus imperfectivity of the verb form to which the relevant harmonizing morpheme attaches (for two of the three harmony constructions) or the realis versus irrealis inflection of the stem (for one of the three harmony constructions). In Chapter 5, we will take a much closer look at realis and irrealis, the two inflectional categories with the highest functional load in the language.

Chapter 5
The Inflectional Realis/Irrealis Distinction in Chini

In this chapter I discuss the workings of two inflectional realis/irrealis categories as they are used in Chini discourse.

The main difference in meaning between the two sets of realis/irrealis constructions is polarity. The set I call 'basic realis/irrealis' has (albeit with a few exceptions for basic irrealis) positive polarity and is overwhelmingly more frequent than the negative realis/irrealis set. As previously discussed, basic realis/irrealis is marked in the aspectual base and negative realis/irrealis in the negative base. There is no overlap or formal relationship whatsoever between these two constructions. Their basic properties as well as token frequency in conversation are summarized in Table 11 below.

Table 11: THE TWO INFLECTIONAL REALIS/IRREALIS DISTINCTIONS

Polarity	Base attachment	Forms	Token count in 30 minutes of discourse[89]
positive ('basic')	aspectual base	lexically conditioned for PFV bases	realis: 263 tokens irrealis: 106 tokens[90]
		-apa/*-i* for IPFV bases	
negative	negative base	*-ma*/*-ra*	realis: 7 tokens irrealis: 11 tokens

The token frequency of these categories relative to that of other inflectional categories in the language attest to their high functional load. Taken together, inflectional realis and irrealis marking account for just over 82% (387 of 470 inflectional markers) of all inflectional

---

[89] The 30 minutes of data in which the tokens were counted were chosen randomly and include 15-minute chunks from two different recordings. One 15-minute chunk is from a recording of two women cooking a meal (afi051116ii, 9:00-24:00). The other is from a casual conversation with four main interactants (and various others filtering in and out) (afi141016iv, 14:00-29:00). The main interactional difference between the two is the presence of a number of children in the former recording, and as a result the imperative category was used much more (44 tokens compared to just 17 for the other recording).

[90] Of the irrealis tokens, 13 involve the standard negation construction in which the suffixal complex *-nda* attaches to the basic irrealis form of the verb (6.3).

marking in Chini discourse (at least based on the data sampled).[91] Compared against one

another, realis marking is used 69.7% relative to 30.2% for irrealis. So, situations marked as

being 'within experience/reality' are expressed at a ratio of just over 2:1 relative to situations

marked as being 'beyond experience/reality'. Irrealis is then, at least in quantitative terms, the

more functionally marked half of the distinction.

In the following sections, I describe the inflectional realis and irrealis constructions

and discuss their diverse semantic and/or pragmatic interpretations, in order to present a more

or less comprehensive picture of how they are used across different contexts in Chini

discourse. The variety of semantic interpretations of realis and especially irrealis categories

in Chini is not unlike that found in other languages, a matter that has been a major target of

criticism notably by Bybee (1998) and Cristofaro (2012). In this view, the category 'irrealis'

is seen as lacking any conceivable synchronic function since it appears too general. Another

way to see this issue is that, at least in languages like Chini where the two categories are so

frequently used and have such a high functional load, we might in fact expect the in-context

interpretations of 'within experience/reality' and 'beyond experience/reality' to have

considerable semantic-pragmatic variety. It is with that general view in mind that the rest of

the discussion in this chapter should be considered.

This chapter is organized as follows. First I discuss the formal characteristics of the

basic realis/irrealis distinction for perfective verb bases, which involves lexically-conditioned

---

[91] Out of a total count of 470 tokens of inflectional marking within those data, the following token counts for the following inflectional categories give an indication about how often these categories are used in conversational Chini discourse: 263 tokens of basic realis and 7 tokens of negative realis; 106 tokens of basic irrealis and 11 tokens of negative irrealis; 61 tokens of the imperative mood; 7 tokens of the delayed future mood; 6 tokens of the prohibitive mood; 5 tokens of the potential mood; 2 tokens of the immediate imperative mood; 1 token of the anterior future mood; and 1 token of the gnomic habitual aspect. Proportionally, then, realis marking accounts for about 57% of the total use of all inflectional categories in Chini conversation, irrealis marking for 25%, imperative marking for 13% and all other inflectional TAM categories for a mere 5%.

allormophy (5.1). Then I introduce the functions of the basic and negative realis/irrealis distinctions and provide working Chini-specific definitions to that effect (5.2). The bulk of the discussion is found in (5.3), where I discuss the workings of inflectional realis and irrealis constructions across temporal frames and lastly in directive speech acts. I then provide a brief discussion of TAM meanings encoded by other TAM categories in the language, something which helps explain why realis and irrealis categories do not express certain TAM meanings (5.4). The discussion in this chapter is then summarized in (5.5).

5.1   Basic realis/irrealis and lexically-conditioned allomorphy for perfective bases

The lexically-conditioned allomorphy of the basic realis/irrealis marking for perfective bases includes a great many allomorphs, many of which are unique to individual lexical verbs. The formation possibilities for basic realis include bare ('zero-marked') roots, suffixation, or weak root suppletion. The formation possibilities for basic irrealis include bare ('zero-marked') roots, suffixation, strong root suppletion, weak root suppletion, and root reduplication. In addition to this for basic irrealis is a type of double exponence involving the combination of 'half' root suppletion with suffixation (e.g., realis *chi-yi* and irrealis *cpmichi-yi* 'get up', where '*cpmi*' has no homologue elsewhere in the language).[92] Table 12 gives an impression of the formal complexity that is involved as well as the (impressionistic at this time) productivity for each pattern.

---

[92] Because of this rather staggering formal complexity, in particular the formation based on substance in particular roots (zero marking, suppletion, reduplication), I do not provide a list of the isolated realis and irrealis forms themselves.

Table 12: LEXICALLY-CONDITIONED ALLOMORPHY FOR BASIC REALIS/IRREALIS (PFV BASES)[93]

English gloss	Basic realis form	Basic irrealis form	Productivity of allomorphy
'eat'	*ama*	*ami*	highest
'catch fish'	*arga*	*aryi*	very high
'stand (something) up'	*nduwa*	*ndui*	low
'speak'	*akamkɨ*	*akami*	very high
'whip up fire'	*ivkɨ*	*ivɨni*	low
'make, cause'	*kɨyimkɨ*	*kɨyimɨyi*	very high
'go out (fire)'	*ŋguyi*	*mhuŋgurgi*	this lexeme only
'fold ends together'	*aku*	*akurgi*	medium
'whistle'	*vyã*	*vyañi*	low
'buy'	*riŋa*	*riñi*	low
'light, kindle'	*nkɨ*	*ndiñi*	this lexeme only
'cover up'	*achuwa*	*achu*	low
'sing'	*akuwa*	*achu*	
'cease, give up, dislike'	*ndi*	*ndindi*	medium
'head upriver'	*agɨyi* (PC) *agɨga* (PL)	*ayi*	very high
'arrive, emerge, originate'	*chagɨyi* (PC) *chagarka* (PL)	*chayi*	this lexeme only
'get up, rise'	*chiyi* (PC) *cpmichiga* (PL)	*cpmichiyi*	this lexeme only
'cut, break (transitive)'	*ɨrkɨ* (PC) *mbrua* (PL)	*mbrui*	this lexeme only
'give'	*añi* (PC) *añiŋa* (PL)	*añiñi*	low
'put inside, load up'	*agwu* (PC) *agwuwa* (PL)	*ayu*	low
'get, retrieve'	*ñi* (PC) *ñiga* (PL)	*ñi*	low

Realis forms for a substantial subset of lexical verbs distinguish 'paucactional' (relatively few repetitions) and 'pluractional' (relatively many repetitions) verbal number. These forms are also lexically-conditioned, as seen in Table 13.

---

[93] Some lexically-conditioned allomorphs are also subject to phonologically-conditioned allomorphy. For instance, -*wa* is a phonologically conditioned allomorph of the (lexically conditioned allomorph) -*ga* that occurs in the environment: /u/_, where -*ga* occurs in all other phonological environments. In other cases, historical changes obscure the picture somewhat and result in similar-but-different homologues (i.e., having their origin in a common historical form). As just one example, the segmental deletion of (historical) realis -*ŋa* in the environment /ɐ/_ is maintained suprasegmentally, i.e. in the nasalization of the /ɐ/.

Table 13: LEXICALLY-CONDITIONED ALLOMORPHY FOR VERBAL NUMBER[94]
(REALIS FORMS)*

Marking strategy/ies	Verbs with mainly monovalent uses			Verbs with mainly multivalent uses		
	English	Paucactional	Pluractional	English	Paucactional	Pluractional
portmanteau suffixes: realis; verbal number	'surface'	*ñjiyu*	*ñjiyu-wa*	'seize'	*yu*	*yu-wa*
	'go/come'	*wu-yi*	*wu-wa*	'make hole in'	*and-kɨ*	*andɨ-ga*
	'head downriver'	*ri-yi*	*ri-ga*	'get, retrieve'	*ñi*	*ñi-ga*
	'descend'	*av-kɨ*	*avi-ga*	'put inside, load'	*agwu*	*agwu-wa*
	'head upriver'	*agi-yi*	*agi-ga*	'give'	*añi*	*añi-ŋa*
portmanteau suffixes: realis; verbal number; translocative	'die'	*anu-avɨ*	*anu-a*	'grab after; throw out'	*pu-avɨ*	*pu-nimarkɨ*
	'come loose'	*ti-avɨ*	*ti-ga*	'propel, throw, kick, drop'	*ki-avɨ*	*ki-nimarkɨ*
	'surround'	(unattested)	*ruku-nimar-kɨ*	'split apart'	*agi-avɨ*	*agi-nimar-kɨ*
	'recede'	*gi-avɨ*	(unattested)	'reveal, disclose'	*arvurku-a*	*arvurku-nimarkɨ*
	'cross'	*ku-avɨ-yi*	*ku-nimarkɨ*			
root suppletion or root reduplication	'be inside'	*agwu-gɨ-*	*agwugwu-gɨ-*			
	'hang'	*nku-*	*ndunhu-gɨ-*			
	'stand'	*mk-*	*ñje-gɨ-*			
	'sit (IPFV); reside'	*ivk-*	*iŋk-* (inanimate) *pirk-* (animate)			
root suppletion and/or portmanteau suffixes: realis; verbal number	'get up'	*chi-yi*	*cpmichi-ga*	'catch with hook'	*ki-yi*	*ŋi-ga*
	'run'	*ku*	*ari-ga*	'hang up'	*nku*	*nduŋu-wa*
	'break'	*ñjir-kɨ*	*ñjimbru-a*	'break'	*ir-kɨ*	*mbru-a*
	'sit'	*pi-*	*pirk-*	'carry (someone) on shoulders/ back'	*am-kɨ*	*ambɨ-ga*
	'fall (a tree)'	*ayivɨ*	*ayima*	'fell (a tree)'	*ayivɨ*	*ayima*
	'arrive; emerge'	*chagɨ-yi*	*chagarka*	'call, designate'	*yori*	*yirur-wa*
	'swim'	*nkugwu*	*ñu-wa*	'wake up'	*ayok-a*	*ayiniku-rgi*

*All forms are realis except those in the shaded box, which represent stems to which either realis or irrealis
suffixes may attach

---

[94] A couple small notes on some of these forms are in order. The form *-wa* is actually a phonologically-conditioned allomorph of *-ga* [ɰɑ] that occurs after high back vowels. The form *-avɨ* is the most frequent paucactional allomorph for translocative-derived verbs and the form *-nimar-* is the corresponding most frequent pluractional allomorph for translocatives. The realis suffix *-kɨ* attaches to all pluractional translocative forms (forming *-nimarkɨ*).

131

5.2 The two inflectional realis/irrealis constructions

There are two inflectional realis/irrealis constructions in Chini. A general working definition that applies to both is as follows:

THE INFLECTIONAL REALIS/IRREALIS DISTINCTION
The inflectional realis and irrealis constructions express whether the (positive or negative) realization status of a situation is within the realm of experience (realis) or beyond it (irrealis). In deictic terms, realis is the proximal category, indicating that a situation is 'within view' while irrealis is the distal category, indicating that a situation is 'out of view'.

What are involved are two morphologically unrelated constructions, one used mostly in clauses with positive polarity (the 'basic' distinction) and the other in clauses that take the negative suffix *-ti*. As an initial impression of the two realis constructions, in the example below Anton explains how the traditional exchange dances (Tok Pisin *singsing*) of Andamang village are no longer known by Awakŋi (i.e., of Andamang) people (that is, they only know foreign villages' exchange dances):

(17) *mɨmbanɨrkŋɨ mɨmɨchi. añi mɨyãrkŋɨ ŋgɨninda. ñi makumɨ,*
'Singsing bilongen i stap. Mipela i no klia longen. Ol i no singsing na,'
'Those exchange dances exist. We aren't familiar with them. Given that they (our parents' generation) did not perform them,'

Negative realis (*-matɨ*)	**Basic realis** (*-a*)	
...*añi* *mɨŋgɨnɨmatɨ.*	*añi* *mavɨndɨ* *mɨvra.*
[añi mɨ=**ŋgɨni-ma-ti**]	[añi mavɨndɨ mɨ=**vr-a**]
1PL DIST=**perceive.DIST-R-NEG**	1PL therefore DIST=**be_ignorant-R**

'mipela i no save. Olsem na mipela i no save.'
'we do not know them. We are thus ignorant of them.'
(Anton Manna, afi141016iv_34:26)

Just as the positive and negative inflectional realis categories span parallel contexts, so do the two irrealis categories. An initial impression of the two irrealis constructions can be seen in the example below. Here Frank remarks that young people in the community would not recognize the *awucpmɨ* fish (Tok Pisin *sodpis*), since it vanished from the Sogeram River before their time:

Negative irrealis (*-rati*)

(18) *kakŋiŋgɨ   twaviŋgayi   miyãrkŋɨ   ŋginirati.*
[kakŋiŋgɨ   twaviŋgayi   mɨ=yãrk-ŋɨ   **ŋgini-ra-ti**]
nowadays   child.PL   DIST=likeness-PC   **perceive.DIST-IRR-NEG**
'Pikinini bilong nau no inap save.'
'Today's children wouldn't know/recognize it.'

Basic irrealis (*-i*)
mɨyigɨ   ikɨ   ŋgini.
[mɨ=yigɨ   ikɨ   **ŋgin-i**]
DIST=name   only   **perceive.DIST-IRR**
'Bai ol i harim nem bilongen tasol.'
'They would know/recognize only its name.' (Frank Manna, afi220414iii_37:31)

Fundamental to the function of inflectional realis and irrealis in Chini is the principle of deixis as suggested in the working definition above. As far as I am aware, the idea that realis/irrealis and comparable TAM distinctions might be deictic in nature was first articulated by Botne (2003), in reference to the tense-aspect system of the Malawian variety of Chindali (Bantu). My own analysis of the inflectional realis/irrealis distinction in Chini draws on Botne's (2003) insight and his discussion of the "deictic dichotomy between events construed and presented as bracketed with the "now" of the speech event and those dissociated from this "now." " (2003:391). He writes:

> [S]peakers situate events in two distinct conceptual domains: a cognitively active, operative, extended present domain, labeled the P-domain; and a conceptually more inactive, distant, dissociative domain, the D-domain (Botne 2003:391).

Botne's insight captures the fundamentally deictic nature of TAM distinctions that operate across a wider and categorically distinct conceptual space than tense. In Chini (and perhaps in other languages as well), the deixis of realis/irrealis is anchored in the multi-dimensional space of experience, which is what I also mean by 'reality'.

Consider the spatial-perceptual metaphor of a field. Realis situations are within view (or other perceptual capacity) of an anchor point in one's own experience/reality — they occupy the 'proximal' space, so to speak. Irrealis situations are beyond view or other

perceptual capacity. As the half of the distinction that occupies the 'distal' space, irrealis is outside experience, but not without maintaining a conceptual relation to experience. This is comparable to other distal categories that are 'distal' in relation to whatever is proximal.

In the next section, I use different temporal contexts as frames to help isolate the principles that determine a speaker's represention of a situation as within the realm of experience (realis) or beyond it (irrealis).

5.3   Inflectional realis versus irrealis across temporal frames

It is (I think) not too controversial to state that for many linguists, the conceptual distinction that realis/irrealis systems code is murky at best. So it is perhaps not surprising that in most discussions and works of scholarship on the subject, the distinction is approached from the point of view of tense and the semantic basis of tense in temporal deixis. This is not surprising, since tense is one of the more semantically straightforward and typologically better understood of the TAM categories. Bruce (1984) offers a more nuanced perspective based on the workings of realis and irrealis constructions in Alamblak:

> In contrast to the realis state which indicates the actuality of a state or event, irrealis indicates
> that the state or event expressed by the verb either 1) was, is, or will not be an actuality, or 2)
> is or will not *with certainty* be an actuality (Bruce 1984:137).

Here I take an approach in a similar vein as Bruce, but go one step further. For Chini (and for any language with a comparable realis/irrealis distinction in its grammar) we must completely abandon the temptation to see realis or irrealis as somehow 'encoding' or 'expressing' any point along the linear dimension of temporal deixis. The data from the corpus, as exemplified in the following subsections, are clear in showing that there are hardly any temporal restrictions on realis or irrealis. That leaves us in a rather interesting position for linguistic analysis, since (what might seem to be) the least nebulous semantic criterion

134

has nothing to do with the meaning of realis or irrealis. What I propose here is a tentative analytical framework that allows us to use temporal contexts as an analytical tool, as a window into the nature of the distinction. Doing that allows us to isolate and control for a contextually straightforward variable. In other words, what I aim to do here is to take some of the clearest examples from the corpus and organize them according to comparable temporal contexts in order to understand at a deep level what 'within experience' (realis) and 'beyond experience' mean in a Chini-specific sense. This alone is also not enough, however, since the context of the original utterance is hugely important. As many of the examples I discuss show, it is often only when we understand the fine-grained semantic and pragmatic details of particular tokens of realis or irrealis constructions that we can understand the delicate (to us) but robust meaning this grammatical distinction hinges upon.

Analyzed in this way, the data suggest that the distinction between realis and irrealis hinges on the notion of realization, an aspectual-like concept relevant across the full spectrum of expressable situations, but ultimately irrespective of phasal and boundedness distinctions we are better acquainted with from linguistic theory and typology (see Comrie 1976; Sasse 1991). The realization status of any given situation refers to whether or not the minimal conditions specific to the event structure of the situation have been sufficiently met for it to be represented as having occurred (i.e., realis).[95] As we will see, for some situation

---

[95] The notion of 'realization' and its use in analyses of realis/irrealis systems have been heavily criticized notably by Cristofaro (2012), who suggests among other things that it is too general to have a synchronically useful function. She writes: "the notion of unrealized state of affairs is a theoretically significant one (rather than being just a way to describe some observed grammatical patterns), but only in the sense that it provides an adequate characterization of particular diachronic processes, not in the sense that it provides a characterization of the grammar of individual languages as presumably represented in a speaker's mind" (2012:144). It is not clear to me why the notion of realization could not be functionally significant. It is quite relatable in terms of our typological understanding of how TAM constructions and aspect in particular function. And in that respect it overlaps closely with familiar concepts like 'completion' and 'termination'. Perhaps it is therefore not surprising that in some descriptions, realis/irrealis systems are characterized in similar terms as aspect (Lichtenberk 1983 for Manam; Capell & Hinch 1970 for Maung).

types, realization status is a fairly straightforward affair. A situation that has not reached its minimal necessary terminal point will thus be reliably represented as irrealis (e.g., a group of people known to be on their way to a destination but who have not yet arrived). A situation that has reached its minimal necessary terminal point regardless of whether it is still underway will be reliably represented as realis (e.g., when one is in the midst of chewing betel nut, regardless of how much longer one might go on chewing it for). Concrete examples of this principle are discussed in the subsections below.

The data also suggest that the representation of a situation as realis or irrealis does not depend just on the 'real-world' realization status of that situation — there is a subtle epistemic component in the meaning realis and irrealis express, as revealed by data from naturally-occurring discourse and especially from conversation.[96] A situation can be 'realis' or 'irrealis' according to the speaker's knowledge or presupposability about it.[97] The explanatory power of this analysis is that accounts for all the data, while leaving room for the rich array of semantic and pragmatic nuance as well as the interaction with other constructions that characterize how Chini people use inflectional realis and irrealis. It is with that in mind that 'experience' (or 'reality') is to be interpreted as the deictic center for the distinction.[98] Realis

---

[96] Though I do not belabor the point about data types here, it is worth making the point about the role that the content of the empirical basis plays in analyses of realis/irrealis distinctions. It is to my mind not surprising that realis/irrealis distinctions are often analyzed so strongly in terms of temporal deixis in descriptions of languages for which primarily (or only) narrative texts are used. At least based on what I know from the Chini corpus, narrative texts have a strong bias toward past temporal contexts. This means that if an analysis draws solely or mostly on narrative data (and/or translational elicitation), 'realis' tends to appear as if it were a more typologically familiar tense-aspect category like past or past perfective. Irrealis in narrative and/or elicited data appears to be limited almost exclusively to past habitual, future, and hypothetical contexts. But, in the conversational data, the temporal and other contexts for realis and irrealis are revealed to be vastly more diverse than narrative or elicitation would lead us to believe.

[97] N.B. This epistemic principle (presupposability) sometimes extends to, but does not entail, the relevance of other epistemic concepts like 'certainty' or 'speaker commitment', though of course that also depends on what is meant by such concepts. Based on what I understand from the data, presupposability extends to certainty in strong assertions but rarely if at all otherwise.

[98] To be clear, my use of 'experience' here may not overlap entirely with the English meaning and associations of the word, but it is as close as our terms come to what I understand about the nature of the Chini distinction.

encompasses the broad range of situations that are well within our experience, those that we can reasonable know or presuppose as having been/being/going to be within our experience, and also those we are willing to go out on a limb and express certainty about being within our experience (i.e., in the near or distant future).

In the following subsections, I compare the uses of realis and irrealis in terms of the following more or less temporal frames: situations underway at time of speech; unitary situations initiated in past/non-future time; extended (habitual and/or iterative) situations in past time; temporally unbounded (habitual and/or iterative) situations; future situations and directives. These frames are intended only as analytical tools to help arrive at a deeper understanding of the function of the realis/irrealis distinction and also to give an impression of how people use these constructions across a broad range of contexts. Finally and also with respect to the issue of context, I include brief descriptions of the original contexts for most examples discussed in the sections below (as I do throughout this dissertation). The inclusion of context is not 'extra information' but is part of a deliberate methodological and theoretical position which holds that context is fundamental to understanding the meaning of linguistic categories — especially ones as 'murky' as realis and irrealis. As stated elsewhere in this dissertation, I do not rely on any decontextualized examples extracted via translational elicitation through Tok Pisin.

5.3.1   Realis versus irrealis expression of situations underway at time of speech

Whether a situation underway at the time of speech will be expressed as realis or irrealis can be seen robustly in terms of its realized or unrealized status. What this means in Chini depends on the nature of the terminal point at which the situation can be said to have occurred. Here I rely on Comrie's (1976) approach to aspect and in particular on the concept

of 'processes' as situations viewed internally, ones that "require a continual input of energy if they are not to come to an end" (Comrie 1976:13). Note, however, that though these and other aspectual concepts exhibit a great degree of overlap with what realis and irrealis are used to do, I intend these concepts only as tools to understand the functional nature of the distinction which ultimately differs from aspect, at least in my current understanding.

The phasal structure of processes like 'chew', 'beat', and 'rain' are characterized by rapid, identical iterations. A very minimal amount of energy must be exerted before the situation can be said to be realized. Situations like chewing, beating someone/something, and raining can be considered realized even when they have only just begun or are in the midst of occurring. The example below is a question someone called out to me one day as I was walking around the village with my mouth visibly at work chewing some betel nut:

Realis: realized process (in medias res)[99]

(19)　*nu*　　*ñjiyimkɨyi?*
　　　nu　　**ñji-yim-ki**-y-i
　　　2SG　　**MID-chew_betel_nut-R**-NMLZ-Q.IRR
　　　'Are you chewing betel nut?' (Unrecorded utterance, fieldnotes)

Note that the realis marking here is not related to the interrogative status of the clause. The standard response to this question, which is a very normal one in everyday life in a Chini village, is also marked as realis but without the interrogative morphology (i.e. *ku ñjiyimkɨ* 'I am chewing betel nut (REALIS)'). The interrogative status of the clause never affects the use of basic realis or irrealis. (As I discuss later on, the status of the clause as a yes-no question is indicated by the irrealis *-i* final marking, but that need not concern us quite yet).

An important point that examples like (19) reveal about the notion 'realization' is that it should not be confused with the (aspectual) notion 'completion'. The two do not overlap

---

[99] Note that I have added my own descriptors above each example in order to approximate the fine-grained details of the semantic or pragmatic meaning(s). Many of these could easily be stated in different ways. However, they are intended primarily as analytical scaffolding for the examples.

entirely. Once a process is underway, it need not be anywhere near fully completed before it may be considered realized and marked as such as realis. This can also be seen in the example below. As several of us were sitting at Emma's house one evening, a child across the way was misbehaving quite badly, to the disapproval of everyone in earshot. Finally one of the parents proceeded to smack him. Emma shouted out immediately in support:

Realis: realized process (inceptive)
(20) *ñjiñjakɨ*   *nuŋguma!*[100]
[ñjiñj-a=kɨ]   [nɨ=**ŋgum-a**]
be_good-R=CNT.R   3SG=**beat-R**
'Gutpela tru yu paitim em!'
'It's a good thing that you're beating him!' (Unrecorded utterance, fieldnotes)

Similarly, Anton had suggested I shout out (21) to warn some people just as the rain began to pour in full force:

Realis: realized process (inceptive)
(21) *ñima*   *avɨnɨ*   *kɨriyi.*
ñi=ma   av-ɨnɨ   kɨ=**ri-yi**
PL=VOC   rain-PC   PROX=**come_down-R.PC**
'Hey you lot, it's raining now!' (Offered example, fieldnotes)

In contrast, what irrealis marking does under otherwise very similar circumstances is to indicate that some critical terminal point has not been reached. Dorothy Paul uttered the clause below the moment we could hear the sound of the outboard motor heading downriver to where we were sitting in Akapmɨŋgɨ. Blasius and some of the other boys were returning from their trip to Madang:

---

[100] There is one interpretative problem for this sentence that bears mentioning. The various uses of the verb *ŋgum-* translate as 'beat' *or* 'strike'. In the use of this verb in this sentence in this context, the child had just begun to be beaten and so Emma could have intended the punctual interpretation ('It's a good thing you struck him!') Either way, realis marking would be expected here, however.

Irrealis: unrealized process (in medias res)
(22) *ñi   kɨri.*[101]
    ñi   kɨ=**ri**
    PL   PROX=**head_downriver.IRR**
    'They're on their way downriver.' (Unrecorded utterance, fieldnotes)

Irrealis marking in the next example was used to describe a hawk flying overhead:

    Irrealis: unrealized process (in medias res)
(23) *anminmi   ŋgu   añjurwakɨ   kɨri.*
    [anminmi   ŋgu   añjuru-a=kɨ]   [kɨ=**ri**]
    hawk   fish   pick_up-R=CNT.R   PROX=**head_downriver.IRR**
    'The hawk picked up a fish and is in flight here downriverwards.'
    (Emma Airɨmarɨ, afi011116iv_19:34)

Irrealis marking can be used by speakers to construe situations as bounded, where a given process is expressed as not having reached some perceived endpoint. This notion of boundedness draws directly from Sasse's (1991) theory of aspect, in which he describes situations as having *in principle* (his emphasis) a beginning, a middle course, and an endpoint (1991:3). The use of irrealis to represent a situation in these terms is seen in the example below. Several of us had walked from the village to Rumtwamrɨ pond to record a conversation, but soon the rain began to drench us all. We knew that we would have to endure the process of the rain drenching us as we made our way back to the village:

    Irrealis: unrealized process (in medias res)
(24) *mɨkɨñjaurwi.*
    mɨ=kɨ=ñji=**auru-i**
    it=PROX=PL.DAT=**wash-IRR**
    'Em wasim mipela nau.'
    'It (the rain) is washing/bathing us now.' (Emma Airɨmarɨ, afi011116iv_31:30)

The type of situation exemplified in (24) resembles Sasse's (1991) 'action situations' ('Aktions-Sachverhalte') defined as "dynamic situations with potential left and right

---

[101] As these examples show, both realis atelic processes and irrealis telic ones are often additionally marked by the proximal proclitic *kɨ=*, which can have a spatial ('here') or temporal ('now', 'present time') interpretation. The fact that it patterns with both realis and irrealis processes, however, suggests that neither realis nor irrealis is dependent on that clitic for their meaning; it is rather that the clitic is adding temporal or spatial nuance.

boundaries" ("dynamische Sachverhalte mit potentieller linker und rechter Grenze") (Sasse 1991:51). The use of irrealis here presents the process of becoming drenched in terms of its as-of-then unattained right boundary. A comparable but otherwise very different example is seen in the example below. Emma and several others shouted *añi aŋgi!* 'we're (in the middle of) sleeping!' out of their houses as the cacophony caused by some of the village boys in the middle of the night was waking us all up. Here, the process of sleeping was 'unrealized' in the sense that that process was interrupted prior to its expected/desired/full realization:

> Irrealis: unrealized process (process interrupted prior to full realization)

(25) *añi   aŋgi!*
    añi   **aŋg-i**
    1PL   **sleep-IRR**
    'We're (in the middle of) sleeping!' (Emma Airɨmarɨ, among others)
    (Unrecorded utterances, fieldnotes)

Some tokens I might describe in terms of 'processes' could alternatively be seen as states, for example the process or state of sleeping. The irrealis expression of various such stative-like situations indicates that the situation is still underway at the time of speech. The language-specific sense of what counts as 'unrealized' extends to states, for example 'being hot' and 'waiting' in the example sbelow, which are still underway at the time of speech. Here our own aspectual notion of 'incomplete' happens to overlap with the Chini notion of 'unrealized':

> Irrealis: unrealized (incomplete) state

(26) *kuñarkɨ   rui.*
    ku=ñarkɨ   **ru-i**
    1SG.POSS=skin   **be_hot-IRR**
    'I'm hot.' (lit. My skin is hot.) (common expression)

> Irrealis: unrealized (incomplete) state

(27) *twavɨŋgayi   vayavi.*
    twavɨŋgayi   **vi-ayi-av-i**
    child.PL   **BEN-wait-TLOC-IRR**
    '(I'm) waiting for the children.' (Emma Airɨmarɨ, afi141016iv_30:50)

Table 14 provides some of the fine-grained information about examples (19), (22) and (26), in order to show that regardless of what semantic material these examples have in common, it is the realization status as it pertains to reality that explains why realis versus irrealis is used.

Table 14: SITUATIONS UNDERWAY AT TIME OF SPEECH: REALIS VS. IRREALIS MARKING

	Inflectional R	Inflectional IRR	
Verb form	*ñjiyim-kɨ*	*ri*	*ru-i*
English gloss	chew_betel_nut-R	go_downriver.IRR	feel_hot-IRR
Situation type	ongoing process without terminal point	onoing process with terminal point unattained	ongoing state with terminal point unattained
Speech act	assertion		
Temporal context	present & ongoing at time of speech		
Boundedness	initiated but incomplete		
Realization status	realized	unrealized	
Relation to reality	within	beyond	

These uses of realis and irrealis at the time of speech are not simply a mirror into the structure of real-world events, but are more like a periscope through the speaker's perspective on those events. 'Realis' and 'irrealis' as categories in Chini do not somehow 'reflect' an objective reality, and we would not expect language-specific categories to operate in such a way. The use of either half of the distinction is always a matter of how the real world is refracted through the speaker's perception of things and their communicative purpose or representation. Paul said the example below to me just seconds after a rooster crowed. It crowed only once, and so we might expect the verb to be marked as realis. But roosters rarely crow just once. Paul's use of irrealis here is not a reflection of the single iteration of the crowing event but is arguably a creative construal of that event (based on the perceived general link between roosters crowing and the setting of the sun):

Irrealis: inception of situation represented as durative

(28) *garɨ kɨndavɨ.*
'The sun is going down.'

amborɨŋgra   katwañi.
amborɨŋgra   kɨ=**atwa-ñi**
rooster   PROX=**sing_out-IRR**
'Kakaruk i singaut nau.'
'The roosters are crowing now.' (Paul Guku, afi141016iv_18:36)

Another possible interpretation of Paul's use of irrealis here is that it proposes or suggests entrance into a potentially durative situation (i.e., where presumably other roosters will join in and then leave no doubt that the day indeed must be getting on). Whatever Paul's intentions were, we cannot know for sure. However, irrealis, here as elsewhere, indicates that a presupposed terminal point of realization is in some sense outside of present experience. Irrealis conveys the idea that some significant stretch of phases or duration of the state is expected to continue to be underway, without any possibility of knowing what that might involve.

One point I have tried to make in this section is that the potential for a given situation to be expressable as realis or irrealis depends on certain fine-grained details about that situation and also how the speaker means to represent it. With that in mind, it is crucial to consider cognitive and emotional events, since these differ so much from objective events in the external world of experience. We might not therefore expect realis and irrealis to pattern the same across such different types of events, and indeed that is what we find in Chini. In the example below, Emma referenced her then-present lack of knowledge as the two of us were working through kinship terms. I had asked her what her maternal grandmother's name was while constructing a family tree. She responded with the negative irrealis form of one of

143

the Chini verbs of perception and cognition, effectively conveying to me that that knowledge

is too far outside her experience, that she could not possibly know such information:

Irrealis: present cognitive state/possibility, beyond experience
(29) *ku*   *miŋginirati.*
     ku   mɨ=ŋgɨnɨ-ra-ti
     1SG.NOM   DIST=perceive.DIST-IRR-NEG
     'I don't/wouldn't know that.' (Unrecorded utterance, fieldnotes)

The Chini-specific meaning of 'realization', then, has an interesting relationship with the

deictic basis of realis meaning in lived experience/reality. Certain processes and states may

have some sort of toehold on reality in the sense that they are underway at the time of speech,

but because their realization lies outside the scope of present experience, they are represented

as irrealis. In contrast, there are processes that may have an unknown number of future

iterations — all technically outside experience. But so long as a minimal number of iterations

have already occurred for them to be considered realized, they are considered realis in Chini

and marked as such. Part of the point here is again that realis/irrealis distinctions cannot be

assumed to be mere straightforward expressions of what we think of as the external 'real

world'. This is because, as with many other modal categories and other aspects of language

use, realis and irrealis reflect the speaker's own construal of the world as they experience it.

The fine-grained details, which I have tried to highlight here, are furthermore language-

specific, though whether there is room for cross-linguistic comparability in such matters is

far from clear. In the next section, I discuss another temporal context where the notion of

realization is significant in determining whether realis or irrealis is used.

5.3.2   Realis versus irrealis expression of unitary situations begun in non-future time

Unitary, i.e., punctual or durative (but not habitual or iterative), situations initiated in past

time are generally marked as realis. These often involve punctual events in past time:

144

Realis: punctual event in past time (immediate past)
(30) *ka*   *ku*   *mpmɨ*   *nɨmɨnkɨ.*
ka   ku   mpmɨ   nɨ=mɨ=**nkɨ**
PROX.DEF   1SG.NOM   bamboo   INS=TOP=**light.R**
'This (the matchwood) I lit using the bamboo.' (Anton Manna, afi271016ii_12:17)

Realis: negative event in past time (recent past)
(31) *añi*   *..urkŋu*   *riŋɨ*   *twavɨ*   *avɨgɨmatia!*
añi   urkŋu   riŋɨ   twavɨ   **avɨ-gɨ-ma-tɨ-a**
1PL   flying_fox   wing   with   **descend-NEG-R-NEG=EXCL**
'Alas we didn't bring the umbrella (lit. wing of flying fox) down (with us)!'
(Emma Airɨmarɨ, afi011116iv_29:18)

Realis can also be used to refer to durative states in the past, unitary ones that continued for

some span of time:[102]

Realis: stative or durative situation in past time
(32) *ku*   *chakɨ*   *kanɨ*   *ɨvkapandaka*
[ku   ch-a=kɨ]   [kanɨ   **ɨvk-apa**=ndaka]
1SG.NOM   ascend-R=CNT.R   here   **sit-R**=SEQ.R

anɨ   *kanɨ*   *mɨñjinɨmapa.*
[anɨ   kanɨ   mɨ=**ñjini-m-apa**]
3SG   here   DIST=**fix-IPFV-R**
'When I came up and was sitting here he was fixing it (the video camera) here.'

mbemɨ, mbemɨ chinapa, ku, ku kanɨ aramɨ ŋga ku mayuwandakɨ kanɨ makɨga.
'As for a bed (i.e. flat surface to set up the camera), I got some pieces of dried palm
bark and placed them over here.' (Paul Guku, afi141016iv__15:55)

In the (fully productive but infrequent) marking of realis on a noun, adjective, or numerals

one, two, or three, the shade of meaning that is often conveyed is inchoative in nature. Or it

may refer to an ingressive situation that indicates entrance into a state (Comrie 1976:20). The

next example occurred in a conversation that touched on the Awakŋi (Andamang village)

---

[102] The aspect of the verb bases in question is worth mentioning here. Just as the perfectivity of the realis form
in (30) derives from the perfectivity of the verb 'to light (i.e., a fire)', the imperfective meaning here derives not
from the realis marking itself but from the imperfective root *ɨvk-* 'sit.PC (IPFV)' and, in the following clause, from
the imperfective-derived base *ñjinim-* 'fix (IPFV)'.

folktale about how a group of women who deceived their male kin and were then transformed into a school of ariid catfish:[103]

>   Realis: ingressive event completed in past time
> (33) *ñi*   *awama.*
>   ñi   **awami-a**
>   PL   **ariid_catfish-R**
>   'Ol kamap kondon.'
>   'They (the women) turned into ariid catfish.' (Frank Manna, afi220414iii_34:50)

There is at least one semantic extension of the unitary character of realis situations in past or non-future temporal contexts. This occurs when a numeral is inflected for realis. Chini has numerals 1 through 10, but only 1 through 3 may unproblematically be inflected for realis (but never irrealis). A numeral marked as realis indicates an event that has undergone that particular number of iterations in non-future temporal contexts. As I chewed betel nut for the second time, the following utterance was suggested to me as something I could say in Chini to describe that situation:

>   Realis: specified number of iterations in non-future time
> (34) *ku*   *ñjiyẽntmɨ*   *ŋuña.*
>   ku   ñji-yim-tmɨ   **ŋuñ-a**
>   1SG.NOM   MID-chew_betel_nut-NMLZ   **two-R**
>   'I have chewed betel nut twice.' (Contextually-elicited example, fieldnotes)

---

[103] N.B. As mentioned briefly in (2.2), the term 'Awakŋi' is the term the people of Andamang use in reference to themselves as a polity distinct from the people of Akrukay, who refer to themselves as the Yavinaŋri. In their own cultural logic as I understand it, the two groups constitute the larger whole referred to as the Chini people group, but they have degrees of distinct cultural heritage in particular where things like folktales are concerned. I have tried to use these terms sparingly so as not to cause confusion to the reader, but the reason I do so is that 'Andamang' and 'Akrukay' in fact result from colonialist misnomers. Chini people use these two terms in reference to the territory belonging to each polity, but never in reference to themselves as people. The misnomer was, as Chini people have explained to me, understandable. According to Chini oral history, the German missionaries who were the first non-native people to travel up the Sogeram River stopped at the Awakŋi hamlet of Andamŋgɨ, which they reformulated into 'Andamang' and applied it to all of Awakŋi territory (which in ancestral times was not named territory). It is my understanding that the Awakŋi and Yavinaŋri peoples were always separate, but like many people groups in New Guinea, they traditionally inhabited small hamlets and homesteads located throughout the bush. Similarly, when the Europeans landed in Yavinaŋri territory, they happened to first shore their boat in the hamlet Akrukaiŋgi, leading them to refer to the whole of the Yavinaŋri territory as 'Akrukay'. As far as I am aware, these misnomers are not seen as problematic per se by any members of Chini society, just technically and historically inaccurate.

A realis-inflected numeral may also indicate present facts that result from past temporal contexts, roughly akin to the meaning of present perfect tense-aspect (i.e., as expressable in other languages). The example below concerns the settlement history of a group of people whose ancestors came from Dibu village in Rao territory but who currently reside in a settlement in western Andamang (Kuvru, or Akwavrɨmŋgɨ):

Realis: present facts resulting from past events
(35) *ŋgɨgɨ ɨvku, mɨnigɨ andikɨ kɨyɨ Aŋgɨmŋgindɨ, Gavrandɨ na Akwavrɨmŋgɨ,*
'Of the old hamlets, another one of them whatsitcalled over there, Aŋgɨmŋgindɨ, Gavrandɨ and Akwavrɨmŋgɨ,'

ñjɨŋgɨgɨ	*ɨvku*	*ŋuñi*	*noya.*
ñji=ŋgɨgɨ	ɨvku	**ŋuñi**	**noy-a**
PL.POSS=village	old	**three-R**	

'they have had three former villages.' (Frank Manna, afi250814iv_8:00)

In the corpus, the main situation types where irrealis can refer to a past context is when the past situation involved a frustrated realization. This is where a situation was unrealized but represented as having been almost realized or, in a counter-expectation type of speech act as in (36), potentially realizable. As Anton and I arrived in Ros' part of the village, she lambasted us for failing to bring any bananas from her late mother's garden. (She was not truly angry, but was rather giving us grief about the situation in a joking manner.)

Irrealis: frustrated realization in the (recent) past
(36)	*oo*	*ŋgwambrɨ*	*mumbruikɨ*
	oo	[ŋgu-ambrɨ	mɨ=**mbru-i**=kɨ]
	INTER	2DU-lazy_bastard	DIST=**cut.PL-IRR**=CNT.R

mɨtwavɨ	*chia!*
[mɨ=twavɨ	**ch-i**=a]
DIST=with	**ascend-IRR**=EXCL

'Agh you two lazy bastards really [failed to] cut any and come up (i.e., to the village) with any!' (Ros Njveni, afi111016ii_ 45:05)

Uses of irrealis in past temporal contexts are rare, because the pragmatic contexts that give rise to them are rare. Similar uses can be seen in negative yes-no questions, where irrealis

functions to contrast an unachieved past realization with the preferred alternative situation (i.e., in which the realization would have been achieved).

Irrealis: negative yes-no question with frustrated, contrastive realization

(37) *ŋgiñinmɨ*   *paŋu*   *wuyinɨka*   *añonɨ anɨ,*
ŋgɨ=ñinmɨ   paŋu   wu-yi-n-ɨ=ka   añonɨ anɨ
3SG.POSS=fem.ancestor before go/come-R.PC-NMLZ-PC=PROX.DEF land   3SG

anɨ   *mamaŋɨratipi?*
anɨ   ma=mɨ=**aŋi-ra-ti**=p-i
3SG   FOC=ALL=**go/come-IRR-NEG**=COP-Q.IRR
'Could he not have gone to the territory to which his maternal ancestors had gone before?' (Paul Guku, afi250814iv_40:05)

The question Dorothy poses in the example below conveys a high degree of incredulity. She is somewhat annoyed that the canoes were not brought back upriver to Akapmɨŋgɨ as they should have been:

Irrealis: negative yes-no question with frustrated, contrastive realization

(38) *ñi*   *ñikɨgava*
[ñi   kɨ-ga=va]
PL   tell-R=PRE.R

ñi   *mɨni*   *nuvkunu* *mamɨgɨ*   *agɨratipi?*
[ñi   mɨ=ni   nuvkunu mɨ=amɨgɨ **agi-ra-ti**=p-i]
PL   DIST=some again   DIST=carry **go/come_upriver-IRR-NEG**=COP-Q.IRR
'Wai na yupela i no laik tokim ol na bai ol i kisim kanu i go antap?'
[Free translation: 'Had you all only told them but they did not bring any of the (canoes) back upriver!'] (Dorothy Paul, afi220414_35:41)

Examples such as these show that there is nothing inherently 'realis' about unitary situations in past time, because the function of the distinction is independent of temporal reference. Instead, the function hinges on the representation of situations as realized versus unrealized. In the following sections, I delve a bit deeper into the functional difference by highlighting how the epistemic status of the proposition (in terms of presupposability/knowability about the realization status) is significant in determining whether realis or irrealis is used.

148

5.3.3 Realis versus irrealis expression of extended situations in past time[104]

The use of irrealis in habitual and iterative situations has received particular criticism in the literature. After all, such uses run counter to our expectations about situations in past time being "part of reality".[105] However, at least for Chini, those expectations are representative of the "etic" viewpoint that Reesink (2008) and others caution against in linguistic analysis. As a prime example of this, in Chini the only absolute temporal constraint on the use of realis and irrealis runs quite counter to our tense-bias about realis being expected to correspond to past temporal contexts. That constraint is that extended situations in the distant (ancestral) past are representable only by irrealis. The example below is about how the ancestors would habitually fish:

> Irrealis: extended (habitual) situation in past ancestral time
(39) *ñi   atuŋgi   nɨmiñi.*
    ñi   atuŋgi   nɨ=mɨ=**ñi**
    PL   hook   INS=DIST=**get.IRR**
    'They (the ancestors) used to get them (fish) with a hook.'
    (Anton Manna, afi100714ii_3:17)

---

[104] Some scholars have claimed that in some languages where irrealis patterns with habitual contexts, it is the non-specificity of the extended occurrence(s) of the situation that lends itself to irrealis (Lazard 1975). In a not dissimilar vein, others have suggested that in some languages realis/irrealis in fact has its functional basis in temporal specificity versus non-specificity (irrealis), and not realized versus unrealized status (van Gijn & Gipper 2009; Cleary-Kemp 2014; Michael 2014). Because the data reveal the possibility for irrealis to refer to temporally specific situations and even (though more rarely) for realis to refer to temporally non-specific situations, it would appear this semantic constraint is not definitive for the Chini distinction.

[105] As Bybee et al. (1994) argue: "Roberts (1990:399) confronts the problem of Bargam (a Papuan language), which treats the past habitual as irrealis. Roberts suggests that the interpretation of the notion 'real world' differs across languages. We suggest that if this binary distinction differs so much across languages that a past aspect, which is usually considered one of the prototypical case of realis (Foley 1986:158f.), can be irrealis in some languages, this binary distinction is not cross-linguistically valid" (Bybee et al. 1994:238). In his article, de Haan (2012:121) also suggests that the marking of past habituals as irrealis is problematic. Among other statements to that effect, he claims that "events that occurred in the past are immutable and fixed; therefore, there should be little doubt about past events" (de Haan 2012:118). However, we can see that in Chini as in other described languages, there is a clear logic to the language-specific workings that defies the outside expectations that we sometimes bring to the data. The bias toward tense/temporal deixis in our own thinking should probably be examined and perhaps discarded altogether in discussions about realis/irrealis distinctions unless it can be justified according to actual data in a particular language. To do otherwise risks becoming a philosophical interaction with our own concepts rather than a linguistic interaction with the concepts encoded in (a) language.

And in the next example, irrealis is used to represent an iterative situation that occurred in an extended (though limited) period in ancestral time. This example is from the narrative about the origin of the Chini people, where Joseph explains how the bits of land in Andamang territory were doled out to different clans:

Irrealis: extended (iterative) situation in past ancestral time
(40) *aku   yãndmɨni   wuwayikaya*
     [aku   yãndmɨ-ni   wu-wa-yi=ka=ya]
     DM   clan-some   go/come-R.PL-NMLZ=PROX.DEF=TOP

     machiriti   mbumbrumɨkɨ
     [mɨ=achi-r-iti   mbu~mb.ru-m-ɨ=kɨ]
     DIST=little-ADJ-ATT.PL   break~NMLZ-IPFV-COH=CNT.R

     ñjvɨndindia.
     [ñjvɨ=**ndi~ndi**=a]
     PL.BEN=**leave~IRR**=EXCL
     'Some of these clans that came, (our clan) would break off very little bits of it (land) and leave it for them.' (Joseph Manna, afi200514i_12:16)

That extended situations in ancestral times are representable only as irrealis allows for a certain insight about the type of meaning it is used to express. One interpretation is that the key dimension here is epistemic rather than temporal. Extended situations in ancestral time make reference to a past context well beyond, i.e. before, one's own lived experience.

Further evidence for that claim can be seen in past habitual situations from earlier in the speaker's life. This sort of temporal context is interesting, because it lies between experientially inaccessible times prior to one's own existence, and the current realm of the here and now. Here we can see that the distinguishing factor depends on whether the speaker wishes to emphasize a complete demarcation of the event from current lived experience, that is, through the use of irrealis marking. In the example below, Veronika describes how in her youth Chini people used to have arranged marriages rather than marrying whomever they please. Veronika references the hypothetical components that used to be involved in arranged

150

marriages, such as those she experienced early in her youth but which no longer have any

reality (i.e., the tradition has ended completely):

Irrealis: past habitual beyond the realm of experience

(41) *aŋɨnɨ*   *ku*   *akakɨkaya*
     aŋ-ɨnɨ   ku   akɨ~akɨ=ka=ya
     man-PC   1SG.NOM   marry~NMLZ=PROX.DEF=TOP

     ku   *mañiñi.*
     ku   mɨ=**añi~ñi**
     1SG.NOM   DIST=**give~IRR**
     'The man for me to marry (in theory), I would give it (food) (to him).'

     ... añjamɨŋɨ   *mami.*
      añji=am-ɨŋɨ   mɨ=**am-i**
      1PL.POSS=mother-PC   DIST=**ingest-IRR**
     '...our mothers would eat it.'

     ñjamɨŋɨñi   *ñjiwunuŋuñi*   *yandmɨ*
     ñji=am-ɨŋɨ-ñi   ñji=wunuŋu-ñi   yandmɨ
     PL.POSS=mother-PC-all   PL.POSS=maternal_relative-all   clan

     ñi   *mami.*
     ñi   mɨ=**am-i**
     PL   DIST=**ingest-IRR**
     'Their mothers and their maternal relatives and fellow clan members they would eat
     it.' (Veronika Añjirovim, afi200514i_1:19)

The use of the irrealis construction for this temporal context is unusual, however. When the

extended past event from early in one's youth falls within the direct experience of the speaker

— and the speaker intends no particular contrast (between a no-longer true event and current

reality) — the realis construction is used. This can be seen in the example below from a story

Anton told me about a pig hunt he was involved in as a young boy:

Realis: past habitual within the realm of experience

(42) *ku*   *pavimɨŋɨ*   *agŋɨŋgɨgɨ*   *naratmapandaka...*
     ku   pa=avi=mɨŋɨ   agŋɨ-ŋgɨgɨ   ni=**ara-tm-apa**=ndaka
     1SG.NOM   before=NEW=TRANS   boy-village   INS=**walk_about-IPFV-R**=SEQ.R
     'Back when I was first newly wandering about (i.e. the world) as a young boy...'
     (Anton Manna, afi250612i_0:52)

The example below is from another autobiographical text, in which Anton describes how his father was habitually ill up until the time of his (father's) death:

Realis: past habitual within the realm of experience

(43) *anɨ   yindmɨŋgɨ   mɨgɨ   aratmapa.*
     anɨ   yi-ndmɨ=ŋgɨ   mɨ-gɨ   **ara-tm-apa**
     3SG   sick-NMLZ=COM   DIST-thus   **walk_about-IPFV-R**
     'He (Anton's father) would go around with illness.'
     (Anton Manna, afi040914i_2:55)

There are various ways in which we could describe the difference in function between realis and irrealis in extended situations in past temporal contexts. In this temporal context, what appears to best explain the uses of the Chini categories is the epistemic status of the proposition (in terms of being within direct experience and/or knowledge of the main participant). This explains most, if not all examples. The table below summarizes this and includes a few other types of relevant information about the contexts of use.

Table 15: EXTENDED SITUATIONS IN THE DISTANT PAST: REALIS VS. IRREALIS MARKING

	Inflectional R	Inflectional IRR
Verb form	*aratm-apa*	*am-i*
English gloss	walk_about-R	ingest-IRR
Speech act	assertion	
Temporal context	distant past (speaker's youth), habitual	
Realization status	realized	no specific realized occasion
Relation to reality	former reality	in contrast to current reality
Epistemic status	fully within direct experience	not fully within direct experience

The data seen thus far permit us to make some more precise definitions for each half of the distinction. The meaning of the realis half of the distinction in Chini can be described in greater detail according both to the results of my own analysis and the native Chini definition as described to me by Frank Manna:

INFLECTIONAL REALIS

Realis is used to represent a situation whose (positive or negative) realization status is perceived or presupposed as being within the realm of experience, that is, within the unitary course of events that make up the real world. This corresponds to the native term for realis as it is marked in this part of Chini grammar, *paŋgɨ* which means, roughly: 'of/characterized by anteriority or primariness (*pa*)'.

And, similarly, the meaning of the irrealis half of the distinction can be understood as follows:

<div align="center">INFLECTIONAL IRREALIS</div>

Irrealis is used to represent the (positive or negative) realization status of a situation as beyond the realm of experience and by extension beyond what can be presupposed. The realization resides purely within the imagined realm of alternative courses of events. This corresponds to the native Chini term for irrealis in this part of the grammar, *gŋaŋgi* which means, roughly: 'of/characterized by posteriority or contingency (*gŋi*)'.

In the next section, I discuss habitual and iterative situations that traverse present time without any set boundary in the past or future.

5.3.4   Realis versus irrealis expression of temporally unbounded situations

As with extended situations in the past, the irrealis expression of temporally unbounded situations can be understood in terms of the non-specificity of the individual occurrences that make up the entire event. As other scholars suggest for other languages, non-specificity of occurrence plays a central role (in those languages) in the semantic make-up of the irrealis domain (Chafe 1995; Cleary-Kemp 2014; Elliott 2000). Elliott (2000) points out that irrealis in some languages can "present the sequence of activities that make up [a] routine process, rather than reporting a specific event which occurred on one particular occasion" (Elliott 2000:79). For the Chini distinction, these insights come close to approximating what irrealis does for unbounded habitual situations. Dorothy asked the question in the example below to the other four people sitting with her within a broader discussion about why people in Chini society deflect others' requests so often:

Irrealis: temporally unbounded habitual-cyclical truism

(44) *añi   mɨyi   vɨndɨ   mɨ--,*
     añi   mɨ-yi   vɨ-ndɨ   mɨ
     1PL   DIST-what   BEN-think   DIST

     añi   ŋɨrkŋɨ   akɨkɨna?
     añi   ŋɨ=ɨrk-ŋɨ   **akɨ~kɨ**-n-a
     1PL   POSS.REFL=talk-PC   **spear~IRR**-NMLZ-Q.R
     'Bilong wanem mipela sakim tok?'
     'For what reason do we deflect/not attend to each other's talk (lit. spear our talk)?'[106]
     (Dorothy Paul, afi260814v_34:55)

We might be tempted to see the meaning of (44) in terms of how it describes a 'real' situation, and in this sense, the irrealis marking would seem counter-intuitive. But we can also understand it as being perfectly consistent with the language-specific logic of what irrealis means. Dorothy's use of irrealis marking here effectively takes the vast multiplicity of iterations of people in Chini society not heeding one another and recasts it as a temporally unbounded (or: atemporal) state of affairs. There is an implicit epistemic component in some temporally unbounded situations because, just like what we saw in the previous section with past habitual and iterative situations, the non-specific but copious iterations are beyond any individual person's direct experience. Moreover, being unbounded in time, the situation Dorothy describes arguably extends far back into inaccessible times in the past (i.e., beyond her or anyone else's experience) and into the future as well.

Consider the data in the next example about wild pigs rooting around in peoples' gardens, a constant problem that plagues rural Papua New Guineans. The situation described here involves a pig who had been a constant pest in its forages into Emma's sweet potato garden:

---

[106] Note that the Chini expression 'spear talk' is not negative despite the only available English translations, which are all negative ('disobey', 'not adhere to', etc.). The irrealis marking here should not be misinterpreted as having something to do with negation.

Irrealis: cyclical habitual-iterative situation (present temporal orientation)

(45) *maramɨ kanɨ aratmi.*
'It (the pig) has been wandering here at its (the garden's) edge.'

avarkɨ   mɨtɨtɨ   mɨchi.
[avar-kɨ   mɨ=tɨ=tɨ   mɨ=**ch-i**]
INCONS-PC   DIST=road=VIA   ALL=**ascend-IRR**

mavɨyi.   mɨri.
[mɨ=**avi-yi**]   [mɨ=**ri**]
DIST=**descend-IRR**   DIST=**go/come_downriver.IRR**
'It goes uphill, it goes downhill, (then) it goes downriver.'

mɨgɨ   ikɨ   maratmi.
mɨ-gɨ   ikɨ   mɨ=ara-tm-i
DIST-thus   just   DIST=wander-IPFV-IRR
'It just wanders around thus.' (Emma Airɨmarɨ, afi051116ii_21:12)

Here, the situation does not extend as boundlessly into past and future as other unbounded situations do. But the speaker's low epistemic access to any specific iteration (here, of the to-and-fro of the pig) is still comparable and helps explain what the irrealis marking is doing. After all, pigs do not root in peoples' gardens when there are people present; the specific workings of that situation are definitionally outside anyone's direct experience. What (44) and (45) have in common with irrealis extended situations in ancestral time is that most or all iterations lie outside the lived experience and knowledge of the speaker and addressee(s).

Chafe's (1995) insight that processes of morphologization can affect the semantic space that realis and/or irrealis occupy in a particular language helps explain why unbounded (or present) habitual situations are not as readily markable for realis meaning like their counterparts in non-future contexts. This is because that sort of meaning is already encompassed by the gnomic habitual *-mɨ* category, which is used to express facts of life and other constant truths. In the next example, Emma paraphrases what her brother Alex had told

us earlier that day about the men's food he had cooked, which cannot be cooked or eaten by women:

Gnomic habitual (no realis/irrealis marking)
(46) *"ku amayaŋgɨ. amariyi amɨrati,*
' "That which I cooked. Women may not eat (it),'

aŋri	*amayi*	*amamɨ."*
aŋ-ri	am-a-yi	**ama-mɨ**
man-PL	cook-R-NMLZ	**ingest-HAB**

'(Only) the men who cooked eat (it)." ' (Emma Aɨrɨmarɨ, afi051116ii_16:53)

The point here is that the grammaticalization of the gnomic habitual category crowds realis out of this corner of the semantic-conceptual domain where we might otherwise expect it. That is, the gnomic habitual falls outside the realis/irrealis opposition. So, this is one corner where the grammar leaks, but for a clear and demonstrable reason.

Realis may be used in the context of temporally unbounded habitual situations, a possibility that appears to be limited to negative clauses and furthermore limited to the specific pragmatic context when a proposition or assumption from the prior discourse is expressly countered. For example, (47) expresses the Chini cultural principle about the organization of groups of people entering a particular chunk of bush ground. The members of the clan that own the bush ground go first, with all non-members following behind:

Negative realis: experience defined in terms of absence of occurrences
(47) *ku*   *mbɨpapamati.*
ku   mbɨ=**pa~pa-ma-ti**
1SG.NOM   DIST.ALL=**go_first~NEG-R-NEG**
'Mi no go pas (i no klen bilong mi i go pas long dispela graun).'
'I (my clan) do(es) not go first into it (the territory).'
(Dorothy Paul, afi250814iv_19:46)

For negated extended situations (English 'never'), irrealis *-rati* and realis *-mati* is a resource that allows speakers to distinguish between never 'in theory' (irrealis) and never 'in practice' (realis). This nuance that results from the basic meanings of these categories (i.e. beyond

versus within experience/reality, respectively) can be seen upon comparison of the following two examples from the same stretch of discourse about the same ongoing situation where children take their parents' wooden tongs and run off with them (resulting in the inevitable loss of the tongs).

Negative irrealis: 'never' in theory (imagined absence of occurrences)
(48) *twaviŋgayi ñjaparɨ mɨgɨ miñinmɨkɨ mumbruinɨkaya,*
'The children always taking them (pairs of tongs) from us and breaking them,'

ñi   ñjavwarati.
[ñi   ñji=**avwa-rati**]
PL   PL.DAT=**tell_off-IRR-NEG**
'they (the mothers of the children) would not scold/tell them off (for that).'
(Dorothy Paul, afi051116ii_37:07)

Negative realis: 'never' in practice (full absence of occurrences within experience)
(49) *ñi avarkɨ amurwa ikɨ ñiŋgɨnɨmichiva akunu mavɨndɨ chindindmi. ñiŋgumiva ñi ñjirkŋɨ ŋgɨnini?*
'They (the mothers) just observe them do so and therefore the tongs keep vanishing. If they (the mothers) were to beat them (the children), would they obey (lit. hear their talk)?'

ñi   ŋgwãmpmɨ   prɨmati.
ñi   **ŋgum-pmɨ**   **pri-ma-ti**
PL   **beat-NMLZ**   **do-R-NEG**
'It's not as if they (the parents) beat them ever (the children).'
(Dorothy Paul, afi051116ii_37:13)

5.3.5   Realis versus irrealis expression of future situations

Some authors have suggested that futurity should by definition not pattern with realis marking (Bybee et al. 1994; de Haan 2012). As de Haan claims: "Actions occurring in the future are by definition unreal" (2012:120). And it has been shown that in some languages, irrealis does indeed cover most if not all future-oriented situations (Michael 2014; Roberts 1994). But this need not be the case.

As other scholars have pointed out, however, different languages exhibit different possibilities in how realis and irrealis are used in future contexts, and so our own concepts

about futurity do not always help us in the analysis of what realis and irrealis mean. In Trinitario (Arawak), Rose (2014:230, in Danielsen & Terhart 2017) points out that the irrealis category expresses expected future events but is restricted from occurrence for certain future situations. In a number of other languages (including Chini, as we will shortly see), both realis and irrealis are used in reference to future contexts (Chafe 1995; Danielsen & Terhart 2017; Elliott 2000; Klamer 2012; Mithun 1995). In his discussion of realis prefixes used for imperatives and futures in Caddo, Chafe (1995) explains that this correspondence may be due to a view of reality as:

> ...not a binary but a gradient dimension in which imperatives and futures express ideas that are judged to be relatively more in accord with reality than, say, yes-no questions or negations. Speakers may have a relatively stronger expectation that... predicted events will take place (Chafe 1995:358).

Similarly, Klamer (2012) points out that in Teiwa future events are generally expressed as irrealis but can be marked as realis instead "to express that the speaker presupposes or is convinced that [the future event] will happen" (2012:221). These insights apply almost perfectly to the use of realis/irrealis in future contexts in Chini. Irrealis is used for many future situations, but realis may be used to indicate that the future realization is as good as given, where presupposed or absolutely certain.

Irrealis is used generally to express future situations and does so regardless of how far into the future they are expected to occur. In the next example, Anton used the irrealis form of the verb 'light, kindle' while he was just on the verge of lighting a fire in the ancestral way. As it turned out, the rope he was using broke, and the fire took several more attempts to light.

Irrealis: immediate/prospective future
(50) *ku   kɨmɨndiñi.*
     ku   kɨ=mɨ=**ndiñi**
     1SG.NOM   PROX=DIST=**light.IRR**
     'I'm kindling/about to light it (the fire) now.'
     (Anton Manna, afi271016ii_1:08)

In the following example, the irrealis forms are used to express a distant future situation, one

bordering on the hypothetical. Dorothy is explaining that allowing foreigners to settle

Andamang land could result in strife at some point in the future:

Irrealis: distant or indeterminate future
(51) *nu   gŋɨkanɨ   ŋguñarkɨ   rui.*
     [nu   gŋɨ-kanɨ   ŋgu=ñarkɨ   **ru-i**]
     2SG   later-here   2SG.POSS=skin   **be_hot-IRR**

     nu   ñitwavɨ   ñjarwi.   ñi   ñjaki.
     [nu   ñi=twavɨ   **ñji-aru-i**]   [ñi   **ñji-aki**]
     2SG   PL=with   **MID-be_angry-IRR**   PL   **MID-spear.IRR**
     'In the future you'll get distressed (lit. 'your skin will be hot'). You'll get angry
     with them, you all will fight.' (Dorothy Paul, afi250814iv_45:06)

Irrealis marking is also used to express negative future situations. Notice that in the next

example, the epistemic principle of 'certainty' does not help us understand why irrealis is

used. What Paul is doing is using a type of local speech act that has the illocutionary force of

assuring the addressee against the possibility of inclement weather:

Negative irrealis for the negative future
(52) *maururati.*
     mɨ=**auru-ra-ti**
     DIST=**wash-IRR-NEG**
     'It won't rain.'

     ñjimɨŋɨ mɨtwavɨ ritmi, avɨnɨ.
     'The wind is going downriverwards with it, the rain.'
     (Paul Guku, afi011116iv_24:10)

For reasons unknown to me, negative future assertions appear to be expressable only via

irrealis. There are no exceptions to this particular distribution that I have encountered. My

159

interpretation of this (possibly absolute) constraint in Chini is that a future situation deemed as not coming to pass is always considered outside of experience.

There is one small quirk in the use of irrealis in negative future contexts which bears mentioning. In prosodic clause combinations, the basic irrealis construction can be used to express an oppositional situation between the normatively expected state of affairs and the prediction for what will come about instead. This can be seen in the following example:

Basic irrealis: unrealized future situation

(53) *ñi*   *bmuru*   *machu.*
ñi   bmuru   mɨ=**achu**
PL   nightfall   DIST=**perform_exchange_dance.IRR**

ñi   *gatmɨ*   *machu.*
ñi   gatmɨ   mɨ=**achu**
PL   high_noon   DIST=**perform_exchange_dance.IRR**
'I no nait bai ol i singsing, san bai ol i singsing.'
'They won't be performing the exchange dance at night (as is the usual custom),
they will perform it during the day.'
Or: 'Rather than performing the exchange dance at night (as is the usual custom),
they will perform it during the day.' (Dorothy Paul, afi160714iv_21:05)

Under the right pragmatic conditions, irrealis can also be used with interrogative illocutionary force to represent an uncertain eventuality, one seen as potentially far removed from realization. This is pragmatically comparable to what 'ever' does in yes-or-no questions in English. (Note, however, that such uses are infrequent, since interrogatives are normally formed within a different construction).

160

Irrealis: uncertain eventuality with interrogative force

(54) *na*   *añjɨgɨ*   *nu*   *muñu?*
na   añjɨgɨ   nu   mɨ=**ñu**
[TP:CONJ]   sago   2SG   DIST=**harvest.IRR**
<u>Emma:</u> 'And are you ever going to harvest that sago?'

añjɨgɨ ku muñu.
<u>Alfons:</u> 'The sago, I'll harvest it.'

nu mɨndiva garɨ maruru kavɨndɨ.
<u>Emma:</u> 'Well you left it out and the sun might dry it.' (afi250814iv_3:14)

Just like some of the languages referenced at the beginning of this section, realis in Chini may be used to represent a future situation with a certain realization. In the next example, Veronika uses the realis form of the verb *pɨ-* 'sit down, reside' to indicate her certainty that she will continue to be alive long into the future:[107]

Realis: high certainty of continuative state far into future time

(55) *kuyindmɨ*   *chini,*   *ku*   *anurati.*
ku=yi.ndmɨ   ch-i-nɨ-i   ku   anu-ra-ti
1SG.POSS=sickness   exist-IRR-IPFV-IRR   1SG.NOM   die-IRR-NEG
'I have no illness, I'm not going to die.'

ku   *mɨgɨ*   *pɨyi.*
ku   mɨ-gɨ   **pɨ-yi**
1SG.NOM   DIST-thus   **sit-R.PC**
'I will remain thus.' (Veronika Añjirovim, afi052014i_4:40)

Tokens of the use of realis to express high certainty about a situation in the distant future are rare, however. Although I cannot be sure, it could be that Veronika's personal quality of being rather given to hyperbole and other pragmatically amplified speech, might in fact be what explains this example.

Table 16 brings together just two of the above examples, namely (55) and (51), in order to tabulate what appears to differentiate realis from irrealis meaning for distant future contexts. The difference hinges on the strength of the presupposition about the future

---

[107] The negative irrealis marking in the previous clause is subject to the aforementioned constraint against the use of negative realis in future contexts regardless of the epistemic status of the proposition.

situation. If the speaker wishes to emphasize their certainty about the situation, they may use

realis, and otherwise irrealis is used.

Table 16: REALIS VERSUS IRREALIS MARKING OF DISTANT FUTURE SITUATIONS

	Inflectional R	Inflectional IRR
Verb form	pi-yi	ru-i
English gloss	sit-R.PC	feel_hot-IRR
Speech act	assertion	
Temporal context	distant future	
Presupposed?	yes, highly (certain)	no (contingent on other situation)

However, certain types of situations are much more safely presupposable than others. Indeed,

Veronika's use of realis in (55) is an outlier, and appears to be an instance of a creative use of

the realis category. Actions that involve a speaker's agentive manipulation of their own

faculties, for instance their posture or use of their perceptual capacities (listening, watching

as opposed to hearing or seeing) are a case in point. In the following examples I restrict the

discussion just to expressions that make use of the verb *pɨ-* 'sit down, reside'.[108]

The only context in which I have ever heard Chini people refer to a near future sitting

event for plural persons is in suggestions.[109] (That is, there is no pragmatic context that

---

[108] Note that in Chini discourse, talk about the perfective action of taking a seat is strikingly different from how this concept gets discussed in English (not to mention many other languages). The verb *pɨ-* 'sit' is simply almost never used with past temporal reference. People simply do not say things like 'I took a seat' but would rather express that concept in imperfective terms using the imperfective verb form (*ivk-* 'sit.PC (IPFV)' and *pirk-* 'sit.PL (IPFV)'). A further but interesting complication is that in fact this verb does not just mean 'sit', it also has the transitive meaning 'finish'. (That this is not simply a matter of homophonous roots is clear upon examination of the lexically-conditioned allomorphs as well as certain irregular forms for this particular verb, which are identical regardless of which meaning is intended). When *pɨ-* is used to mean 'finish', the realis form *piyi* is used much more readily to refer to a completed situation in the past.

[109] I have not discussed the marking of verbal number so as not to complicate the discussion, but *pi-yi* 'sit-R.PC (PFV)' is realis as well as paucactional. It is generally used in reference to one or two individuals. Unlike any other verb of which I am aware, there is no realis pluractional form for *pɨ-*. The reason for this is due to how Chini people talk about the act of sitting, similar to what is discussed in the previous footnote. In everyday speech I have almost never heard anyone express the action of one or multiple people having sat down, that is, as a perfective event with past temporal reference. Such uses do occur in particular in narrative texts, which virtually without exception are oriented to the distant past. The imperfective event of having been sitting is common, as reflected in the realis use of the grammatically imperfective verbs for sitting (*ivkapa* 'were sitting (few people)' and *pirkapa* 'were sitting (many people), but the perfective action that seems like a normal everyday thing to say to an English speaker is vanishingly rare in the discourse practices of Chini people regardless of the language of use (Chini or Tok Pisin). In the rare instance that a sequence of actions in the past includes reference to such an event, one of the imperfective roots (i.e., either paucactional or pluractional) is

162

would occasion something like 'we will all sit down', despite how normal it may seem in our

own perspective. Perhaps the irrealis form for this verb can be used in this way, but if so such

a usage is so rare that I have not encountered it.)

Irrealis: future-oriented suggestion
(56) *añi*   *agamkɨ*   *varɨ*   *pɨnɨchiŋi.*
    añi   agamkɨ   varɨ   **pɨ-nɨchiŋi**
    1PL   everyone   floor   **sit-IRR**
    'Let's all sit down.' (Anton Manna, offered example, fieldnotes)

But for singular persons, the default expression of the near future act of sitting is the realis

form of the realis form of the verb (*pɨyi*). The next example is the standard expression to

declare one's intention to sit down:

Realis: near future postural act
(57) *ku*   *kanɨ*   *pɨyi.*
    ku   kanɨ   **pɨ-yi**
    1SG.NOM   here   **sit-R.PC**
    'I'm taking/going to take a seat here.' (common expression)

This usage can be seen in the corpus as well. As Emma joined the rest of us and prepared to

take a seat, she said:

Realis: near future postural act
(58) *ku*   *kanɨ*   *avarkɨ*   *kanɨ*   *pɨyi.*
    ku   kanɨ   avar-kɨ   kanɨ   pɨ-yi
    1SG.NOM   here   INCONS-PC   here   sit.PC-R
    'Here, I'll sit just sit down here.' (Emma Airɨmarɨ, afi141016iv_27:54)

This generalization holds when the same verb combines with adverbs of perception in

certain periphrastic constructions, as seen in the next example. Anton said this to me one day

after I told him I was going to sit and do some linguistic analysis:

---

used and is derived by the perfective suffix -*ɨ*: *ɨvkɨ* 'sat, will sit (few people)' and *pirkɨ* 'sat, will sit (many people)'.

Realis: near future postural-perceptual act
(59) *ku*   *ŋgwakru*   *pɨyi.*
      ku   ŋgu=akru   **pɨ-yi**
      1SG.NOM   2SG.POSS=watch   **sit-R.PC**
      'Mi bai was long yu.'
      'I'll watch you' (lit. I'll sit at your watch.)
      (Anton Manna, unrecorded interaction, fieldnotes)

At this point in our discussion let us focus more closely for a moment on the possibility for the same realis (or irrealis) form of a verb to be used across diverse temporal contexts. In many approaches to realis/irrealis distinctions — especially the arguments against the categorial legitimacy of the distinction as found in Bybee (1998), Cristofaro (2012) and de Haan (2012) — there is a clear bias toward our own better-understood concept of tense and its semantic basis in the deixis of temporal reference. But even if we take the most skeptical position possible, that this TAM-like distinction in Chini is somehow not 'realis/irrealis' or should not be described in such a way for whatever reason, it is also undeniable that temporal reference has nothing to do with the meaning coded by these markers. This is abundantly clear in the corpus, because the same 'realis' or 'irrealis' forms even for the same lexical verbs occur in radically different temporal contexts. In the following example, the exact same realis paucactional form of the perfective verb 'sit' (i.e., *pɨyi*) used in reference to a near-future context in (59), here refers to the distant past:

Realis form of *pɨ-* 'sit' used in reference to a situation in the distant past
(60) *anɨ*   *wavɨ*   *yukɨ*   *maŋuñi*   *añiva*
      [anɨ   wavɨ   yu=kɨ]   [ma=ŋuñi   añi=va]
      3SG   sheath   fetch.R.PC=CNT.R   DIST.DEF=two   give.R.PC=PRE.R

      maŋuñi   *varɨ*   *pɨyi.*
      [ma=ŋuñi   varɨ   **pɨ-yi**]
      DIST.DEF=two ground   **sit-R.PC**
      'He fetched palm sheaths and gave (them) to those two and those two sat on the ground.' (Or: 'Once he fetched palm sheaths and gave (them) to those two, those two sat on the ground.') (Joseph Manna, afi200514i_6:24)

My point in this aside is to highlight the semantic detachment of temporal reference from the emic meaning of the realis and irrealis categories. Temporal reference is not irrelevant to their constructional use, it is just that it is part of etic material that changes from one context to the next. Moreover, such temporally diverse uses of the realis form of the same lexical verb are not outliers. Were the corpus extensive enough to do so (and with fully morphologically parsed and glossed annotations), it would be entirely possible to list tokens of the realis and irrealis forms for identical lexical verbs across the full range of temporal contexts (notwithstanding various lexical idiosyncrasies as well as certain grammatical constraints i.e., the impossibility for realis to refer to extended situations in the distant past). That ideal is beyond what even good documentation can produce, however.

Returning now to the use of realis for future-oriented situations, so far I have shown that realis may be used to express a future situation in the following contexts: (a) when the speaker expresses a high degree of certainty in a strong assertion and; (b) when the situation involves the speaker's own control over their physical or perceptual faculties in expressions about posture and active perception. There is a third context, however, which requires neither (a) nor (b). In interrogative sentences, realis may represent a future situation as presupposed (though not necessarily 'certain'), in the sense of what we could translate more or less as "Given future situation X, what then?" This can be seen in somewhat different ways in the following three examples. All of these involve clause chains, but for now we are interested only in the realis marking of the verbs in question.

Both (61) and (62) are from two different parts of the same conversation about Breri and Rao (i.e., neighboring people groups) settlements cropping up inside Andamang territory. In both examples, the speakers pose hypothetical questions they envision asking the

foreign invaders, whom they address only in absentia. The realis-inflected verb in the first clause in (61) expresses the realization of some Rao people having come to Andamang a couple generations ago. The realis-inflected verbs in the second and third clauses in the chain, however, are framed within the future context of Frank hypothetically reacting to the Rao settlers. The clauses also have the illocutionary force of a rebuke rather than an assertion of how he intends to react. He is figuratively throwing up his hands in frustration at the situation:

Realis: presupposed future outcome resulting from past situation
(61) *nu   mɨyigɨ   vuwuyikɨ*
[nu   mɨ=yigɨ   vɨ=wu-yi=kɨ]
2SG   DIST=name   BEN=go/come-R.PC=CNT.R
'Long wanem samting yu kam long em na'
'With what sort of legitimacy (lit. name) did you come (i.e., to my territory) and'

mɨgɨ   pɨyikɨ   makamkɨo.
[mɨ-gɨ   **pi-yi**=kɨ]   [mɨ=**akam-kɨ**=o]
DIST-thus   **sit-R.PC**=CNT.R   DIST=**say-R**=[TP:or]
'mi bai sindaun olsem wanem na bai mi tok?'
'what will (I) sit down and do (i.e., say) about it as a result?'[110]
(Frank Manna, afi250814iv_8:25)

In the next example, the sequence of events encapsulated in the clause chain is displaced from the immediate context: it is a rhetorical question. Paul imagines addressing a man from the Breri village Potebu he has heard intends to come settle Andamang territory (as clarified in a stretch of the preceding discourse). Paul's rhetorical question carries the implication that there is not enough land belonging to that particular clan in Andamang for him to settle legitimately in Andamang. The realis inflections of the two verbs in the clause chain have the effect of casting the sequence of events as being as good as given:

---

[110] These two clauses stretch the limits of what gets lost in translation, they can hardly be translated without losing most of what they mean in Chini even in a free translation. The realis paucactional verb form *pɨyi* 'sit' does not refer to the actual act of sitting but rather to occupying land and all the deep-seated cultural concerns that touches on. Frank is referring to his own rightful residence on his own lands and is essentially voicing his worry about how continued settlement of Andamang territory will affect him and his progeny.

Realis: highly given, evincible situation in hypothetical future context

(62) *na   nu   kanɨ   agɨyikɨ*
     [na   nu   kanɨ   **agi-yi**=kɨ]ₘₑ𝒹ᵢₐₗ
     [TP:CONJ]   2SG   here   **go/come_upriver-R.PC**=CNT.R

     mɨti   añonɨ   pɨyina?
     [mɨ-ti   añonɨ   **pɨ-yi**-n-a]ғɪɴᴀʟ
     DIST-which   land   **sit-R.PC**-NMLZ-Q.R
     'Na long hia yu kam antap bai yu sindaun long wanem graun?'
     'And so to here you will come upriver and then what land will you settle (lit. sit)?'

     kanɨ anamɨñi añonɨ chini.
     'Long hia, klen anamɨñi nogat graun.'
     'Here the *Anamɨñi* subclan does not have any land.'
     (Paul Guku, afi250814iv_22:54)

The realis marking in the last two examples is used to express the information as highly presupposed, in the context of rhetorical questions posed to imaginary addressees. This pragmatic construal of realis meaning shifts the deictic center of their shared world of experience to a future point of reference, a world that is conceptually imaginary but is good enough to 'count as' the real world. As with any other aspect of language use, realis can be used in creative ways.

The next example represents a pragmatic variation on the same concept, where realis indicates a future-oriented presupposition. When someone is impatient to the point of exacerbation for a situation to be realized, they may express what I refer to here as their 'frustrated presupposition' through their use of the basic realis construction somewhat similar to certain pragmatic uses of 'already' in questions in English. In the example below, the speaker is paraphrasing some of the Rao villagers, who had been pestering Andamang people about when the video-recorded *singsing* ('exchange dance') would be performed:

Realis: frustrated presupposition pertaining to future situation

(63) *"ñi   mekŋi   ŋaŋgi   kiyimkiva*
[ñi   mi-kŋi   ŋi=aŋgi   **kiyim-ki**=va]
PL   DIST.PL-way   POSS.REFL=LH.PC   **do_whatsit-R**=PRE.R

añi   mundwina?"
[añi   mi=**ndwi**-n-a]
1PL   DIST=**perceive.PROX.R**-NMLZ-Q.R
' "Wanem taim bai ol mekim bilong ol na bai mipela lukim?" '
' "When exactly are they going to do their thing (i.e., the exchange dance) already so that we can watch it already?!" ' (Peter, afi260814v_24:29)

These uses of the realis construction suggest that the notions of 'future' and 'hypothetical' turn out not to be fine-grained enough to address the function of the category. Contrary to what we might assume from our etic perspective, future situations including ones bordering on hypotheticality can rely on events that are highly presupposed (and represented as such by realis marking). This is particularly true in interrogatives as used in particular pragmatic contexts like those described above. In the next section, I discuss another future context in which realis or irrealis may be used, but in directive rather than assertive or interrogative speech acts.

First however, there is one additional complexity we ought to consider in understanding the use of irrealis in particular to represent future situations. In Chini there are three verbal categories that include futurity as part of their basic meaning: a delayed future ('do X in a bit'); an anterior future ('do X first before doing Y'); and an uncertain future used for the unpredictable future actions of inanimate agents (e.g., climate, geological events, etc.). So, in Chini, the conceptual-semantic space of futurity is a rather crowded space. We should not then be surprised that irrealis does not get used to express those specific shades of future meaning, since other categories are dedicated to doing so. Cross-linguistic studies of realis/irrealis distinctions (including refutations of the legitimacy of the distinction) must take

168

into serious consideration whether other verbal categories preclude the possibility for realis or irrealis to occur in the contexts those other categories are used for.

5.3.6 Realis versus irrealis expression of directives

Although Chini also has a dedicated imperative category, both realis and irrealis may be used in directive speech acts. These uses are very straightforward and are comparable to what other scholars have claimed about the cross-linguistic use of Realis versus Irrealis directives. About Realis directives, Mithun writes: "speakers might intentionally mark commands as Realis to imply strong certainty of their immediate actualization" (Mithun 1995:377). With respect to the workings of a number of unrelated languages, she goes on to write that "in a number of languages [there are] two options: a polite imperative classified as Irrealis, and a strong imperative classified as Realis" (385).

Such a distinction between realis and irrealis directives has been described for other languages of New Guinea besides Chini. Bruce (1984) describes the contrast specific to Alamblak as follows: "The present realis imperative or hortative is considered to be rude or harsh depending upon the relative social status of the illocutors and the social expectations of a given context in which it is used" (Bruce 1984:139). In Chini, however, realis directives are not rude (fortunately!). They always rely on a strong, and socially reasonable, presupposition that the addressee(s) will comply with the directive. In the corpus and also in my fieldwork experience thus far, realis directives in Chini are limited to verbs of motion. One way in which we can understand this is that directing one's addressee's trajectory, especially when there is good reason to assume they would be in agreement anyways, is a fairly reasonable and low-demand thing to ask of someone else. Anton said the example below to me as we were walking in the bush. He had good reason to believe I would comply, since after all I

was following him with the video camera. Such uses have a pragmatic effect comparable to English expressions like "come along!":

Realis: directive with presupposed compliance (verb of motion)
(64) *a mumuŋhu andɨ, tɨ gekanɨ chi.*
'Ah Aunt (Dorothy)'s hill garden, the path is over here downriver.'

aŋgɨ	*andikɨtɨ*	*muwuyi.*
aŋgɨ	andikɨ=tɨ	mɨ=**wu-yi**
1DU	F.DIST=VIA	ALL=**go/come-R.PC**

'The two of us will go via that way over there.'
Or: 'Let us two go via that way over there.' (Anton Manna, afi101116m_37:35)

Joseph Manna said the next example to several of us as were walking in the bush and it began to rain. He called out to us to follow him back downriver to his hamlet Aŋgwanmɨŋgɨ. He had every reason to believe we would comply with his directive, since the promise of sitting around a warm fire to dry off would be tempting to any normal person after all. (So, despite being a realis directive, he was not imposing on us per se):

Realis: directive with presupposed compliance (verb of motion)
(65) | *avɨnɨ* | *vɨndɨ,* | *rɨga.* |
|---|---|---|
| av-ɨnɨ | vɨ-ndɨ | **ri-ga** |
| rain-PC | BEN-think | **go/come_downriver-R.PL** |

'Considering the rain, (let's) all head downriver (to the house).'
(Unrecorded utterance, fieldnotes)

Another interpretation of these uses of realis is that they involve situations the speaker has a fairly strong degree of control over, or where their exertion of agency does not amount to any major imposition on the addressee. It is not asking very much of people to convince them to follow along in the direction they were already going, or to run home quickly to escape the rain. But convincing others to participate in an activity of greater complexity, village work for instance, is a very different matter. In such situations, where the speaker has a low expectation about the prompt realization of the event and/or has a low degree of control over

170

it, irrealis is used to express the directive. Irrealis directives, then, are best understood as suggestions or hortatives:

Irrealis: co-hortative directive (suggestion)
(66) *aŋginama   vimivari.*
     aŋginama   vi=mi=**var-i**
     sweet_potato   BEN=TOP=**garden/work-IRR**
     'Concerning the sweet potatoes, (let's) garden them.'
     (Emma Airimari, afi160714iv _43:16)

Dorothy said the next example as we were all in the bush making a recording, and the dark rain clouds had gathered overhead. Through her use of the irrealis-marked verb, she suggested we might stop what we were doing and head back upriver to the village:

Irrealis: co-hortative directive (suggestion)
(67) *añi   pa   ayi,   avini   aŋinimki   aurwi.*
     [añi   pa   **ayi**]   [av-ini   aŋini-mki   auru-i]
     1PL   first   **go/come_upriver.IRR** rain-PC   big-AUG.PC   wash-IRR
     'Let's go upriverwards (toward the village), the rain is going to pour heavily.'
     (Dorothy Paul, afi011116iv_41:20)

On a different occasion, Dorothy suggested to the addressees that they sneak to catch some fish before the Watabu people (who have fishing rights in the same marsh) arrive:

Irrealis: co-hortative directive (suggestion)
(68) *añi   pa   mini   ami.*
     añi   pa   mi-ni   **am-i**
     1PL   first   DIST-some   **ingest-IRR**
     'Mipela kaikai sampela pastaim.'
     'Let's eat some of them (the fish) first (before the Watabu folks arrive).'
     (Dorothy Paul, afi260814v_6:59)

Finally, the negative irrealis construction may also be used in directive speech acts, namely in a specific type of warning or prohibition where there is some external reason for not doing something. The reason is never internal and may not derive solely from any individual's desire. Negative irrealis warnings are used for example to urge people against breaking rules in the ancestral Chini code of law, and in other situations as well. In (69), the speaker urges

Andamang villagers not to allow themselves to be loathe to harvest sago sprout, the external

reason being that there is work yet to be done:

Negative irrealis: externally-motivated warning (suggestion)
(69) *añɨ*   *amɨgɨ*   *mbumbru*   **ndindirati.**
      añɨ   amɨgɨ   mbu~mb.ru   **ndi~ndi-ra-ti**
      1PL   sprout   cut~NMLZ   **be_loathe~NEG-IRR-NEG**

ma   *vavrɨ*   *mɨchi.*
ma   vavrɨ   mɨ-ch-i
DIST.DEF   work   PART-EXIST-IRR
'We should not be loathe to cut the (sago) sprout. It still has some work remaining.'
(Dorothy Paul, afi160714iv_10:25)

Similar to what I described about future assertive temporal contexts, in directives, the choice

of realis versus irrealis relates to whether compliance ('realization') is presupposed (realis) or

whether it is not presupposable (irrealis). Another way to understand the difference is in the

perlocutionary force of realis versus irrealis directive speech acts. Realis directives have

perlocutionary force, while irrealis directives are more like suggestions and lack

perlocutionary force. This corresponds in expected ways to the degree of agency asserted in

either type, where realis directives exert a high degree of agency over the action of the

addressee while irrealis directives exert a low degree of agency over the addressee.

Furthermore, the fact that realis directives are much less frequent than irrealis directives and

are only used for verbs of motion reflects a deep-seated cultural principle in Chini society,

since people have a high degree of individual autonomy. Getting others to comply with one's

own wishes is much more a matter of persuasion than exerting agency per se, and this is

reflected in the Chini-specific use of irrealis verb forms to make suggestions. In other words,

this language-specific use of a language-specific category has its basis in culturally specific

principles. For a related discussion that pertains in part to how irrealis suggestions pattern

with realis and irrealis linkage devices in clause chains, see (8.3.2).

172

5.4   Conceptual space occupied by other modal categories of the Chini verb

This section concerns those categories that stand outside the realis/irrealis system. Yet their presence in the language is important, since some if not all of them are used to express meanings that we could imagine falling under the functional jurisdiction of the irrealis category — and (some of) which do get expressed by irrealis categories in other languages. We have already seen this in the use of the gnomic habitual construction, which helps explain why realis marking is rarely used for habitual situations that otherwise seem to be 'within experience' (5.3.4).

In (5.3.6) I discussed how both inflectional realis and irrealis categories are used in directive speech acts. Such usages are, however, peripheral. For positive directives (i.e. as opposed to prohibitives and warnings), the go-to directive construction in Chini is the imperative. The imperative category can be used for all person-number combinations and for inanimates and involve straightforward 'vanilla' directives that are deontic in their interpretation. Because the imperative is the go-to construction for directives, it is not surprising that the use of the inflectional realis and irrealis constructions in forming directives is very infrequent in discourse in comparison and that both have specialized directive functions. As previously discussed, realis directives presuppose compliance on the part of the addressee(s) in events involving translational motion. Irrealis directives are careful suggestions, that do not presuppose compliance.

Demands that require immediate action on the part of the addressee(s) are formed by the immediate imperative construction. Morphologically, this construction consists of the attachment of the perfective suffix *-nd* to the modal base form of the verb. Here, however, there is something to be said about the influence of realis marking. Even though the verb is

173

not inflected for the realis category, the perfective suffix always takes its realis (*-nda*) form in

this construction.

The immediate imperative modal construction
(70) *aku ñi makamrɨnda.*
aku ñi mɨ=**akam-rɨ-nd-a**
DM PL DIST=**speak-MOD-PFV-R**
'So then you all talk now!' (Joseph Manna, afi040814iii_1:16)

Another modal category in Chini is the anterior future. This is used in a variety of speech acts

to indicate the occurrence of an action that will occur prior to another (often though not

always implicit and unexpressed) action in the near future.

The anterior future modal construction
(71) *ku bmakañi bmurupa achikanɨ pa arŋi mayi. ku arŋi magɨyindakɨ gari.*
<u>Dominika:</u> 'Tomorrow morning I'll head upriver to the garden first. I'll go upriver and
come back downriver.'

arŋi prɨ mɨndarɨ! ...
<u>Emma:</u> 'Forget about your garden!'

mbriñ̃ami ndundatɨ.
mbriñi-ami **ndu-ndatɨ**
Rao-women **perceive.PROX.MOD-ANT**
'See the Rao women first.'

gŋɨ ñjañindaka aku nu yu, nu agɨ-- gŋɨ ayi.
'Afterwards once you've given it to them, ok then you go--, go upriver
afterwards.' (afi250814iv_6:29)

Another modal category is the delayed future which can generally be translated more or less
accurately by the English expression 'in a bit'. It indicates a delay between the time of speech
and the occurrence of the action. The following example includes the delayed future
construction in the first clause, and then the anterior future:

The delayed future (and anterior future) modal constructions
(72) *ku aŋgurɨndɨkɨ. ñi prɨ akamrɨndatɨ.*
[ku **aŋgu-rɨ-ndɨkɨ**] [ñi prɨ akam-rɨ-ndatɨ]
1SG.NOM **sleep-MOD-FUT** PL DM speak-MOD-ANT
'I'll sleep – you all feel free to chat a bit first!'

ñi akãmpmɨ nɨyuva ku gŋɨ yukɨ aŋgi.
'Once you all go on chatting I will go and sleep.' (Anton Manna, afi141016iv_46:09)

174

The uncertain future category alluded to at the beginning of this section can be seen in the example below:

The uncertain future modal construction
(73) *añi   mɨyãrkŋɨ   ŋgɨninda.   maurugruri.*
[añi   mɨ=yãrk-ŋɨ   ŋgɨn-i-nd-a]   [mɨ=**auru-gru -ri**]
1PL   DIST=way-PC   perceive.DIST-IRR-PFV-R   DIST=**wash-MOD -UFUT**
'Mipela no klia, em (ren) bai pundaun o.'
'We're not certain, it might rain (or it might not).'
(Offered example, fieldnotes)

For further discussion that relates to the three future modal categories and how they pattern in clause chaining constructions, see (8.3.1.2.1).

Finally, Chini possesses a potential mood category, which is used in diverse temporal contexts. Its meaning is fairly straightforward and static across tokens of use.

The potential mood construction (near future temporal context)
(74) *nu   amugu   avɨgɨ,   nu   rɨgɨru.*
[nu   amugu   avɨ-gɨ]   [nu   **ri-gi-ru**]
2SG   carefully   descend-IMP   2SG   **fall-MOD-POT**
'Descend carefully, you might fall!' (Dorothy Paul, unrecorded utterance, fieldnotes)

The potential mood construction (past temporal context)
(75) *ñjimɨŋɨŋgɨ   rɨgayaŋgiya,   ku   ɨnkuyori..*
ñjimɨŋi=ŋgɨ   ri-ga-yi=aŋgi=ya   ku   ɨnku=yori
wind=COM   go/come_downriver-R.PL-NMLZ=LH.PC=TOP   1SG.NOM   2SG.FOC=call.R
'All that (smoke) which came downriver with the wind, it was you I thought of:'

"*kɨni   Kiapmɨ   ndɨ   ɨvrɨru.*"
[kɨni   Kiapmɨ   ndɨ   **iv-ri-ru**]
 whosit   Kiapmɨ   kunai_field   **set_alight-MOD-POT**
' "Whatshisface must have set fire to the *kunai* grass field at Kiapmɨ." '
(Joseph Manna, afi150514ii_4:39)

It would not be unreasonable to expect the basic irrealis inflectional category to express some of the meanings in the above examples. One clear reason why it does not, however, is that Chini possesses these other modal constructions. This has important cross-linguistic repercussions for realis/irrealis distinctions. The presence of other modal categories or

constructions in a given language is bound to complicate the contexts of use for an irrealis verbal category. We would not ever expect the irrealis categories in any two languages to overlap completely in their use.

5.5   Summary of chapter 5

Part of my goal in this chapter has been to show that the meaning of realis and irrealis is deictic, and thus relative, in nature. Inflectional realis marking indicates the concept 'within experience' and inflectional irrealis marking indicates 'beyond experience'. How this is to be interpreted depends on the speaker's representation any particular situation (rather than realis or irrealis directly 'representing' reality). Inflectional realis and irrealis constructions furthermore carry a large functional load in Chini; the vast majority of verbs (around 82%) in actual discourse are inflected for one or the other category while all the remaining inflectional categories combined account for the remaining 18%. The contexts in which realis and irrealis constructions are used are diverse, but the meanings of the categories are consistent.

What I have also aimed to accomplish here is to highlight the pitfalls in understanding exactly what semantic material is part of the consistent meanings of these categories versus the semantic (and pragmatic) material that is part of the diverse uses of realis and irrealis constructions. Consider again Contini-Morava's (2012) point about irrealis categories:

> [A] distinction should be made between meaning — the conceptual content conventionally associated with a specific linguistic sign — and message — conceptual content that is inferrable from a combination of linguistic meanings and contextual and pragmatic information (Contini-Morava 2012:200).

I have argued that for the realis/irrealis distinction in Chini, perhaps the major analytical pitfall centers around our own expectations for temporal reference to serve as an important parameter in determining the use of realis versus irrealis marking. But in Chini, temporal

176

reference turns out to be part of the loose etic material, what Contini-Morava refers to as the 'message'. Neither realis nor irrealis marking indicates much less codes temporal reference. What I have also argued, however, is that temporal reference can be seen as a useful variable and thus an analytical tool for understanding the language-specific meanings of these categories.

The role of temporal reference can therefore be understood as an important variable in the cross-linguistic comparison of realis/irrealis distinctions. Other scholars have shown that temporal reference is usually analyzed as functionally central. Michael (2014) describes the Nanti system as "dependent on the temporal reference of the clause... while crosscutting modal categories [but] not reducible to modality" (2014:255). The difference in attribution of temporal reference to the meaning versus the message (along the lines of Contini-Morava 2012) suggests that this is one area where realis/irrealis distinctions do differ across languages, and would be a fruitful one for future work.

In the following chapters, I discuss other areas of Chini grammar where realis/irrealis distinctions occur but differ in terms of the conceptual material that remains constant across tokens of use in the corpus. In Chapter 6, I discuss a set of other constructions in which realis and/or irrealis marking co-occurs with other verbal morphemes and, for several of those constructions, can involve multiple marking of realis and/or irrealis in the same verb form.

Chapter 6
Specialized Realis and Irrealis Marking in Chini Verb Morphology

Here I discuss several verbal constructions in which realis and/or irrealis marking co-occur with one or more other morphemes. In these constructions, realis and irrealis have come to take on specialized (that is: extra-grammaticalized) meanings within their larger constructions but are still related in form and function to the inflectional distinction as described in Chapter 5. As we will see, in some of these constructions realis/irrealis may be doubly, triply, or even quadruply marked. I address the counterfactual or contrastive realis construction (6.1), the standard interrogative construction (6.2), the standard clausal negation construction (6.3), the combinatorial possibility for the latter two (i.e., negative interrogatives) (6.4), and specialized irrealis marking in certain relative clauses (6.5).

6.1   Counterfactual clause combinations: the contrastive realis construction

Here I suggest that the marking of the basic realis category in a counterfactual clause combination construction may have originated as a morphological pattern borrowing from Rao, a neighboring, much larger, and very distantly related Ramu language with which Chini speakers have had very intensive contact. Brief discussion of another (possible) morphological borrowing from Rao into Chini can be found in (6.4, footnote 119).

In this construction, the contrastive suffix -*ambia* attaches to the basic realis form of the verb. This construction often occurs in asyndetic combinations where both the protasis and apodosis are identically marked. The meaning they express is comparable to what we could also call a counterfactual combination:

(76) *anɨ*   *ŋɨrkŋɨ*   *akamkambia*
      [anɨ   ŋɨ=ɨrk-ŋɨ   **akam-ki-ambia**]ₚᵣₒₜₐₛᵢₛ
      3SG   POSS.REFL=talk   **speak-R-CTRST**

      ku   *ŋavɨgɨ*   *wuyiambia.*
      [ku   ŋgɨ=avɨgɨ   **wu-yi-ambia**]ₐₚₒ𝒹ₒₛᵢₛ
      1SG.NOM   3SG.POSS=with   **go/come-R.PC-CTRST**
      'If he (Ndimŋgi) had notified (about having gone to the bush to harvest sago), I
      would have gone with him.' (Dorothy Paul, afi011116iv_36:32)

Although many tokens of this construction do translate readily as counterfactuals, the more

basic conceptual notion of contrast represents the wider range of use. In the next example,

Emma contrasts her status as a widow versus the possibility of what things would be like if

her husband Airɨ were still alive:

(77) *ku*   *ma,*   *ma*   *pirkɨ*   *kanɨ*   *mkapambia,*
      [ku   ma   ma   pi-r-kɨ   kanɨ   **mk-apa-ambia**]
      1SG   DIST.DEF   DIST.DEF   bad-ADJ-PC   here   **stand.PC-R-CTRST**

      Airɨ   *kanɨ*   *mkapambia*   *anɨ*   *miŋgiŋgini.*
      [Airɨ   kanɨ   **mk-apa-ambia**]   [anɨ   mɨ=ŋgi~ŋgini]
      Airɨ   here   **stand.PC-R-CTRST**   3SG   DIST=perceive~NMLZ
      'Mi dispela nogut i stap olsem, Airɨ i stap olsem, em dispela kain.'
      'Would that I should be here in such a bad way (as a widow), had Airɨ only been
      here, he (was) that kind (of man).'

      anɨ kri gapɨ ñjiŋimapayinda.
      'Em i no save slek long ol samting.'
      'He did not slack off with things.' (Emma Airɨmarɨ, afi260814v_35:10)

The semantic contribution of the realis marking can be seen in terms of the strength of the

presupposition. This follows rather directly from the nature of counterfactuals which is to

express a present reality that contrasts with what was otherwise a highly presupposed

situation. This explains the use of realis in this construction in a way that is entirely

consistent with the Chini logic realis and irrealis, despite the cross-linguistic tendency to see

counterfactuality as being somehow fundamental to irrealis and expected to pattern as such

as it does in many languages (Elliott 2000; Mithun 1995; Roberts 1990, 1994).

In the case of this construction, there is a historical explanation that is worth mentioning, even if the details of how it developed are not entirely clear. This particular constructional pattern — where the counterfactual protasis and apodosis are both marked with the same morphological form — is found in many languages in and around the Madang region (and to some extent, farther afield in New Guinea as well). The fact that this unusual formal pattern shows up again and again in related and unrelated languages of this region means it is a very good candidate as a contact-induced change. The forms themselves are not always cognate across languages, but the pattern is the same. These strikingly comparable constructions have been described for Ramu languages including Rao (Christensen 1978) and Chini (as discussed here), and for Trans New Guinea languages including Kobon (Davies 1981), Usan (Reesink 1987, 2014) and Mauwake (Berghäll 2015).[111]

The data and the distribution of languages in this region suggest that this construction has its origin in some Trans New Guinea languages and then spread via contact to other languages (in particular to Ramu). The morphological form of the counterfactual suffix is complex only in some Trans New Guinea languages but *not* in Ramu (i.e. Rao or Chini, as I discuss in further detail below). In Kobon (Kalam-Kobon subgroup of the Madang family of Trans New Guinea) for instance, counterfactual conditionals are "expressed by the juxtaposition of two independent clauses each manifesting the contrary-to-fact mood-tense-number suffixes" (Davies 1981:39). The 1SG form of the counterfactual can be seen in both clauses in the combination below:

---

[111] Austing and Upia (1975) also describe a comparable construction in Ömie, a language of the Kolarian family of central Papua (Papua New Guinea). Olsson (2017:432-3) describes another comparable construction in Marind, a language of the Anim family in the south of Indonesian-occupied West Papua. Both languages are very far from Madang, so even though this sort of construction might be a contact feature in northeast New Guinea, it may be that its occurrence in so many unrelated languages in this part of the world is due to certain discourse practices or to a combination of recurrent practices and contact.

Counterfactual combination in Kobon (Davies 1981:39)

(78) yad   Dusin ar-**bnep**   kaj   rimnap   rau-**bnep**
     1SG   Dusin go-**CF.1SG**   pig   some   buy-**CF.1SG**
     'If I had gone to Dusin I would have bought some meat.'

However, in Usan (Croisilles subgroup of the Madang family of Trans New Guinea), the protasis and apodosis in counterfactual conditionals are marked by a single form, which Reesink (2014:246) describes as a dubitative/interrogative enclitic (=*qi*):

Counterfactual combination in Usan (Reesink 2014:247)

(79) *an   munon qei   mi   qand-qand   ob-oumon gas   ende ebet-emei=**qi**   eng,*
     2PL   man   some thing quickly-RED do-2PL.PR like thus do-1SG.FP=**DUB** that

     *eng um-orei=**qi**.*
     that die-3SG.FP=**DUB**
     'If I had done like some of you who act very quickly, he [that one] would have died.'

The forms themselves are not at all identical, but the pattern is the same. This suggests that morphological pattern borrowing along the lines of Gardani et al. (2015) may be the culprit here, perhaps even for related languages. The formal evidence for this construction as it occurs in Chini, the geographic distribution of languages that have this construction, and the relative sizes of their speaker populations all point to the possibility that Chini may have acquired this construction as a pattern borrowing from Rao. I discuss this below and then bring the discussion back to what this contact situation tells us about the patterning of realis marking in Chini and the more general issue it touches upon for realis and irrealis categories cross-linguistically.

The main Trans New Guinea languages Chini is in contact with are those of the Sogeram subgroup, in particular Nend, Maŋga (a Mum dialect) and especially Manat. We are fortunate to have descriptions of several Sogeram languages as well as a thorough historical reconstruction of Proto-Sogeram in Daniels (2015). As far as we know, none of these Trans

New Guinea languages possesses this construction, so its occurrence in Chini cannot really be explained via any direct contact with a Trans New Guinea language. However, Chini has had intensive historical (and ongoing) contact with two Ramu languages: Breri and Rao. The Breri village Limbebu has a border with Chini just to the west of Andamang. Andamang then has some marginal boundaries with the Rao villages Dibu and Watabu to the southwest. There is no description of Breri, so unfortunately we cannot know whether that language is relevant for this part of the discussion, but for Rao there is a detailed sketch grammar (Christensen 1977, 1978a and 1978b). Unlike the other languages that Chini has intensive contact with, Rao does possess a comparable counterfactual construction. The Rao construction relies on the contrastive enclitic *=(v)we* (Christensen 1978:42).[112] Christensen (1978:42) explains that in Rao, *=(v)we* attaches to the end of verbs and other words to mark both the protasis and apodosis in a counterfactual conditional clause combination:[113]

Rao *=we* (Christensen 1978:42)
(80) *'banɨku   kwakɨwe   ni   mvawe.*
     ['ba-nɨku   kwakɨ=**we**]   [ni   mva=**we**]
     water-LOC   there=**CONTRAST**   1PL   hold=**CONTRAST**
     'If it was in the water, we would have caught it.'

Rao *=we* (Christensen 1978:42)
(81) *me   zokɨwe   ndi   me   ilɨkɨ   mbalenɨkɨwe.*
     [me   zo-kɨ=**we**]   [ndi   me   ilɨkɨ   mbale-nɨ-kɨ=**we**]
     they   know-FPST=**CONTRAST** us   they   accomp.   say-HAB-FPST=**CONTRAST**
     'If they had known, they would have told us.'

While Chini is very unlikely to have borrowed the *-ambia* construction from a Trans New Guinea language, it is possible that Rao, however, did. As it happens, the southern border of

---

[112] Chini and Rao have been posited as members of the same family (Z'graggen 1971; Foley 2017). Any genealogical relationship they have, however, is at best a very distant one despite their geographic proximity to each other.

[113] I have maintained Christensen's original analysis but note that she does not explicitly analyze *=(v)we* as a clitic. Because it attaches to different word classes, however, I have analyzed it as an enclitic rather than a suffix.

Rao territory comes very close to the northern border of Kobon territory, the same Trans New Guinea language that has the most morphologically complex forms of the construction under discussion. This can be seen in the SIL language map below (which should be seen only as providing a rough indication of language boundaries).[114]

Figure 25: **The approximate locations of Kobon, Rao, and Chini (map)**
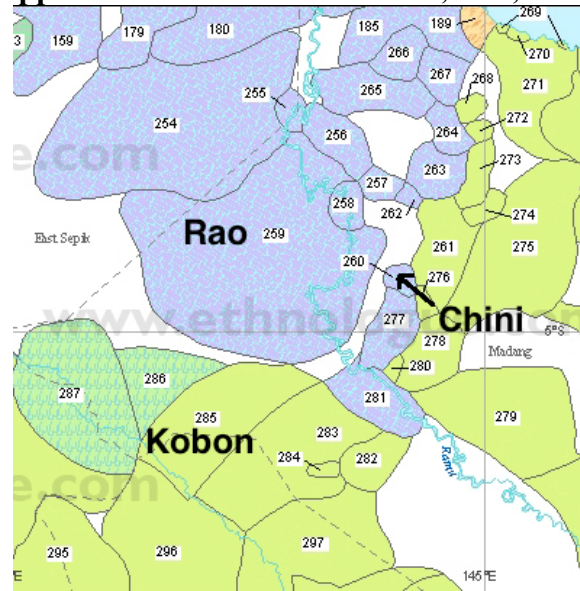
Map data @ 2009, SIL

Regardless of however Rao acquired the *=(v)we* construction, what we are left with are two possibilities for the history of the functionally comparable *-ambia* construction in Chini. One is that this construction arose as part of a much earlier situation (whether contact-induced or otherwise). The other is that Chini acquired this construction as a pattern borrowing from Rao, which would be unsurprising since there is so much contact between the two. Importantly, Rao has several thousand speakers and extends over a very large swath of territory, while Chini has around 50-60 speakers and has historically always been very small both in terms of geography and population. We would expect the effects of contact between these languages to be largely unidirectional (from the much larger language, Rao, into the

---

[114] Note as well that despite what the map might suggest, there is no contact whatsoever between Chini and Kobon, and I have never heard of a Chini person traveling anywhere near Kobon country.

much smaller language, Chini). Finally, it is hard to ignore that *-ambia* is not exactly a phonetically reduced form, as we would expect if it resulted from old historical processes (Bybee 1985).

My suggestion for Chini that would explain the otherwise counterintuitive presence of realis marking in the counterfactual/contrastive *-ambia* construction in Chini is that it may have morphologized as a pattern borrowing through contact with Rao. Clearly, more evidence is needed to substantiate this claim. But if the contrastive realis construction in Chini did indeed develop in this way, this would add to Chafe's (1995) point that processes of morphologization can explain some patterns for realis and/or irrealis in particular languages. The data I have presented here suggest that *-ambia*, a form that indicates counterfactuality among other types of contrast, began patterning with the basic realis construction for historical rather than reasons to do with the meaning of the inflectional realis category.

We might wonder why realis would be marked in a construction that readily expresses something akin to our notion of counterfactuality. After all, what we currently understand about the cross-linguistic semantics of the distinction would lead us to expect irrealis, and not realis, to be marked in this type of construction (van Gijn & Gipper 2009; Roberts 1994). What the data and the analysis I have presented here suggest is that the co-occurrence of realis or irrealis marking with other categories is not predictable, because it depends so heavily on historical processes, whether language-internal morphologization (Chafe 1995), or contact-induced change.

6.2   The standard interrogative construction: realis versus irrealis questions

A very different type of specialized realis and irrealis marking is found in the standard interrogative construction. Standard interrogatives are the primary, most frequent way by far

to form questions in Chini. They are built on the nominalized form of the verb identical to the relative clause, but they include an additional suffix at the end, just after the nominalizer. The realis marking co-occurs with the use of question words (*mɨyi* 'what', *mikŋi* 'when, what of all things', *mɨti* 'where, which', *mɨgɨ* 'how' or *mɨyi vɨndɨ* 'why/for what reason') to indicate a content question:

Realis question
(82) *nu   mɨyi   amaya?*
nu   mɨ-yi   am-a-y-**a**
2SG   DIST-what   ingest-R-NMLZ-**Q.R**
'What did you eat?' (standard expression)

The irrealis marking indicates an 'irrealis' or yes-no question:

Irrealis question
(83) *nu   amayi?*
nu   am-a-y-**i**
2SG   ingest-R-NMLZ-**Q.IRR**
'Did you eat?' (standard expression)

The following examples are just some of many tokens of this construction from natural speech. The forms of the nominalizers (*-y*, *-n* and *-ch*) change according to rules of morphological harmony as described in (4.5). The use of the verb-final suffixes, however, is robust and without exception. The suffix *-a* always indicates a realis (question-word) question:

Realis question
(84) *mɨni   kɨkɨyi   nɨgwu   mɨgaya?*
mɨ-ni   kɨ=kɨyi   nɨ=gwu   mɨ=ga-y-**a**
DIST-who   PROX=whatsit INS=fire   ALL=lay.R-NMLZ-**Q.R**
'Who laid this whatsit thing in the fire?' (Dorothy Paul, afi051116ii_17:45)

Realis question
(85) *aŋgɨ   nɨkupmapayaŋgɨ   ku   mɨti   makɨyina?*
aŋgɨ   nɨ=ku-pm-apa-yi=aŋgɨ   ku   mɨ-ti   mɨ=aki-yi-n-**a**
LH.PC   INS=sharpen-IPFV-R-NMLZ=LH.PC   1SG.NOM DIST-where   TOP=put-R.PC-NMLZ-**Q.R**
'That thing I sharpened that thing (the knife) with, where did I put it?'
(Emma Airɨmarɨ, afi051116ii_10:40)

185

Realis question
(86) *Nwamim   mikŋi   akapmicha?*
Nwamim   mi-kŋi   aka-pm-i-ch-**a**
Nwamim   DIST.PL-what   do-IPFV-IRR-NMLZ-**Q.R**
'What of all things is Nwamim (Emma) doing?'

anɨ ayuku avɨgɨnda.
'She needs to hurry down here now.' (Anton Manna, afi141016iv_20:44)

And the suffix *-i* always indicates an irrealis question:

Irrealis question
(87) *ku   nubmukwavɨyi?*
ku   nu=bmɨ=ku-avɨ-y-**i**
1SG.NOM   2SG=SUC=cross-TLOC.IRR-NMLZ-**Q.IRR**
' "Shall I follow you to the other side of the river?" '
(Dorothy Paul, afi051116ii_15:29)

Irrealis question
(88) *ñi   augra   achimindani?*
ñi   augra   achim-i-nd-a-n-**i**
PL   money   gather-IRR-PFV-R-NMLZ-**Q.IRR**
'Did you all not gather the money?' (Emma Airɨmarɨ, afi051116ii_27:28)

Irrealis question
(89) *Ikundutu   amariyi,   mɨtwavɨŋgayi   vɨndɨ   amamichi?*
Ikundutu   am-ar-iyi   mɨ=twavɨŋgayi   vɨ-ndɨ   ama-m-i-ch-**i**
Ikundutu_hamlet woman-DIM-PL TOP=child.PL   BEN-think cook-IPFV-IRR-NMLZ-**Q.IRR**
'The Ikundutu women, are they cooking for their children?'
(Dorothy Paul, afi051116ii_28:09)

This construction represents how interrogative clauses are formed for verbs built on the aspectual base, which is true for most questions in actual discourse. A somewhat different construction is used when the interrogative is formed on a diverse set of other clause types including: verbs built on the negative base; pronouns; bare question words and; nouns functioning as main clauses, among others.[115] Interrogatives for these clause types are formed

---

[115] One constraint is that verbs built on modal bases cannot co-occur with interrogative morphology of any kind nor can they occur with interrogative prosody (except perhaps some uses of the uncertain future construction). I had noticed there were no examples of such constructions in the corpus and so I tried to elicit them with speakers, including attempts on my own part to produce what I would have assumed to be "grammatical" clauses (e.g., to say something such as 'will you go in a bit?'). Speakers are clear that such forms are unacceptable, however.

by the attachment of the enclitic =*p* (which I gloss as a copula only for lack of a better descriptor). The enclitic =*p* is then followed by the same realis (-*a*) or irrealis (-*i*) question suffix:

Realis question
(90) *mɨyi   vɨndɨpa?*
mɨ-yi   vɨ-ndɨ=**p-a**
DIST-what   BEN-think=**COP-Q.R**
'Why/For what reason?' (common expression)

Realis question
(91) *mɨyipa?*
mɨ-yi=**p-a**
DIST-what=**COP-Q.R**
'What (is it)?' (common expression)

Realis question
(92) *gwu   kanɨ   gayika,   mɨniaŋgɨpa?*
gwu   kanɨ   ga-yi=ka   mɨ-ni=aŋgi=**p-a**
fire here   lay.R-NMLZ=PROX.DEF   DIST-who=LH.PC=**COP-Q.R**
'This which was laid in the fire whose is it?' (Dorothy Paul, afi051116ii_23:38)

Irrealis question
(93) *kamba   gwu   mɨchuratipi?*
kɨ=amba   gwu   mɨ=chu-ra-ti=**p-i**
PROX=small_string_bag   fire TOP=burn-IRR-NEG=**COP-Q.IRR**
'This string bag the fire isn't going to burn it is it?'
(Dorothy Paul, afi051116ii_19:48)

Irrealis question
(94) *nu   ŋgɨgɨmbripi?*
nu   ŋgɨgɨ-mbri=**p-i**
2SG   village-loafer=**COP-Q.IRR**
'Are you a village loafer?'
[Free translation: 'Are you a lazy bastard or what!?']
(Offered example, fieldnotes)

This use of realis and irrealis to distinguish content questions from yes-no questions (respectively) has also been described for Caddo (Chafe 1995). Chafe writes that the distinction is "motivated by the fact that a yes-no question implies a lack of knowledge as to whether the event actually occurred... whereas a question-word question presupposes the

187

event and asks only about the identity of a participant" (1995:354). Chafe's explanation for realis versus irrealis questions applies strikingly well to Chini.

6.3 The standard negation construction

Chini possesses a rich array of negation constructions. The speaker's choice to use one or the other depends on certain specifics involved in the situation as well as the semantic and/or pragmatic nuance they wish to convey. So far, we have already seen that Chini has a dedicated set of negative constructions, a realis one (-*mati*) and an irrealis one (-*rati*). These are, however, much more infrequent in Chini discourse than what I call the 'standard negation' construction(s).

It is 'standard' only in the sense that it is the most frequent and pragmatically unmarked negation construction, however. Morphologically, this construction involves the attachment of the realis perfective suffixal complex -*nda* to the basic irrealis aspectual stem form:

(95) ...*ku*   *miŋgininda.*
      ku   mɨ=**ŋgin-i-nd-a**
      1SG.NOM   DIST=**perceive.DIST-IRR-PFV-R**
      'I don't know (what you all are talking about).'
      (Emma Aɨrɨmarɨ, afi141016iv_28:37)

(96) *ku*   *yunda.*
      ku   **yu-nd-a**
      1SG.NOM   **go/come.IRR-PFV-R**
      'I didn't go.' (common expression)

This construction relies on the combinatorily semantics of basic irrealis marking and the perfective -*nd* construction.[116;117] The perfective -*nd* marking limits the interpretation of the

---

[116] As a derivational device, -*nd* is grammatically promiscuous and is the only affix that may attach to verb stems formed on any of the three bases. The lexical source from which it grammaticalized is a verb that means something along the lines of 'cease, dislike, be loathe to, neglect, leave (someone), leave (something) give up'. In the aspectual base it is used to form the standard negation construction; in the negative base to form the

irrealis marking to an unrealized, but also bounded, situation whose inceptive and terminative phases are unalternable and set in time at the time of speech (see also Sasse 1991). The compositionality of the morphology furthermore extends to the final realis (-*a*) marking, in that this construction is restricted to non-future temporal contexts. These fine-grained details can be understood not only in reference to compositionality of this construction, but also reflect how this construction differs semantically and pragmatically from other negation constructions in the language.[118]

The -*nda* construction has an irrealis sibling (-*ndi*), though the two differ in the extreme in their relative frequency in discourse. I have encountered the -*ndi* construction only a few times. As far as I know, it attaches only to realis counterfactual (-*ambia*) verb forms:

(97) *avɨnɨ*   *vɨyi*   *kakŋi*   *akɨgambia,*
     av-inɨ   vɨyi   ka-kŋi   aki-ga-ambia
     rain-PC   yesterday   PROX.DEF-way   do-R-CF
     'If it had rained in this way yesterday,'

     añi   *rɨgambiandia.*
     añi   rɨ-ga-ambia-**nd-i**=a
     1PL   go/come_downriver-R.PL-CTRST-**PFV-IRR**=EXCL
     'we wouldn't've been able to come downriver!'
     (Contextually-elicited example, fieldnotes)

---

prohibitive; in the modal base the immediate imperative. It also occurs in certain lexicalized verb forms, namely *chinɨnd-* 'be finished' and *aviand-* 'withhold (information)', among a few other places.

[117] The suffix -*nd* could alternatively be analyzed as a negative morpheme and glossed as 'NEG', but due to the pervasive use of -*nd* as a perfective marker in so many different constructions in the language, I continue to gloss it as 'PFV'. Given the part-negative part-perfective semantics of the lexical source construction (*nd-* 'cease, dislike, be loathe to, neglect, leave (someone), leave (something) give up'), we should not be surprised that the grammaticalized suffix -*nd* can also be seen in terms of both perfectivity and negation.

[118] Recall that the negative irrealis -*rati* category (built on the negative base) is used in reference to future (among other) temporal contexts. So, the -*nda* construction is effectively the 'go-to' pragmatically-unmarked negation construction for situations in non-future contexts, while -*rati* is the 'go-to' pragmatically-unmarked negation construction for situations in future contexts. The use of other negation constructions, including the negative realis (-*mati*), is pragmatically marked in certain ways I have left out of the discussion.

Similar to the *-nda* construction, the full meaning of the *-ndi* construction can be understood from its component parts. The contrastive realis marking expresses a situation that ended up running counter to its presupposed alternative occurrence. The perfective *-nd* marking represents the situation as bounded in its phasal structure as previously described. The final irrealis (*-i*) marking reflects that the negative counterfactual situation lies outside lived experience and in the realm of the alternative context (i.e., the imagination).

There is one small corner of the grammar worth mentioning where *-nda* and *-ndi* also alternate and occur (again) in complementary distribution. The alternation can be seen in forms of the verb *chinɨnd-* 'be finished', a lexicalization of the existential verb (where the material forming the lexicalized stem includes the perfective suffix *-nd*). The alternation in the final realis/irrealis marking occurs in certain medial clause constructions in clause chains:

(98) *aku   papmɨ   chinɨndamɨ...*
     aku   papmɨ   ch-i-ni-**nd-a**=mɨ
     DM   completely   exist-IRR-IPFV-**PFV-R**=PRE.IRR
     'if/when/once it's completely finished, then...' (Anton Manna, afi260814v_33:11)

(99) *...kuvavrɨ   chinɨndiva...*
     [ku=vavrɨ   ch-i-ni-**nd-i**=va]
     1SG.POSS=work   exist-IRR-IPFV-**PFV-IRR**=PRE.R
     '... if/when/once my work is finished...' (Dorothy Paul, afi011116iv_4:31)

Unlike in the pair of standard negation constructions, in these examples there is little evidence to support the possibility that the final realis or irrealis marking contributes to the semantic interpretation. Investigating this question for this construction is just not something the corpus is extensive enough to permit, because since examples with the final realis marking are extremely infrequent (and are impossible to elicit). The distributional pattern of the final realis/irrealis marking is, however, clear in that for *chinɨnd-*, realis marking is

restricted to =*mɨ* medial clauses while irrealis marking is restricted to =*va* medial clauses, just for reasons beyond my current understanding.

6.4 Negative interrogatives

When the standard interrogative and standard negation constructions combine in negative interrogative clauses, a perfective verb base like *mbru* 'cut' below will be triply marked for realis/irrealis. The perfective realis -*nda* suffixal complex attaches to the basic irrealis stem, and this form is then nominalized by -*n* in an interrogative clause. The nominalizer is followed by either the realis question suffix -*a* or the irrealis question suffix -*i*.

Triple marking of realis/irrealis (negative interrogative, perfective base)

(100)

na	*ñi*	*ŋiñinmɨ*	*aŋgɨnɨ*
na	ñi	ŋɨ=ñinmɨ	aŋgɨnɨ
[TP:CONJ]	PL	POSS.REFL=female_ancestor	banana

ndvɨmbruindani?
ndvɨ=mbru-**i**-nd-**a**-n-**i**
3SG.BEN=cut-**IRR**-PFV-**R**-NMLZ-**Q.IRR**
'Na yupela i no katim banana bilong ñiñi bilongem a?'
'And did you all not cut any bananas of his female forebear for him (to eat)?'
(Ros Njveni, afi111016ii_45:05)

Triple marking of realis/irrealis (negative interrogative, perfective base)

(101)

nu	*ŋamkavrɨ*	*kɨgayika*	*anɨ*	*ayuku*	*mbɨriñindani?*
nu	ŋɨ=amkavrɨ	kɨ-ga-yi=ka	anɨ	ayuku	mbɨ=ri-**ñi**-nd-**a**-n-**i**
2SG	POSS.REFL=sororal_nephew	tell-R-NMLZ=PROX.DEF	3SG	quickly	DIST.?=exchange-**IRR**-PFV-**R**-NMLZ-**Q.IRR**

'Your sister's nephew whom you told, he hasn't exactly rushed to exchange/buy any has he?' (Paul Guku, afi141016iv_21:03)

Imperfective bases that occur in negative interrogative clauses are quadruply marked for realis/irrealis. They are marked first for basic realis or irrealis, and then take a secondary irrealis marker that co-occurs with a special nominalizer for perfective-derived imperfective bases (below: -*y*), then by the secondary realis marker that co-occurs with the perfective suffix -*nd*, and finally by the realis or irrealis question suffix.

191

(102) *nu   pamuŋu   Aŋgrutamrɨ miŋginɨmapayindani?*
 nu   pa=nɨŋɨ   Aŋgrutamrɨ mɨ=ŋgɨnɨ-m-**apa**-y-**i**-nd-**a**-n-**i**
 2SG before=TRANS Aŋgrutamrɨ   DIST=perceive.DIST[PFV]-IPFV-**R**-NMLZ-**IRR**-PFV-**R**-NMLZ-**Q.IRR**
 'Did you not use to see it (a type of fish) before in Aŋgrutamrɨ marsh [rhetorical
 question]?' (Paul Guku, afi011116iv_26:50)

This rather remarkable and complex system makes use of the parts in the verb morphology
where the realis/irrealis distinction is still fully functional (basic marking and question
marking) as well as those where it is frozen or evident only in certain limited distributional
ways as I have mentioned in the above sections (e.g., the irrealis marking that co-occurs with
the nominalizer forming *-yi*, and the realis marking that co-occurs with the perfective suffix
forming *-nda*). The reasons for these patterns are historical, though I do not discuss that
matter here.

6.5 Realis and irrealis relative clauses

Verbs in Chini are relativized by adding a nominalizing suffix to the basic realis- or irrealis-
inflected stem. The nominalizer can take one of three forms (*-yi*, *-nɨ/ni*, or *-chi*). Which form
or forms occur is determined by principles of morphological harmony (4.5). Realis-inflected
verb stems take the nominalizer *-yi* and irrealis-inflected imperfectives take *-chi*. Relativized
forms exhibit one exception to the general harmony rules, however, in that all irrealis-
inflected stems take *-nɨ/ni* regardless of their aspectual class. So, the double-marking of verb
forms by both *-chi* and *-nɨ/ni* as seen in (104) through (108) is a construction unique to
(irrealis-inflected, imperfective) relativized verb forms.[119] To make a long story short, realis-
inflected relatives take *-yi* and irrealis-inflected relatives all take *-n*:[120]

---

[119] The nominalizer *-n* has a number of idiosyncrasies that *-y* and *-ch* do not share, and there is good evidence
that it morphologized much later than the other two forms. These idiosyncrasies are mostly all unique to the
occurrence of *-n* in relative clause formation (but, curiously, not in the other clause types where it is found) and
include: (1) the grammatical opposition marked in the following vowel (paucal *-ɨ* and irrealis *-i*) unique to this
bisuffixal complex; (2) its co-occurrence with imperfective as well as perfective stems (unlike its form *-ni*
which harmonizes exclusively with perfective stems in other clause constructions); (3) the fact that some

Realis relative clause

(103) *aŋriambiyi*   *miŋginayi*   *ŋgvuyi*   *ñi*   *anwa.*
[aŋ-ri-ambiyi   mɨ=ŋgɨn-a-**yi**   ŋgvuyi]REL   [ñi   anu-a]MAIN CLAUSE
man-PL-AUG.PL   DIST=perceive.DIST-R-**NMLZ** folks   PL   die-R.PL
'Those bigmen who knew how they all died.' (Emma Airɨmarɨ, afi160714iv_22:49)

Irrealis relative clause

(104) *ñi*   *akãmpmichinɨ*   *ɨrkɨri*
[ñi   akam-pm-i-chi-**n-ɨ**   ɨrkɨ-ri]REL
PL   speak-IPFV-IRR-NMLZ-**NMLZ**-PC   speech-PL

ku   *miŋgininda.*
[ku   mɨ=ŋgɨn-i-nd-a]MAIN CLAUSE
1SG.NOM   DIST=perceive.DIST-IRR-PFV-R
'I don't know anything of what you all are talking about.'
(Emma Airɨmarɨ, afi141016iv_28:37)

Irrealis relatives include a final suffix after the nominalizer that codes a unique opposition in

the language: paucal number (*-ɨ*) versus irrealis (*-ɨ*), where the irrealis marking has two

possible interpretations: plurality or negation of the relativized constituent:

Irrealis relative clause marked for paucal number (*-ɨ*)

(105) *ku*   *aratmichiniŋgɨni.*
ku   ara-m-i-chi-**n-ɨ**=ŋgɨ-ni
1SG.NOM   wander-IPFV-IRR-NMLZ-**NMLZ-PC**=CHAR-who
'I'm a man of mobility' (lit. I'm someone who is characterized by wandering about.)
(Elicited example, fieldnotes)

---

speakers, e.g. Paul Guku, use *-nɨ/-ni* as a generalized relativizer for realis as well as irrealis clauses, and do not use the otherwise expected *-yi* forms in their speech. There is a possibility this suffix was borrowed in both substance and function from the neighboring language Rao, which also has *-nɨ* as a relativizer (cf. Christensen 1977). In addition to the close identity in form and function, other evidence points in the same direction. One is that the suffix occurs at the word boundary in both languages, i.e. a salient position more conducive to being borrowed than say, a word-internal morpheme. The languages, if indeed genealogically related, are very distant, and so the parallel attachment at the farthest point from the root suggests that Rao *-nɨ* and Chini *-nɨ/-ni* do not represent shared inheritance. That is, we know from Bybee (1985) that grams that morphologized earlier tend to occur closer to the root. Another is that the 'left' morpheme boundaries of the two corresponding nominalizers do not coincide in the two languages; we know that mismatches of morpheme boundaries are good evidence for contact in the borrowing of other types of derivational morphemes (Robbeets 2015:140). Additionally, where morphological borrowing is concerned, we know that derivational morphemes are especially prone to being borrowed (Gardani 2015). An origin in contact could also explain the variation across some speakers where this construction is concerned.

[120] There is one important exception to this general rule. Verbs that indicate a number distinction in their realis forms consistently take the *-n* form of the nominalizer in the realis paucactional construction and *-y* in the realis pluractional construction in all clause types where the harmonic nominalizers occur.

Irrealis relative clause marked for paucal number (*-ɨ*)
(106) *ɨvkɨrgŋɨ*   *ayigŋɨmichinaŋgɨ*
     ɨvkɨrgŋɨ   ayigŋɨ-m-i-chi-**n-ɨ**=aŋgɨ
     paper   write-IPFV-IRR-NMLZ-**NMLZ-PC**=LH.PC
     'man bilong raitim pepa, saveman'
     'scholar/s (lit. one/few who habitually write(s) on paper)'
     (Offered example, fieldnotes)

Irrealis relative clause marked doubly for irrealis (*-ɨ*) (plural interpretation)
(107) *ɨvkɨrgŋɨ*   *ayigŋɨmichiniŋgɨ*
     ɨvkɨrgŋɨ   ayigŋɨ-m-i-chi-**n-ɨ**=ŋgɨ
     paper   write-IPFV-IRR-NMLZ-**NMLZ-IRR**=LH.PL
     'scholars (lit. all/those who habitually write on paper')'
     (Offered example, fieldnotes)

Irrealis relative clause marked doubly for irrealis (*-ɨ*) (negative interpretation)
(108) *ku*   *ñjimbambamɨchiniŋgɨni.*
     ku   ñji-mba~mba-m-i-chi-**n-ɨ**=ŋgɨ-ni
     1SG.NOM   MID-deceive~IPFV-IPFV-IRR-NMLZ-**NMLZ-IRR**=CHAR-who
     'I'm no liar.' (lit. 'I'm not someone who is characterized by lying.')'
     (Offered example, fieldnotes)

The paucal form *-nɨ* is by far more frequent in discourse, and the frequency of *-ni* is

(impressionistically) extremely low, however.

6.6   Summary of chapter 6

The constructions I have discussed in this chapter differ from the basic realis/irrealis and

negative realis/irrealis distinctions discussed in Chapter 5 in the meaning they contribute to

the overall construction, and there a number of distributional differences as well. The details

of these constructions as I have described them are summarized in Table 17.

Table 17: SPECIALIZED REALIS/IRREALIS MARKING IN THE CHINI VERB[121]

	Contrastive realis construction	Standard interrogative construction	Standard negation construction (PFV bases)	Standard negation construction (IPFV bases)	Relative -*n* clauses
Form of R/IRR	basic R marking	-*a*/-*i*	-*a*/-*i*	IRR -*i*	IRR -*i*
Functional load of R/IRR distinction	functional R only	high	low (distinction is distributional, with residual semantic effects)	functional IRR only	functional IRR only, opposed to paucal marker (-*i*)
Obligatorily co-occurring morpheme	-*ambia* (CTRST)	NMLZ (-*y*, -*ch*, -*n*); copula (=*p*) for other clause types	-*nd* (PFV)	after -*y* (NMLZ) or -*ch* (NMLZ) and before -*nd* (PFV)	-*n* (NMLZ)
Semantic contribution of R/IRR	highly presupposed alternative to what actually occurred	content question (R); yes-no question (IRR)	non-future, within experience (R); imagined alternative (IRR)	unrealized situation	negation or plurality of constituent

In the literature on realis and irrealis, linguists have pointed out that a distinction should be drawn when a marker is an independent indicator of its meaning (or 'non-joint' in Palmer's (2001:145) terms) versus when it depends on another marker for its meaning ('joint'). These constructions allow us to consider the matter somewhat differently. One property evident across the various specialized forms in Chini is that realis and/or irrealis (including instances of multiple marking) have their own meanings that contribute to the compositionality of these constructions. Here and elsewhere in the language, realis and irrealis are independent indicators of the meaning they are used to express, just like any other TAM category. The concept of joint (or dependent) marking of realis and irrealis is very different from this, since it hinges on the expression of a general modal category 'realis' or 'irrealis' that is specified, and thus entirely limited in its interpretation by, some other category or part of a construction in which the realis/irrealis marking occurs.

---

[121] Another relevant construction which I have left out of this discussion is the irrealis marking that co-occurs with the nominalizer forms -*y* and -*ch* in imperfective bases in the standard negation construction.

In Chapter 8, I discuss the realis/irrealis distinction as it is marked in a completely different area of the grammar, in the forms of the clause chain linkage enclitics. As we will see, the issue of dependent marking has played a major role in understanding how realis/irrealis distinctions in chaining constructions work in many languages. However, what first appears to be joint/dependent marking in that area of the grammar in Chini turns out not to be supported by the full extent of the data. Little of what I have described thus far aboutthe functions of the inflectional realis and irrealis constructions transfers over to the chaining constructions. So, despite my use of the identical labels 'realis' and 'irrealis', no comparability is intended between the function of the distinction in the verb morphology and in the chaining constructions.[122]

---

[122] In the parts of this dissertation where confusion could arise, explicit modifying labels distinguish the two, e.g. 'inflectional' realis or irrealis marking versus realis or irrealis 'chaining devices'. An alternative would be to propose a new term for one of the constructions, but I have chosen not to do so for a number of reasons. At this early stage of our understanding about realis/irrealis distinctions in clause combining in particular, introducing new terminological complexity (i.e., into a topic that is already complex) does not seem to me like a good idea.

Chapter 7
Fundamental Structures of Clause Chaining in Chini

This section is intended as a reference for the basics of Chini clause chaining, in order to contextualize Chapter 8 on the realis/irrealis distinction as marked in the clause chain linkage enclitics. This chapter does not assume prior knowledge about the function of the realis/irrealis component in the clause chaining devices.

Discourse in Chini, as in many Papuan languages and those of the Trans New Guinea family in particular, is structured primarily in clause chains (Pilhofer 1933; Longacre 1972; Haiman 1980; Reesink 1983 & 2014; Roberts 1997; Foley 2000; de Vries 2005 & 2010, among many others). Some Austronesian languages of New Guinea have also developed clause chaining through contact with neighboring Trans New Guinea languages (Ross 1987). It is with these languages in mind that we can then refer to something called 'Papuan-style' clause chaining. The basic syntactic structure involves the combination of one or more dependent ('medial') clauses with an independent ('final') clause. As Foley (2000) writes:

> Clause chaining is a phenomenon whereby languages distinguish between two types of clauses, independent and dependent. The former are characterized by fully inflected verbs, in particular for subject agreement and tense-aspect-mood whereas the latter contain morphologically simpler, stripped down verbs. Dependent clauses coordinate with independent clauses and normally precede them, and many of their semantic features are determined by the following independent clause (Foley 2000:383).

The syntactic status of chained clauses has been described in different ways (e.g., 'subordinate', 'cosubordinate') and continues to be a matter of debate among Papuanists and among typologists, but this need not concern us here even though much of what I describe here has clear repercussions for our understanding of the hierarchical structuring of clause chaining in Chini.

In order to gain a foothold on clause chaining in Chini, consider the following principles. As Haiman (1980, 1988) originally proposed, Papuan chains are characterized by

197

syntactic iconicity. This means that the order of clauses in any given chain reflects the conceptual order of events:

> The medial clause chain [...] is the standard means for the iconic expression of a variety of asymmetrical relations, among them the relations between cause and effect, protasis and apodosis in ordinary (but not concessive!) conditionals, and, most generally, anteriority in temporal succession (Haiman 1988:50).

This fundamental organizing principle applies to clause chaining in Chini, with the difference that the semantic interpretation of relations between linked clauses in Chini depends heavily on the particular chain linkage device that is used, and includes (for one pair of devices) symmetrical in addition to asymmetrical relations. This is described in greater detail in this chapter.

There are also several basic distributional principles (regarding form-meaning relations) across clauses. These include: the distribution of marking for dependency relations (marked on all medial clauses by the linkage enclitics); the relative greater distribution of verbal inflectional categories in final (rather than medial) clauses; the tendency for semantic information expressed in the final clause to be distributed across one or multiple medial clauses, via principles of scope. With these principles in mind, consider the example below:

(109) *manɨ arwã apiñi añɨgɨ ŋumɨndaka*
  [manɨ arwã api-ñi añɨgɨ ŋu-m-ɨ=ndaka]_{MEDIAL}
  there bush father-PL sago harvest-IPFV-COH=SEQ.R

  kri nɨmanɨ makapmɨkɨ   chagapmapa.
  [kri nɨ=manɨ mɨ=aka-pm-ɨ=kɨ]_{MEDIAL} [chaga-pm-apa]_{FINAL}
  thing INS=there TOP=put-IPFV-COH=CNT.R emerge-IPFV-R
  'Ol papa bilong bus save wokim saksak long dispela hap na putim ol samting long dispela hap na save kamap long ples.'
  'There the owners of (that part of) the bush having harvested the sago, (their) things they would put there and then return to the village.'
  (Emma Airɨmarɨ, afi100714ii _1:37)

The order of the clauses reflects the temporal ordering of the events in the sequence (syntactic iconicity). The medial clauses are easily identifiable, since they all have a chaining

enclitic attached but the final clauses does not (marking of dependency relations). The verb in the final clause is marked for the realis inflectional category, while the medials are not (final clauses marked for more verbal categories than medial clauses). The inflectional realis semantics marked in the final clause extends to the medial clauses, though they are not themselves marked for the inflectional realis category (scope).

In order to better understand the workings of these basic principles in Chini, in the following sections I describe: the function of the dependency relations of each of the three pairs of linkage devices (7.1); the morphology of medial verbs (7.2) and also the issue of the scope and resolution of negation in clause chaining (7.2.5). Finally, I discuss the grammatical heterogeneity of final clauses (7.3).

7.1 Dependency relation functions and their semantic interpretations

Dependency relations for clause chaining in most Papuan languages have been described in terms of switch-reference. Same-subject linkage constructions are distinguished from different-subject constructions as a referent tracking device in discourse (Jacobsen 1967; Haiman & Munro 1983). Switch-reference systems have been described for many languages, and these systems also exhibit a number of important differences in terms of what property of participants the constructions track, e.g. whether it is grammatical subjects or topics that are more central to the dependency relations (Longacre 1972; Reesink 1983; Roberts 1997; Daniels 2015). In Chini, however, the chain linkage morphology does not function to track referents nor does it code information about any other property specific to participants. Instead, the dependency relations serve to manage the flow of different types of information across chained clauses.

The most frequent symmetrical and asymmetrical semantic relations that arise from the different dependency constructions include: temporal succession or overlap, manner, temporal contingency, conditionality, and causality, though data in particular from conversation reveal a much wider array of possibilities.[123] There are two dependency relation types that involve asymmetrical semantic relations, namely temporal contingency and the juxtaposition of presuppositional/given versus dynamic/new information. Symmetrical relations are interpretable from the constructions that signal continuity of information across clauses. The six linkage devices and the meanings they code are summarized in the table below.

Table 18: CLAUSE CHAIN LINKAGE DEVICES IN CHINI

	Dependency relation		
	Temporal succession, contingency	Continuity of information	Framing of presuppositional information
Realis	=ndaka	=kɨ	=va
Irrealis	=ndata	=tɨ	=mɨ

I discuss these and one other chaining construction in the following sections.

---

[123] It is important to keep in mind that the semantic relationships that hold across chained clauses in Chini can be expressed in various ways in English and in Tok Pisin. That is, it is impossible to provide literal translations in English or Tok Pisin for Chini clause chains, because the principles are so different. So, the translations I provide for clause chains should be considered 'free' (liberal) with respect to clause combining, while still being 'literal' (or conservative) for other aspects of any particular example. For some examples, I felt it necessary to provide even freer, more liberal translations when doing otherwise would lose the emic gist of the original Chini. Those extra-liberal translations are labeled 'free'. However, it is important to understand that the translations themselves do not give direct insight into the Chini-specific functions of the clause chaining constructions, since there is no clause-combining construction whatsoever in English or Tok Pisin that comes close to conveying the types of information that are conveyed by the Chini devices. As Reesink (2014) argues: "[R]eliance on translations in a descriptive grammar is bad advice if we are interested in the language-specific means to organize known and new information... As shown by the different translation possibilities for various examples, this is not a solution that helps us understand how a speaker of a particular language can express the levels of presupposition and assertion. Free translations cannot be relied on for ascertaining language-specific constructions" (2014:259).

7.1.1 Dependency relation function of *=ndaka/=ndata* combinations

The chain linkers *=ndaka* (realis) and *=ndata* (irrealis) both indicate a relationship of

temporal contingency across clauses. This often involves a temporal gap between two or

more events:

       Temporal contingency linker
(110) *aku*   *ñi*   *ñjambari*   *yuwandaka*
       [aku   ñi   ñji-amba-ri   yu-wa=**ndaka**]_{MEDIAL}
       DM   PL   PL.POSS=head-PL   grab-R.PL=**SEQ.R**

       aganiŋgi   *muyuwaki*
       [aga-ni=ŋgi   mi=yu-wa=ki]_{MEDIAL}
       large_string_bag-PC=COM   DIST=grab-R.PL=CNT.R

       ñimhimikinimarki.
       [ñi=mhi= mi=ki-nimar-ki]_{FINAL}
       PL=FOC.ALL= ALL=propel-TLOC.PL-R
       'So once they (the men) grabbed all their (the women's) (detached) heads, (they) grabbed (them) together with the large string-bags and threw (them) all to them (the women).' (Anton Manna, afi220414iii_34:54)

Temporal dependency is reinforced by the strong tendency in future-oriented chains for a

medial verb in a *=ndaka* clause to be inflected as realis but the final verb inflected as irrealis:

       Temporal contingency linker (realis-inflected medial verb)
(111) *bmurupa*   *agiyindaka*
       [bmurupa   agi-**yi**=ndaka]_{MEDIAL}
       morning   **go/come_upriver-R.PC**=SEQ.R

       niŋgimiŋi   *ri.*
       [ni=ŋgimiŋi   **ri**]_{FINAL}
       REP=afternoon   **go/come_downriver.IRR**
       '(I) having gone upriver in the morning, will then come back downriver in the afternoon.' (Joseph Manna, afi150514ii_9:58)

The corresponding irrealis linker *=ndata* indicates the same dependency relationship,

regardless of any other differences brought about by the irrealis component (which I discuss

later on):

Temporal contingency linker (irrealis)

(112) ...*myagɨ*   *amurgiarɨndata*
     [myagɨ   amu-rgi.arɨ=**ndata**]_{MEDIAL}
     betel.nut   seize-MOD=**SEQ.IRR**

     nɨgŋɨ   *aŋɨtɨ*   *aŋgɨndu!*
     [nɨ=gŋɨ   aŋɨ=tɨ]_{MEDIAL}   [aŋgɨ=ndu]_{FINAL}
     REP=later   go/come.MOD=CNT.IRR   1DU=perceive.PROX.IMP
     'Once (you) get the betel nut, come back afterwards and see us two!'
     (Anton Manna, afi141016iv_15:31)

7.1.2   Dependency relation function of =*kɨ*/=*tɨ* combinations

The chain linkers =*kɨ*/=*tɨ* indicate high continuity (or cohesion) of information across clauses.

While temporally anterior events in =*ndaka* and =*ndata* medial clauses are construed in asymmetrical terms (i.e., of temporal contingency), here the semantic relations of temporal succession and overlap that =*kɨ* and =*tɨ* medials express are more readily interpretable as symmetrical. (To put it another way, the symmetrical semantic relations in these constructions arise from the symmetrical pragmatic relations in terms of continuity of information).

     Continuity of information construction

(113) *añi*   *avarkɨ*   *avɨgakɨ*   *manɨ*   *ñjvayavapa.*
     [añi   avar-kɨ   avɨ-ga=**kɨ**]_{MEDIAL}   [manɨ   ñjvɨ-ayi-avɨ-apa]_{FINAL}
     1PL   INCONS-PC   descend-R.PL=**CNT.R**   there   PL.BEN=wait-TLOC-R
     'We (the Andamang women) went down there (to the meeting-point for the crop exchange) in vain and were waiting there for them (the Dibu women).'
     (Emma Airɨmarɨ, afi042414i_0:45)

In the linkage constructions in the above example and in (114) through (117) below, the =*kɨ*/=*tɨ* linkers signal continuity across the medial and the final clause.

To understand the behavior of =*kɨ* and =*tɨ* medial clauses that link to final clauses in these examples, it is critical to understand what type of information the final clause construction is used for. Final clauses express the new, focal information or event in the chain. In terms of the discourse function of final clauses, that information can also be

described as 'dynamic'. The focal events in final clauses are the primary material for use as contexts in the subsequent discourse, for example in tail-head linkage (see de Vries 2005). This pragmatic characterization of Papuan-style chaining corresponds to what other Papuanists have described for other languages. Reesink (2014) describes final clauses as tending to convey the main assertion. Similarly, Sarvasy (2015) describes them as having a "relative prominence [...] in establishing 'waypoints' in a sequence of events" (Sarvasy 2015:692). The information in the =*ki* and =*ti* medial clauses in these examples is not 'focal' but rather 'ancillary': it contains the event that leads to the focal event in the final clause:[124]

Continuity of information construction
ANCILLARY EVENT

(114) ...*ñi*   *nɨmbumbu*   *nɨgɨ*   *vɨchɨkɨ*
   [ñi   nɨ=mbu~mbu   nɨgɨ   vɨ=ch-i=**ki**]MEDIAL
   PL   REP=play~NMLZ   another   BEN=ascend-IRR=**CNT.R**

FOCAL EVENT
akwamɨ   *nɨpapmɨ*   *ñjañiñi.*
[akwamɨ   nɨ=papmɨ   ñji=añi~ñi]FINAL
day   NEW.P/ALL=exact   PL.DAT=give~IRR
'...they (the Paynamar folks) will come back up again to play soccer and (we) will set an exact date with them.'
(Anton Manna, afi260814v_16:50)

Continuity of information construction
ANCILLARY EVENT   FOCAL EVENT

(115) *mbarɨŋri*   *ŋɨmɨtɨ*   *kɨrvagɨndɨ.*
   [mbarɨŋ-ri   ŋɨ-m-ɨ=**ti**]MEDIAL   [kɨrvɨ=agɨ-ndɨ]FINAL
   Breri_man-PL   pull-IPFV-COH=**CNT.IRR**   CISLOC=go/come_upriver-PROH
   '(You all) don't keep pulling the Breri men such that (they) come hither upriver (i.e., and take more of our land).' (Paul Guku, afi250814iv_45:38)

---

[124] So, for example, it is very common for =*ki* and =*ti* medial clauses to be headed by verbs of motion, though this is just a tendency.

Continuity of information construction

ANCILLARY EVENT			FOCAL EVENT		
(116) *tutɨ*			*aŋgɨ*	*ambɨgɨ*	*mumui."*
[tu=**tɨ**]_{MEDIAL}			[aŋgɨ	ambɨgɨ	mɨ=mu-i]_{FINAL}
come=**CNT.IRR**			1DU	house	ALL=go_inside-IRR

' "(You) come and let's the two of us go inside the house!" '
(Emma Airɨmarɨ, afi010514v_8:27)

In other words, the =*kɨ* and =*tɨ* linkers do not themselves indicate new information status. Rather, when they link directly to final clauses, they take on the pragmatic qualities expressed in the final clause and thus constitue part of the new and dynamic information in the chain. When =*kɨ* and =*tɨ* clauses link to other clause types, for example to =*va* medial clauses, they also signal continuity, but here they take on the pragmatic qualities attributable to the =*va* medial construction. In the example below, the =*va* medial construction is interpretable as a temporal prerequisite prior to the focal event. The =*kɨ* medial clause that links to the =*va* medial, is used to express the ancillary event continuous with the temporal prerequisite:

Continuity of information construction

ANCILLARY EVENT			TEMPORAL PREREQUISITE	
(117) *anɨ*	*wavɨ*	*yukɨ*	*maŋuñi*	*añiva*
[anɨ	wavɨ	yu=**kɨ**]_{MEDIAL}	[ma=ŋuñi	añi=va]_{MEDIAL}
3SG	sheath	fetch.R.PC=**CNT.R**	DIST.DEF=two	give.R.PC=**PRE.R**

FOCAL EVENT		
maŋuñi	*varɨ*	*pɨyi.*
[ma=ŋuñi	varɨ	pi-yi]_{FINAL}
DIST.DEF=two	ground	sit-R.PC

'He fetched palm sheaths and gave (them) to those two and those two sat on the ground.' (Or: 'Once he fetched palm sheaths and gave (them) to those two, those two sat on the ground.') (Joseph Manna, afi200514i_6:24)

In the next section, I start by discussing similar examples but with a focus on the pragmatic and semantic contributions of the =*va*/=*mɨ* constructions.

7.1.3 Dependency relation function of *=va/=mɨ* combinations

The *=va/=mɨ* linkage devices are used to demarcate the presuppositional content in a chain, which serves as a frame for the following information. First I elaborate on what this characterization means and then discuss the most common asymmetrical semantic relationships that arise from this type of dependency relation.

My labeling of the *=va/=mɨ* medial clauses as 'presuppositional' corresponds strongly to Chafe's (1976) definition of topics and Haiman's (1978) definition of conditionals as framing devices:

> The topic sets a spatial, temporal, or individual framework [...] which limits the applicability of the main predication to a certain restricted domain (Chafe 1976:50).

> Conditionals, like topics, are givens which constitute the frame of reference with respect to which the main clause is either true (if a proposition), or felicitous (if not) (Haiman 1978:564).

We could also describe the information status of *=va* and *=mɨ* clauses in terms of givenness, and indeed that characterization would be accurate for most of the data. However, part of what I want to convey with the concept 'presuppositional' is that it is not just the information status of the clause that is signaled by this pair of devices but the *relation* that information has to whatever follows. That relation is one of framing.

Consider the example below. The information in the two medial clauses was already expressed in the immediately prior discourse, and is therefore highly given. Here Anton deduces that the tobacco leaves he was given were not separated out properly, as they should have been to prevent them from sticking together. The *=va* construction effectively renders the presuppositional content as a frame for the focal event in the final clause:

Presuppositional framing construction
(118) *miñjaga.*
'Paspas tumas.'
<u>Emma Airɨmarɨ:</u> 'It's all stuck together.'

miñjaga.
'Paspas tumas.'
<u>Anton Manna:</u> 'It's all stuck together.'

ANCILLARY EVENT   (MAIN) PRESUPPOSITIONAL EVENT
achigamkapakɨ   *ñjagava*
[achigɨ-amk-apa=kɨ]_{MEDIAL}   ñji-ag-a=**va**]_{MEDIAL}
many-AUG.PC-R=CNT.R   MID-stick_together-R=**PRE.R**

FOCAL EVENT
ñi   mɨnamɨmati.
[ñi   mɨ=namɨ-ma-ti]_{FINAL}
PL   DIST=separate-R-NEG
'Planti tumas na paspas tumas na yupela no rausim.'
<u>Anton Manna:</u> '(The tobacco leaves you gave me) were too many and all stuck together, not like you all had pulled them apart (as one would expect).'
(afi010514v_11:22)

Similar to what I described in (7.1.2), the ancillary event in the *=kɨ* medial clause is continuous with the main presuppositional event. Or, to put it another way, it is the information in both medial clauses that constitutes the presuppositional frame. This possibility can be seen again below:

Presuppositional framing construction (biclausal presuppositional event)
(119) *″ twamɨŋgañi ŋipmɨ   apiakɨ*
      [twamɨŋgañi ŋɨ=pmɨ   api-a=kɨ]_{MEDIAL}
      child.PC   POSS.REFL=penis   gratify-R=CNT.R

ku   pa   ritmapava
[ku   pa   ri-tm-apa=va]_{MEDIAL}
1SG.NOM   still   go/come_downriver-IPFV-R=**PRE.R**

ku   ŋgu   akinda.″
[ku   ŋgu   aki-nd-a]_{FINAL}
1SG.NOM   fish   spear.IRR-PFV-R
' "The kid messed up the pond area (lit. masturbated) while I was still heading downriver and (so) I didn't spear any fish." ' (Joseph Manna, afi150514ii_34:16)

In the next example, Dorothy complains about her daughter-in-law, who habitually avoids her. Here, it is the focal rather than presuppositional event that contains an ancillary event (in the =kɨ medial clause). Here as in other examples, the function of the =va linkage device is consistent:

Presuppositional framing construction (biclausal focal event)
(120) *ku*   *ŋgaŋgukŋimapava*
       [ku   ŋgɨ=aŋgu.kŋi-m-apa=**va**]MEDIAL
       1SG.NOM   3SG.DAT=inquire-IPFV-R=**PRE.R**

      anɨ   *ŋirkŋɨ*   *niŋaviandikɨ*
      [anɨ   ŋɨ=irk-ŋɨ   nɨ=ŋɨ=avia.ndi=kɨ]MEDIAL
      3SG   POSS.REFL=talk-PC   INS=1SG.ACC=withhold.R=CNT.R

      ku   *yanɨ* *pupmu*   *kwavɨyi.*
      [ku   yanɨ pupmu   ku-avɨ-yi]FINAL
      1SG.NOM   FOC   alone   cross-TLOC-R.PC
      'I had been asking her (Dorin), but she withheld her plans from me and I alone went to the other side of the river (i.e., to collect greens).'
      (Dorothy Paul, afi051116ii_15:14)

The semantic interpretations of =va and =mɨ medial clauses include conditions, causes, temporal prerequisites, the content of a suggestion, evaluation or antithetical, among other possibilities. Similar to what I described earlier in this chapter, these asymmetrical semantic relations are not indicated explicitly through the use of =va or =mɨ; instead those relations arise via interpretation from the presuppositional (pragmatic) nature of the dependency relation.[125] That is, the diverse semantic asymmetries are epiphenomenal to the unitary pragmatic asymmetry that characterizes all uses of these medial linkage constructions. The asymmetrical semantic relations involve conceptually anterior events like those mentioned above, which then frame the conceptually posterior event (e.g., consequents,

---

[125] Another important point but one I have not belabored here is that many of these combinations can be vague in the type of asymmetrical semantic relation they express. This is due to the fact that the specific nature of the relation is not necessarily overtly indicated, but results from interpretation of the (pragmatically-based) dependency relation, and may also include additional elements, e.g. discourse markers such as *mavindɨ* 'thus' indicating causality, or a rising pitch on the protasis, which indicates conditionality.

effects, the suggestion, evaluation or antithetical). The following examples give an

impression of some of the most common semantic relationships:

Asymmetrical semantic relationship: cause and effect
(121) *ramɨ   anɨ   mayiva   mɨtarwatɨ   muyunda.*
[ramɨ   anɨ   mɨ=ayi=**va**]_MEDIAL   [mɨ=tɨ-arwa-tɨ   mɨ=yu-nd-a]_FINAL
pig   3SG   TOP=spear.R=**PRE.R**   DIST=path-long-VIA   ALL=go.IRR-PFV-R[126]
'He killed the pig and it did not go far.' [Free translation: Because he killed the
pig it did not go far.] (Paul Guku, afi100514i_2:40)

Asymmetrical semantic relationship: temporal prerequisite and result
(122) *aku   añi   papmɨ   kri   napwatɨ   mɨkaviva*
[aku   añi   papmɨ   kri   nɨ=apwatɨ   mɨ=ki-avi=**va**]_MEDIAL
DM   1PL   completely   thing   INS=in_the_open ALL=put-TLOC.R.PC=**PRE.R**

añi   mɨŋgini.
[añi   mɨ=ŋgɨn-i]_FINAL
1PL   DIST=perceive.DIST-IRR
'Ok we put the things completely out in the open and then we'll check it out.'
(Peter, afi260814v_23:11)

Asymmetrical semantic relationship: condition and consequent
(123) *amamɨ ñiŋɨ, anmɨ, amboriŋgra riŋira.*
'Get food, alcohol, buy a chicken.'

ñi   ramɨ   riŋiramɨ   ñi   ramɨ   riŋira.
[ñi   ramɨ   ri-ŋɨ.ra=**mɨ**]_MEDIAL   [ñi   ramɨ   ri-ŋɨ.ra]_FINAL
PL   pig   buy-MOD=**PRE.IRR**   PL   pig   buy-IMP
'(And) should you all buy a pig then (so be it) buy a pig.'
(Frank Manna, afi040814iii_41:58)

Asymmetrical semantic relationship: condition and consequent
(124) *makŋi   akɨramɨ   gŋɨ   aŋgwakɨ   ŋgɨgɨ   amɨndɨ.*
[ma-kŋi   akɨ-ra=**mɨ**]_MEDIAL   [gŋɨ   aŋgwakɨ   ŋgɨgɨ   amɨ-ndɨ]_FINAL
DIST.DEF-way   do-MOD=**PRE.IRR**   late   morning   village   ingest-PROH
'If (you) do that, (you) can't eat in the village late in the morning (i.e., you'll need to
get up and leave straight away).' (Anton Manna, afi040814iii_8:36)

---

[126] N.B. The diverse glosses for the proclitic form *mɨ=* as seen in this and other examples appear strange but are
in fact motivated in different ways that need not concern us here.

Asymmetrical semantic relationship: cause and effect

(125) *ñi*   *makumɨ*
    [ñi   mɨ=aku=**mɨ**]_{MEDIAL}
    PL   DIST=perform_exchange_ dance.NEG=**PRE.IRR**

    añi   *miŋginɨmati.*
    [añi   mɨ=ŋginɨ-ma-ti]_{FINAL}
    1PL   DIST=perceive.DIST-R-NEG
    'It's not as if they (our parent's generation) performed them (the ancestral exchange dances) that we might know (how to perform) them.'
    (Anton Manna, afi141016iv_34:29)

To summarize what I have described in this section, the uses of the =*va* and =*mɨ* medial constructions always involve a 'demarcation' or 'break' within the flow of information in the chain. The presuppositional event (or event sequence) frames and is set apart from the following information. In that sense, then, these medial constructions exhibit a high degree of independence even though they are still dependent structurally.

In the next section I briefly discuss a construction that allows for a clause with presuppositional content to be nevertheless continuous with the information status of the following clause, in particular when both events in an asymmetrical combination represent new information.

7.1.4   **Dependency relation function of =*vakɨ* combinations**

Some New Guinea languages have a chaining construction that allows for chain linkage morphemes to co-occur (see Wade 1997 for Apalɨ, a Trans New Guinea language spoken not far upriver on the Sogeram from Chini). In Chini, the linker =*kɨ* may under certain conditions attach to =*va*, forming the complex linkage device =*vakɨ*. Although this construction is much less frequent in discourse than the other medial constructions, the co-occurrence of the two linkers suggests that the realis continuous (=*kɨ*) and realis presuppositional (=*va*) dependency relations are by no means oppositional.

The most common use of this construction is to represent an event or event sequence as being a presuppositional frame (=*va*) for the event in the final clause (and thus still pragmatically and semantically asymmetrical) yet at the same time continuous (=*ki*) with the new and dynamic information status of the final clause. This possibility can be seen in the example below. Here Anton and I were walking through the bush with the video camera, and he addressed me when he saw a Malay apple at one point along the way. The reference of the condition itself is not at all 'given' or pragmatically recoverable from the context in any way. It is in fact completely new information, and this unusual possibility is represented in the (equally unusual in terms of its frequency) use of the =*vaki* medial construction:

Presuppositional frame as part of new information in final clause

(126) *a,   mɨmani.   mɨyigɨ   ŋgɨma...*
    a   mɨ-ma-nɨ-i   mɨ=yigɨ   ŋgɨma
    DM   DIST=DIST.COP-IPFV-IRR   DIST=name   Malay_apple
    'Ah, there it is. It's called *ŋgɨma* ('Malay apple')...'

    nu   pa   maminda.
    nu   pa   mɨ=am-i-nd-a
    2SG yet   DIST=ingest-IRR-PFV-R
    'You haven't eaten it before.'

    (UNREALIZED) CONDITIONAL EVENT   FOCAL EVENT
    añi   gŋɨ   nɨmɨnigɨ   ñivakɨ   *nu   mami.*
    [añi   gŋɨ   ni=mɨ=nigɨ   ñi=**va=ki**]MEDIAL   [nu   mɨ=am-i]FINAL
    1PL   later   INS=DIST=one get.IRR**PRE.R=CNT.R**   2SG   DIST=ingest-IRR
    'If we grab one of them later, you'll eat it.' (Anton Manna, afi111016ii_41:56)

What this construction tells us about dependency relations in Chini clause chaining is that the discourse status of a clause (in terms of new or given information) is independent of pragmatic asymmetry. So, it is 'almost but not always' the case that the presuppositional content in a =*va* medial clause is 'given', but the =*vaki* construction shows that under the right pragmatic circumstances, the presuppositional frame can in fact be new despite how counter-intuitive this might seem at first.

As one final comment on the significance of this construction, it suggests that attempts to see Chini clause chaining in terms of coordination versus subordination or related syntactic-semantic concepts (e.g., co-subordination) ultimately fail altogether to account for how this system works. The *=kɨ/=tɨ* medial constructions could be easily and uncontroversially described as coordinate, while the *=ndaka/=ndata* as well as *=va/=mɨ* constructions could be described as co-subordinate (or subordinate, depending on one's view of what subordination is). But these primarily syntactic concepts can hardly describe the combinatorial effect of the *=vakɨ* medial construction. Simply put, the syntactic structures involved in Chini clause chains are best seen as the hardware or machinery in a system powered by pragmatic principles.

7.2   Medial verb morphology

Here I discuss the suffixal morphology particular to medial verbs and discuss the semantic contribution(s) of each construction to clause chains. In several places in this section I refer to the aspectual, modal, and negative base constructions as described in greater detail in (4.3).

7.2.1   Medial verbs consisting of uninflected modal base forms

In chains where the final verb is inflected for one the categories built on the modal bases (i.e., the imperative, immediate imperative, potential, delayed future, anterior future, and uncertain future), the verbs that appear in any *=ndata*, *=tɨ*, and/or *=mɨ* medial clauses will consist of (uninflected forms of) the derived modal bases. These bare modal base forms have no further distribution in the grammar outside of medial clauses. (In this section, the term 'modal' is meant solely with respect to the modal base construction in Chini, and not to the general typological or otherwise concept of modality.)

The workings of this construction type can be seen in the imperative chain below. Here Emma recounts that she had just told the children she was looking after to get up and accompany her to where the rest of us were sitting. The final verb is an imperative and the medial verb consists of an underived modal base. Both clauses have the same (i.e. imperative) illocutionary force:[127]

Modal base form for verb in =*mɨ* medial clause (imperative chaining construction)
(127) *"ñi   cpmichigarɨmɨ   añi   aŋɨ!"*
[ñi   **cpmichi-gi.ari**=mɨ]_{MEDIAL}   [añi   aŋɨ]_{FINAL}
PL   **get_up.PL-MOD**=PRE.IRR   1PL   go/come.IMP
' "You all get up (and) let's go!" ' (Emma Airɨmarɨ, afi141016iv_32:44)

The verbs in =*ndata* and =*tɨ* medial clauses tend to be affected by scope from the modal category marked in the final clause. That is, they take on the meaning of whatever modal base category appears in the final clause:

Modal base forms for verbs in =*ndata* and =*tɨ* medial clauses (imperative chain)
(128) ...*myagɨ   amurgiarɨndata*
[myagɨ   **amu-rgi.ari**=ndata]_{MEDIAL}
betel_nut   **seize-MOD**=SEQ.IRR

nɨgŋɨ   aŋiti   aŋgɨndu!
[ni=gŋɨ   **aŋi**=tɨ]_{MEDIAL}   [aŋgi=ndu]_{FINAL}
REP=later   **go/come.MOD**=CNT.IRR   1DU=perceive.PROX.IMP
'Once (you) get the betel nut, come back afterwards and see us two!'
(Anton Manna, afi141016iv_15:31)

---

[127] Recall that the forms of the modal base derivations are lexically-conditioned and are thus not predictable. The modal base forms are identical to the imperative forms for most, but not all, verbal lexemes. So, while one analysis is that scope of the imperative category extends from the final to the medial clause(s). Another possibility is that the formal identity between modal bases and imperatives for most verbs could be enough for the imperative interpretation to come from the modal base form of the medial verb.

Modal base forms for verbs in =*tɨ* medial clauses (delayed future chain)

(129) *ku*   *..agɨtɨ*
[ku   **agi**=tɨ]_{MEDIAL}
1SG.NOM   **go/come_ upriver.MOD**=CNT.IRR

ku   *ñjindutɨ*   *mɨtarɨndikɨ.*
[ku   ñji=**ndu**=tɨ]_{MEDIAL}   [mɨ=ta-rɨ-ndɨkɨ]_{FINAL}
1SG.NOM   PL.DAT=**perceive.PROX.MOD**=CNT.IRR   DIST=remove-MOD-D.FUT
'I'll go upriver and see them and take it out (the stick used to aid the banana tree seedling in its growth).' (Dorothy Paul, afi160714iv_45:18)

Medial verbs built on modal bases that occur in =*mɨ* clauses are trickier with respect to scope. Sometimes, scope of the modal category does extend to the medial clause. This can be seen in the example below, where the meaning of the potential *-ru* category in the final clause has scope over the previous medial:

Extension of scope to =*mɨ* medial clause

(130) *ɨvkuyi*   *agɨmɨ*   *anɨ*   *ñikɨyimrɨru.*
[ɨvkuyi   agi=mɨ]_{MEDIAL}   [anɨ   ñi=kɨyim-rɨ-ru]_{FINAL}
folks   go/come_upriver.MOD=PRE.IRR   3SG   PL=do_whatsit-MOD-POT
'Nogut ol lain i go antap na em i mekim long ol.'
[Free translation: 'It's likely the folks'll go upriver and he'll negatively affect/do thus to them.'] (Frank Manna, afi220414iii_26:26)

Other times, the modal category in the final clause is not interpreted as having scope over the =*mɨ* medial:

(131) *amamɨ ñiŋi, anmɨ, amboriŋgra rɨŋira.*
'Get food, alcohol, buy a chicken.'

ñi   *ramɨ*   *rɨŋɨramɨ*   *ñi*   *ramɨ*   *rɨŋira.*
[ñi   ramɨ   **ri-ŋi.ra**=mɨ]_{MEDIAL}   [ñi   ramɨ   **ri-ŋi.ra**]_{FINAL}
PL   pig   **buy-MOD**=PRE.IRR   PL   pig   **buy-IMP**
'(And) should you all buy a pig then (so be it) buy a pig.'
(Frank Manna, afi040814iii_41:58)

What determines when scope applies or is blocked is a somewhat mysterious matter (at least to me at this point in time). The data suggest in these as well as other chaining constructions, that scope is largely a matter of interpretation of particular constructional uses, rather than

something that is overtly locatable to any particular marker.[128] In the above example, for instance, the scopal interpretation would be pragmatically infelicitous ("You all buy a pig and you all buy a pig!")

7.2.2 The scope-friendly suffix *-i* for imperfective medial verb forms

A very different medial verb construction involves the suffix *-i* which acts most often as an overt indicator of a scopal relationship with the inflectional category in the final clause.[129] It occurs in the same slot in the aspectual base template as basic realis/irrealis marking. However, *-i* does not contribute any meaning whatsoever to the verb, other than to signal (in most cases) that it is under the scope of the (realis or irrealis) inflection of the final verb.

In the corpus, *-i* attaches to medial verbs in all medial clause constructions, with the exceptions of *=va* and *=mi*. It also attaches exclusively to imperfective verb forms. These *-i* medial verbs are affected by scope regardless of dependency relation/linkage device and regardless of the (aspectual, modal, or negative) base of the verb in the final clause:

---

[128] One issue with the conditional use of *=mi* medial construction when it attaches to the bare modal base form of the verb is the two possible interpretations that arise, one with an assertive interpretation of the action in the medial clause and the other with a directive interpretation. This sort of phenomenon appears not to be too uncommon in languages of New Guinea. In his grammar of Alamblak, a language unrelated to and very distant geographically from Chini, Bruce (1984) writes: "The unusual thing about the subordinate imperative/hortative in Alamblak is that it combines a sense of obligation (by the hortative prefix) with a sense of conditionality (by the irrealis suffix). This particular combination is not allowed in a single English clause. Thus, example 395 must be translated in English by a coordinate sentence (or two sentences) with the contingency subordinated to one of the independent clauses, e.g., 'Let it come and if/when it does, I will shoot it.' The combination of both features (obligation and conditionality) in a single clause in Alamblak allows for the change of illocutionary force from the dependent to the independent clause. The subordinate imperative/hortative clause, then, is a counter-example to Thompson and Longacre's restriction on subordinate clauses regarding independent illocutionary force" (Bruce 1984:271).

[129] For lack of a better label I have glossed *-i* as 'COH', i.e. 'cohesive' in the sense that *-i* forms (almost always) cohere with the realis or irrealis marking on the final verb.

Scope-friendly -ɨ imperfective forms in =kɨ medial clauses

(132) ñi   mumbupmɨkɨ   chitmɨkɨ
      [ñi   mɨ=**mbu-pm-i**=kɨ]ₘₑₐₗ   [**chi-tm-i**=kɨ]ₘₑₐₗ
      PL   it=**lay_floor-IPFV-COH**=CNT.R **ascend-IPFV-COH**=CNT.R

      kandmɨ   arwari   ñi   mambɨyitmi.
      [kandmɨ   arwa-ri   ñi   ma=mbɨyi-tm-i]ₑₐₗ
      stick   long-PL   PL   FOC=stand-IPFV-IRR
      'They would lay the floor, move upwards, and they would stand up a bunch of
      long sticks (to build a yam house).' (Frank Manna, afi080514i_7:29)

Scope-friendly -ɨ imperfective forms in =ndaka and =kɨ medial clauses

(133) manɨ   arwã   apiñi   añjɨgɨ   ŋumɨndaka
      [manɨ arwã   apɨ-ñi   añjɨgɨ   **ŋu-m-i**=ndaka]ₘₑₐₗ
      there bush   father-PL   sago   **harvest-IPFV-COH**=SEQ.R

      kri   nɨmanɨ   makapmɨkɨ   chagapmapa.
      [kri   ni=manɨ   mɨ=**aka-pm-i**=kɨ]ₘₑₐₗ   [chaga-pm-apa]ₑₐₗ
      thing   INS=there   TOP=**put-IPFV-COH**=CNT.R   emerge-IPFV-R
      'Ol papa bilong bus save wokim saksak long dispela hap na putim ol samting long
      dispela hap na save kamap long ples.'
      'There the owners of (that part of) the bush having harvested the sago, (their)
      things they would place there and then return to the village.'
      (Emma Airɨmarɨ, afi100714ii_1:37)

Scope-friendly -ɨ imperfective form in a =tɨ medial clause

(134) mbarɨŋri   ŋimitɨ   kɨrvagindɨ.
      [mbarɨŋ-ri   **ŋi-m-i**=tɨ]ₘₑₐₗ   [kɨrvɨ=agɨ-ndɨ]ₑₐₗ
      Breri_man-PL   **pull-IPFV-COH**=CNT.IRR   CISLOC=go/come_upriver-PROH
      '(You all) don't keep pulling the Breri men so that (they) come hither upriver
      (i.e., and take more of our land).' (Paul Guku, afi250814iv_45:38)

These previous examples of the -ɨ medial verb construction have all involved a
semantic interpretation of temporal succession across clauses. A semantic interpretation of
temporal eclipse rather than succession arises when a medial verb is formed on an
imperfective base and the final verb on a perfective base (see 4.4 for further discussion of the
aspectual base constructions). Temporal eclipse has at least two possibilities: total or partial.
When the imperfective medial verb in this chaining construction is marked by -ɨ as in the

215

example below, the only possible interpretation (as far as I know) is total temporal eclipse of

the parts:

Medial verb marked by -*ɨ* in IPFV-PFV chain (total temporal eclipse)
(135) *anɨ   ramɨ   yigɨ   irutmɨkɨ   atwãŋgɨ   wuyi.*
[anɨ   ramɨ   yigɨ   **iru-tm-i**=kɨ]_{MEDIAL}   [atwã=ŋgɨ   wu-yi]_{FINAL}
3SG   pig   sign   **call-IPFV-COH**=CNT.R howl=COM   go/come-R.PC
'She was calling out the sign *ramɨ* ('pig') as she went off howling.'
(Frank Manna, afi260612i_5:15)

When, instead, the imperfective medial verb in a temporally eclipsed chaining construction is

marked not by -*ɨ* but by the basic realis category, the only possible interpretation is partial

temporal eclipse, i.e. between the ongoing event in the medial clause and the punctual event

or interruption in the final clause:

Medial verb marked by realis (-*apa*) in IPFV-PFV chain (partial temporal eclipse)
(136) *...añi   kanɨ   ñjinunkunkumapakɨ,   krukɨyi,*
[añi   kanɨ   **ñji-nɨ-nku~nku-m-apa**=kɨ]_{MEDIAL}   kru-kɨyi
1PL   here   **MID-?-hang~IPFV-IPFV-R**=CNT.R   middle-whatsit

ku   kɨyi   kanɨ   aŋgurkŋu   ku   mamavkɨ.
[ku   kɨyi   kanɨ   aŋgurkŋu   ku   ma=mɨ=av-kɨ]_{FINAL}
1SG.NOM whatsit here   tall_grass_species   1SG.NOM   FOC=ALL=fall-R.PC
'...as we were swinging back and forth (on the tree swing) here, into the middle, it
was right into this tall grass over here I fell.' (Paul Guku, afi260814v_4:39)

Lastly, it should be noted that there are some (albeit very infrequent) exceptions to -*ɨ* medial

clauses falling within the scope of the final clause. In the example below, the clausal

negation (marked by the -*nda* suffixal complex) does not extend to the medial clause, which

has positive polarity:

216

Scope blocked despite *-ɨ* marking in medial clause

(137) *añi   avarkɨ   miñjiñjmɨkɨ*
[añi   avar-kɨ   mɨ=ñji~ñj-m-ɨ-kɨ]_{MEDIAL}
1PL   INCONS-PC   DIST=plant~IPFV-IPFV-COH=CNT.R

dmwavɨ   mɨkɨyimamɨnda.
[dmw.avɨ   mɨ=kɨyima-mɨ-nd-a]_{FINAL}
foolishly   DIST=do_whatsit-HAB-PFV-R
'We plant them wherever but (we) don't do so foolishly (by doing things like chucking dirt around or throwing the digging stick).'
(Frank Manna, afi080514_5:24)

7.2.3   Nominalized verb forms in *=va* medial clauses

The nominalizer *-chi* harmonizes with irrealis-inflected imperfective verb bases and occurs in diverse constructions in the language as a generalized nominalizer. In clause chaining, it attaches to the vast majority of irrealis-inflected imperfectives that occur in *=va* medial clauses:

Nominalization of irrealis-inflected imperfective verb in *=va* medial clause

(138) *...ñjipmu   amamichiva*
[ñji=pmu   ama-m-i-**chi**=va]_{MEDIAL}
PL.POSS=beetle   ingest-IPFV-IRR-**NMLZ**=PRE.R

ñi   wuyikɨ   muchu.
[ñi   wu-yi=kɨ]_{MEDIAL}   [mɨ=chu]_{FINAL}
PL   go/come-R.PC=CNT.R   DIST=remove.IRR
'When their beetles have started feeding, they'll go and remove them (from the vine).' (Joseph Manna, afi150514ii_25:31)

In the Akrukay dialect only, basic realis verb forms (specifically those built on an imperfective aspectual base) that occur in a *=va* medial clause are nominalized by the suffix *-i* (which appears to be an elided form of the nominalizer *-yi*):

Nominalization of realis-inflected imperfective verb in a *=va* medial clause

(139) *mɨchiragɨ   manɨ   gapaiva   ..anɨ   niwuyi.*
[mɨ=chiragɨ   manɨ   gɨ-apa-**i**=va]_{MEDIAL}   [anɨ   ni=wu-yi]_{FINAL}
DIST=body   there   lie-R-**NMLZ**=PRE.R   3SG   REP=go-R.PC
'As its body was lying there, he went back.' (Roy Mayapar, afi010814i_1:15)

7.2.4 Inflectional realis/irrealis marking in =ndaka, =kɨ, =va, and =vakɨ medials

The specialized medial verb suffixes I have described thus far are, however, far less frequent in discourse than the much more frequent pattern where verbs in =ndaka, =kɨ, =va, and =vakɨ medial clauses are marked for the basic realis/irrealis distinction. The inflectional realis/irrealis marking makes semantic contributions that are fairly straightforward from their uses in main clauses as described in Chapter 5. Here I give just a few examples so that the semantic contribution of the inflectional realis or irrealis marking does not get confused with the pragmatic contribution of the realis/irrealis distinction of the chain linkage devices, which I discussed in Chapter 8. It should be noted from the outset that the ratio of realis-inflected medials to irrealis-inflected medials in Chini discourse is as high as 49:1.[130]

It is common in future-oriented chains for the medial verb to be inflected for the basic realis category, which indicates the temporal anteriority of that event. The irrealis inflection in the final clause situates the event sequence as a whole in the future:

Future-oriented chain
(140) *twavɨŋgayi   amariyi   chavakɨ   añi   mamrugi.*
 [twavɨŋgayi   am-ar-iyi   **ch-a**=va=kɨ]   [añi   mɨ=**amu-rgi**]
 child.PL   woman-DIM-PL **ascend-R**=PRE.R=CNT.R   1PL   DIST=**hold-IRR**
 'The girls having come up, we will get it (the betel nut).' [Free translation: Once the girls have come up then we'll be able to get some betel nut.]
 (Emma Airɨmarɨ, afi141016iv_30:50)

---

[130] This ratio was found in the same 30 minutes of data discussed at the beginning of Chapter 5. The tokens are from two 15-minute chunks of two different recordings. One is from a recording of two women cooking a meal (afi051116ii, 9:00-24:00). The other is from a casual conversation with four main interactants (and various others filtering in and out) (afi141016iv, 14:00-29:00). In the clause chains in those data, there were 98 medial verbs inflected for the basic realis category and a mere 2 medial verbs inflected for the basic irrealis category. (Note that, as discussed in the other sections in this chapter, medial verbs may take a number of other forms as well and need not be inflected for realis or irrealis categories.)

Future-oriented chain

(141) *bmurupa*   *agɨyindaka*
       [bmurupa   **agɨ-yi=ndaka**]_{MEDIAL}
       morning   **go/come_upriver-R.PC=SEQ.R**

       niŋgimɨŋɨ   *ri.*
       [nɨ=ŋgimɨŋɨ   **ri**]_{FINAL}
       REP=afternoon   **go/come_downriver.IRR**
       '(I) having gone upriver in the morning, will then come back downriver in the
       afternoon.' (Joseph Manna, afi150514ii_9:58)

Sometimes the realis inflection in the medial verb can refer to a realized event in the past,

while the irrealis inflection in the final verb refers to an unrealized event in the future:

       Past and future event in same chain

(142) *anɨ*   *agɨyikɨ*
       [anɨ   agɨ-yi=kɨ]
       3SG   go/come_upriver-R.PC=CNT.R

       mɨvkɨrŋɨ   *anɨ*   *achimanɨ*   *mɨndindi.*
       [mɨ=ɨvkɨr-ŋɨ   anɨ   achi-manɨ   mɨ=ndi~ndi]
       DIST=paper-PC   3SG   upriver-there   TOP=leave~IRR
       'Em i go antap na dispela fom em bai stretim antap.'
       'He went upriver (to Madang) (already) and that form (i.e., document) he will leave it
       there upriver.' (Peter, afi260814v_38:54)

As discussed in detail in Chapter 5, there is no temporal constraint in terms of past versus

future for inflectional realis or irrealis categories, because temporal reference is not part of

the basic meaning for either half of the distinction. This is reflected in the temporal

possibilities in clause chains where a) medial and final clauses both have realis-inflected

verbs and where b) medial and final clauses both have irrealis-inflected verbs. In these

chains, temporal reference is only part of the loose contextual material.

       Realis-inflected medial and final verbs (chain interpreted with past reference)

(143) *añi*   *achiritiapava*   *ñi*   *anwa.*
      [añi   **achi-r-i-ti-apa=va**]   [ñi   **anu-a**]
      1PL   **little-ADJ-PL-ATT.PL-R=PRE.R**   PL   **die-R.PL**
      'When we were still quite small they died off.'
      (Emma Airɨmarɨ, afi141016iv_36:29)

Realis-inflected medial and final verbs (chain interpreted with future reference)
(144) *na   nu   kanɨ   agiyikɨ*
[na   nu   kanɨ   **agi-yi**=kɨ]_{MEDIAL}
CONJ   2SG   here   **go/come_upriver-R.PC**=CNT.R

mɨti   añonɨ   pɨyina?
[mɨ-ti   añonɨ   **pi-yi**-n-a]_{FINAL}
DIST-which   land   **sit-R.PC**-NMLZ-Q.R
'Na long hia yu kam antap bai yu sindaun long wanem graun?'
'And so to here you will come upriver and then what land will you settle (lit. sit)?'
(Paul Guku, afi250814iv_22:54)

Irrealis-inflected medial and final verbs (chain interpreted with past reference)
(145) *oo   ŋgwambrɨ   mumbruikɨ*
oo   [ŋgu-ambrɨ   mɨ=**mbru-i**=kɨ]
INTER   2DU-lazy_bastard   DIST=**cut.PL-IRR**=CNT.R

mɨtwavɨ   chia!
[mɨ=twavɨ   **ch-i**=a]
DIST=with   **ascend-IRR**=EXCL
'Agh you two lazy bastards really [failed to] cut any and come up (i.e., to the village) with any!' (Ros Njveni, afi111016ii_ 45:05)

Irrealis-inflected medial and final verbs (chain interpreted with future reference)
(146) *ku   Amɨŋarɨ   mayikɨ*
[ku   Amɨŋarɨ   mɨ=**ayi**=kɨ]
1SG.NOM   Ramu_river   ALL=**go/come_upriver.IRR**=CNT.R

achikɨ   tɨŋɨ   mayuku   yu.
[achikɨ   tɨ=ŋɨ   mɨ=ayuku   **yu**]
upriver   road=ADESS   ALL=quickly   **go/come.IRR**
'I'll go upriver along the Ramu, going quickly on the upriver road.'
(Dorothy Paul, afi260814v_29:03)

The point here is similar to what I have argued elsewhere in this dissertation, which is that past, future, and other semantic interpretations of clause-internal realis or irrealis marking are just that — interpretations based on the etic material present in the contexts of use of particular tokens and stretches of discourse. We know this because the interpretations change despite the consistent marking of realis or irrealis categories.

220

There is one additional chaining construction that bears mentioning, namely what we might call a 'hypothetical conditional' combination. Here, 'hypothetical' refers to the unrealized status of the condition, where that status is (not surprisingly) indicated by the irrealis inflectional marking in the protasis. The apodosis (logically dependent on that unrealized condition as it is) is likewise marked as unrealized by the irrealis inflection of its verb. The use of the =*va* linkage device indicates that the first unrealized situation is a presuppositional frame, which becomes a strong candidate for a conditional interpretation when it co-occurs with an irrealis-inflected verb like in the examples below.

Hypothetical conditional construction (use of =*va* and irrealis-inflected verbs)
(147) *miñjitɨtɨyiva*   *ku*   *ndvwaviyi.*
[mɨ=**ñji-tɨtɨ-yi**=va]_{MEDIAL}   [ku   ndvu=**avɨ-yi**]_{FINAL}
DIST=**MID-burrow-IRR**=PRE.R   1SG.NOM   2SG.BEN=**descend-IRR**
'If it (the fish) should burrow down into the ground, I will come down to (help) you.' (Dorothy Paul, afi011116iv_6:42)

The same principle applies when there are multiple protases and/or multiple apodoses. In the example below, there are two distinct protases (separated into two =*va* medial clauses) and then a unitary though biclausal apodosis (where the continuity of information is signaled by =*kɨ*).

Hypothetical conditional construction (use of *=va* and irrealis-inflected verbs)

(148) *wutmɨ   ŋɨnginiva,*   Protasis 1
[wut-mɨ   ŋɨ=**ŋgin-i**=va]_{MEDIAL}
man-PC   1SG.ACC=**perceive.DIST-IRR**=PRE.R

ku   mɨtwavɨ   akamiva,   Protasis 2
[ku   mɨ=twavɨ   **akam-i**=va]_{MEDIAL}
1SG.NOM   DIST=with   **speak-IRR**=PRE.R

mɨ   mɨndinkɨ   ñikɨ   Ancillary to apodotic event
[mɨ   mɨ=ndɨ-nkɨ   **ñi**=kɨ]_{MEDIAL}
DIST   DIST=think-NMLZ   **get.IRR**=CNT.R

ŋɨnɨŋɨ   mayu.   Main apodotic event
[ŋɨ=nɨŋɨ   mɨ=**ayu**]_{FINAL}
POSS.REFL=inside   DIST=**put_inside.IRR**
'Were someone to see me, and were I to speak with him, he would understand my
thoughts and internalize (lit. put inside of himself) them.'
(Anton Manna, afi260814v_33:35)

The main point in this section has been that the inflectional realis and irrealis marking

contributes to the meaning of the events in the sequence of any given chain. This should not

be confused with the contribution of the realis/irrealis distinction in the chaining enclitics,

which as I discuss in Chapter 8 has its own distinct function that draws roughly on the

pragmatic contrast between 'expected/expectable' (realis) and 'unexpected/unexpectable'

(irrealis).

7.2.5   Distributed exponence and the scope of negation in clause chains

In other languages, scope as a potential diagnostic for dependency relations has figured

prominently in the ongoing discussion about the syntactic status of medial clauses (Foley &

Van Valin 1984; Reesink 1994 & 2014; Roberts 1997; Bickel 2010). As Roberts states:

> A SS/DS medial clause will normally be within the scope of the final clause [...] for the
> categories of tense, mood, and polarity. A subordinate medial clause [...] will not be within
> the scope of the final clause [...] This diagnostic has been applied by a number of linguists to
> Papuan languages to define SS/DS medial clauses as coordinate and not subordinate (Roberts
> 1997:179-180).

In Chini, analogous principles of scope apply (though the functions of the dependency relations in Chini are not based on switch-reference), but these are only tendencies.

Earlier I described various aspects of two of thre three main morphological negation constructions in Chini: the negative realis (-*mati*) and negative irrealis (-*rati*) constructions (5.2) and the standard negation (-*nda*) construction (6.3). The prohibitive (-*ndi*) construction has also been mentioned here and there. None of these involves the simple attachment of a single negative affix to the verb. Instead, all involve what I call distributed exponence: the negative meaning is expressed via two separate parts of the morphology. In this section, I describe how this double-marking of negation in main clauses allows for medial verbs to indicate negation. The basic pattern is straightforward: the exponent nearest the root is maintained in any medial verb with negative polarity, and only in the final verb do both negation markers occur.

7.2.5.1   The scope of prohibitive and negative realis categories in clause chains

In (7.2.1) I showed how one morphological possibility for medial verbs is to consist of a bare (uninflected but derived) modal base form. A similar possibility exists for the negative base.[131] When a medial verb consists of a bare negative base, the negative derivation of the root is enough to indicate that the clause is within the negative scope of the final clause.[132]

---

[131] Recall from section (4.3) that of the three verb bases (aspectual, negative, and modal) in Chini, the negative base is associated only with the prohibitive category (-*ndi*) and the negative realis/irrealis distinction (-*mati*/-*rati*). Negative bases are formed by deriving verb roots via lexically-conditioned allomorphy. The allomorphy involves different morphological processes for different lexical verbs (primarily: suffixation or zero-derivation of the root).

[132] I have relied on the concept of 'scope' rather uncritically here. However, there is reason to be skeptical, because this concept suggests speakers are somehow "waiting" until the final clause to "find out" what the category is. The process of digital transcription (e.g. in ELAN), however, allows us to take a more careful look and offer a more empirically sound analysis about where exactly the scopal meaning itself is locatable to. I have noticed a few times during the transcription process that when I play back a medial clause with a negative base form, that the person I am annotating with already knows immediately whether the category is the prohibitive (-*ndi*) or negative realis (-*mati*) even before I have played back the final clause to them. Yet there is nothing in the segmental structure of the medial clause for them to know that. Yet native speakers do know it — somehow.

This can be seen in the clause chain below, where the (zero-derived) negative based form *aku* 'perform exchange dance (NEG)' in the medial clause is within the scope of the negative realis (-*mati*) category marked in the final clause:

(149) *ñi*   *makumɨ*
  [ñi   mɨ=**aku**=mɨ]_{MEDIAL}
  PL   DIST=**perform_exchange_dance.NEG**=PRE.IRR

  añi   *mɨŋɨnimati.*
  [añi   mɨ=**ŋgini-ma-ti**]_{FINAL}
  1PL   DIST=**perceive.DIST-R-NEG**
  'Due to them (our parent's generation) not having performed the exchange dances, we do not know how to perform them.' (Anton Manna, afi141016iv_34:29)

The same principle of negative scope applies to imperfective medial verbs marked by the scope-friendly suffix -*ɨ*:

(150) *achikɨniya...* *bmurupa* *ritmɨtɨ*
  [achi-kɨni=ya [bmurupa ri-tm-ɨ=tɨ]
  upriver-whosit=TOP morning **go/come_downriver-IPFV-COH**=CNT.IRR

  nɨtwavɨ *akãmpmɨtɨ*
  [nɨ=twavɨ akam-pm-ɨ=tɨ]
  3SG=with **speak-IPFV-COH**=CNT.IRR

  nɨtwavɨ *pɨnɨcpmɨ* *prɨmati.*
  [nɨ=twavɨ pɨ-nɨ-cpmɨ **pri-ma-ti**]
  3SG=with sit-IPFV-NMLZ **do[NEG]-R-NEG**
  'Whatshisface upriver... it's not as if he ever comes downriver mornings and talks with him and sits down with him.' (Anton Manna, afi260814v_ 11:56)

If the medial verb is marked by a different category, however, this is sufficient to make the clause impervious to the negative realis scope in the final clause:

This suggests that our analytical concept of 'scope' may fall short of capturing what the speaker knows about the use of constructions in their language and how they are used in natural interaction. Alternatively, prosody may play an important role in indicating some pragmatic property of the chain as a whole, i.e. a property independent of the semantic-pragmatic contribution of the segmental structure.

(151) *kawarma*   *raŋgɨ*   *kwakru*   *ɨvkapava*
     [kɨ=awarma   ri-aŋgɨ   ku=akru   **ivk-apa=va**]
     PROX=egret   exist.PC-LH.PC 1SG.POSS=watch **sit.PC-R=PRE.R**

     ku   *nɨtwavɨ*   *akamɨmati.*
     [ku   nɨ=twavɨ   akamɨ-ma-ti]
     1SG.NOM   3SG=with   speak-R-NEG
     [Free translation: 'Given that this whiteman (lit. 'one characterized-by-egret') was sitting watching, I did not talk with him (Albert) (about it).']
     (Anton Manna, afi040814iii_12:58)

Essentially the same principles apply to chains headed by prohibitive final verbs. The medial verbs in the two clause chains below are within the prohibitive scope of the final clause:

(152) *nu*   *avaŋri*   *aŋgukŋitɨ*
     [nu   ava-aŋ-ri   **aŋgu.kŋi=tɨ**]
     2SG   other-man-PL **inquire[NEG]=CNT.IRR**

     ankɨpinichiŋɨ   *nɨpinichiŋinda.*
     [ankɨ=pɨ-ni-chiŋɨ   nɨ=**pɨ-ni-chiŋɨ-ndɨ=a**]
     3SG.POSS.FOC=sit-IPFV-NMLZ   INS=**sit-IPFV-NEG-PROH=EXCL**
     'You should not go asking anyone else and living (lit. sitting) according to their way of living.' (Anton Manna, afi260814v_35:50)

(153) *kri*   *atunu* *mɨyigɨya*   *nɨmakɨyimɨgitɨ*
     [kri   atunu mɨ=yigɨ=ya   nɨ=ma=**kiyimi-gi=tɨ**]_{MEDIAL}
     things.PC   too   DIST=name=TOP   INS=FOC=**do_whatsit-NEG=CNT.IRR**

     mandã   *mɨyirurigɨndɨ.*
     [mɨ=andã   mɨ=**yiru-ri.gi-ndɨ**]_{FINAL}
     DIST=side   DIST=**call-NEG-PROH**
     [Free translation: With things, with their names, don't do that and pronounce them on their side (i.e. with bad enunciation).] (Anton Manna, afi011116iv_3:06)

And, just as I described for the negative realis construction, imperfective medial verbs marked by *-ɨ* are within the scope of the prohibitive category in the final clause:

(154) *nu   myagɨ   yiminɨkaya*
    [nu   myagɨ   yim-i-n-i=ka=ya]
    2SG   betel_nut   chew_betel_nut-IRR-NMLZ-PC=PROX.DEF=TOP
    'This betel nut you are in the midst of chewing,'

    myagɨ   kɨyi   iŋkɨri   ŋinɨŋɨ   magwupmɨtɨ
    [myagɨ   kɨyi   iŋkɨ-ri   ŋɨ=nɨŋɨ   mɨ=**agwu-pm-i**=tɨ]
    betel_nut whatsit quid-PL   POSS.REFL=inside   ALL=**fill-IPFV-COH**=CNT.IRR

    makamɨndɨ.
    [mɨ=**akami-ndɨ**]FINAL
    DIST=**speak-PROH**
    'Don't keep filling the inside of your (mouth) with betel nut quid and talking.'
    (Emma Airɨmarɨ, afi260814v_2:48)

However, when a medial verb does not take the form of a bare negative base, its clause lies
outside the prohibitive scope of the final clause. That this is true can be seen in the examples
below where the medial verbs are formed on the modal base:

    Modal base form for medial verb (outside prohibitive scope of final clause)
(155) *makŋi   akɨramɨ   gŋɨ   aŋgwakɨ ŋgigɨ   amɨndɨ.*
    [ma-kŋi   **aki-ra**=mɨ]MEDIAL   [gŋɨ   aŋgwakɨ ŋgigɨ   ami-ndɨ]FINAL
    DIST.DEF-way   **do-MOD**=PRE.IRR   late   morning village   ingest-PROH
    'If (you) do that, then (you) can't eat in the village late in the morning (i.e., you'll
    need to get up and leave straight away).' (Anton Manna, afi040814iii_8:36)

    Modal base form for medial verb (outside prohibitive scope of final clause)
(156) *mɨpɨgɨ   achɨrkatɨ   karɨmɨ,*
    [mɨ=pɨgɨ   achi-r-kɨ-atɨ   **ka-rɨ**=mɨ]
    DIST=sole   little-ADJ-PC-ATT.PC   **PROX.COP-MOD**=PRE.IRR

    mɨkɨnɨgindɨ.
    [mɨ=kɨ-nɨgi-ndɨ]FINAL
    DIST=propel-NEG-PROH
    'Sapos igat samting hait longen, noken tokaut long pablik.'
    'Even if there's just one really little bit of secret information (lit. 'its sole'), don't
    broadcast (lit. propel) it.' (Frank Manna, afi250814iv_27:08)

Notice again that throughout this discussion and as I claimed earlier, the chain linkage
devices and the dependency relations they signal are irrelevant with respect to scope. Scope
is resolved in the bound morphology of the medial verb.

226

7.2.5.2 The scope of standard negation over irrealis-inflected medials

The primary (i.e., by far most frequently used in discourse and also most pragmatically unmarked) negation construction relies on the combination of the irrealis inflection of the verb and the perfective suffix *-nd*. Notice how in the two clause chains below, only the final clause is marked for this negation construction. The medial verbs take realis marking. This blocks the scope of negation; no realis-inflected medial verb in this type of construction ever has negative polarity like the verb in the final clause does:

Realis-inflected medial verb blocks negative scope
(157) *mɨgɨ*   *magɨyikɨ*
[mɨ-gɨ   mɨ=**agɨ-yi**=kɨ]_MEDIAL
DIST-thus DIST=**go/come_upriver-R.PC**=CNT.R

achikanɨ *mɨYavɨnɨŋgɨ*   *aurwinda.*
[achi-kanɨ mɨ=Yavɨni-ŋgɨ   auru-i-nd-a]_FINAL
upriver-here DIST=Akrukay-village wash-IRR-PFV-R
'It (the rain) went upriver like so (toward Akrukay) and then did not rain upriver in Akrukay.' (Anton Manna, afi010514v_12:40)

Realis-inflected medial verb blocks negative scope
(158) *ŋgɨrkŋɨ*   *ndwindaka*   *kanɨ aŋginda.*
[ŋgɨ=ɨrk-ŋɨ   **ndwi**=ndaka]_MEDIAL [kanɨ aŋg-i-nd-a]_FINAL
3SG.POSS=talk-PC **perceive.PROX.R**=SEQ.R here sleep-IRR-PFV-R
'Having heard what he (Father Daniel) said (lit. perceived his talk), (I) didn't sleep here (i.e., I went straightaway).' (Agusta Njveni, afi231016ii_8:46)

When the medial verb is inflected for *irrealis* meaning as in the example below, it lies within the negative scope of the final clause. That is, when both morphological exponents of the negation are marked in the final clause (basic irrealis *-i* and perfective *-nd*), the marking of just one of them (the inflectional irrealis category) in the medial verb restricts the interpretation of irrealis to one of clausal negation. As far as I am aware, there are no exceptions to the negative interpretation of irrealis-inflected medials in negative chains.

Irrealis-inflected medial verb: negative meaning via scope of *-nd* in final clause

(159) ku nandɨvɨyɨ krukanɨ avɨyɨkɨ
[ku nɨ=andɨvɨyɨ kru-kanɨ **avɨ-yɨ=kɨ**]MEDIAL
1SG.NOM REP=day_before_yesterday middle-here **descend-IRR=CNT.R**

miŋgininda.
[mɨ=**ŋgin-i-nd-a**]FINAL
DIST=**perceive.DIST-IRR-PFV-R**
'Meanwhile the day before yesterday I did not go back down (to the marsh) and check (the water level).' (Anton Manna, afi260814v_6:41)

When the final clause contains a negated verb, it is also possible for some medial clauses to have positive polarity but others negative polarity. Simply put, the realis-inflected medial verbs lie outside the negative scope of the final clause while the irrealis-inflected ones lie within it:

(160) ñi ŋivkurkŋɨ ara kɨyi, tɨ muyukɨ
[ñi ŋɨ=ivku-irk-ŋɨ ara kɨyi tɨ mɨ=**yu=kɨ**]MEDIAL
PL POSS.REFL=old-talk-PC good whatsit path ALL=**go/come.IRR=CNT.R**

chagarkakɨ manɨ pirkichinda.
[**chagi-arka=kɨ**]MEDIAL [manɨ **pirk-i-ch-i-nd-a**]FINAL
emerge-R.PL=CNT.R there **settle-IRR-NMLZ-IRR-PFV-R**
[Free translation: They (the Breri settlers) did not follow a sound genealogy (lit. good old-talk) whatsit before they all showed up and settled there (in our territory downriver in the Aŋgrupɨyindɨ settlement).] (Anton Manna, afi250814iv_18:17)

The use of inflectional realis and irrealis marking in medial clauses to block or permit (respectively) negative scope allow for an insight about our typological understanding of realis/irrealis distinctions. Recall from (5.3) that in independent clauses, the use of the inflectional irrealis category has a wide range of possible interpretations. No other marker restricts its interpretation in any regularized way. This corresponds to Palmer's (2001) notion of 'non-joint' (independent) marking. But when a medial verb is inflected for that very same irrealis category and the final verb is negated, the interpretation of that irrealis category does depend on another marker, *-nda*, and is restricted to a negative reading. This is what Palmer

228

(2001) calls 'joint' marking. Taken together, these facts reveal that Palmer's typological parameter is less relevant to the inflectional irrealis category in Chini, but very relevant to the constructional uses of that category.

7.3   The grammatical heterogeneity of final clauses

In other languages of New Guinea described as having a realis/irrealis distinction in the chaining morphology, the inflectional category marked in the final verb is understood as determining whether realis or irrealis chaining devices are used (Roberts 1987, 1994; Ross 1987; Daniels 2015). So, for example, a final verb marked for an imperative or future category will require irrealis chaining morphology on previous medial clauses, notwithstanding certain differences across languages. As I discuss in greater detail in Chapter 8, the Chini system is completely different in this regard. As a segue into that discussion, here I show how there are virtually no syntactic or other constraints on the segmental substance that can constitute a final clause in Chini.

A final clause in a chain may be marked as a relative clause, where the nominalization marking effectively relativizes the entire event sequence in the chain:

Relativized final clause

(161) ñɨ ..nainkaŋgɨ ambwavɨ ñjagripmɨkɨ
[ñɨ nɨ=ainkɨ=aŋgɨ ambwavɨ ñji-agri-pm-ɨ-kɨ]MEDIAL
PL INS=1PL.POSS.FOC=LH.PC over MID-jump-IPFV-COH=CNT.R

agapmɨkɨ
[aga-pm-ɨ-kɨ]MEDIAL
go/come_upriver-IPFV-COH=CNT.R

kanɨ mamamichinɨkaya,
[kanɨ **mɨ=ama-m-ɨ-chi-n-ɨ=ka=ya**]FINAL=REL
here **DIST=ingest-IPFV-IRR-NMLZ-NMLZ-PC=PROX.DEF=TOP**

añɨ makŋi ndi.
[añɨ ma-kŋi ndi]MAIN CLAUSE
1PL DIST.DEF-way dislike.R
'This tendency of them (the Watabu folk) jumping over to our side (of Rumtwamrɨ marsh), coming upriver and eating here, we don't like that.'
(Dorothy Paul, afi260814v_2:10)

Relativized final clause

(162) twaviŋgayi ñjaparɨ mɨgɨ miñinmɨkɨ
[twaviŋgayi ñji=aparɨ mi-gɨ mɨ=ñi-nm-ɨ-kɨ]MEDIAL
child.PL PL.POSS=hand DIST-thus DIST=get-IPFV-COH=CNT.R

mumbruinɨkaya
[**mɨ=mbru-i-n-ɨ=ka=ya**]FINAL=REL
DIST=break-IRR-NMLZ-PC=PROX.DEF=TOP

ñɨ ñjavwaratɨ.
[ñɨ ñji=avwa-ra-ti]MAIN CLAUSE
PL PL.DAT=tell_off-IRR-NEG
[Free translation: 'The children always taking them (pairs of tongs) from us and breaking them, they (the mothers of the children) would not scold/tell them off (for that).'] (Dorothy Paul, afi051116ii_37:07)

Irrealis-inflected imperfective verbs are nominalized by the suffix -chi when they occur as complements to the deictic copula (distal ma- or proximal ka-). The complementation itself is marked on the copula by the distal proclitic mɨ= that refers to the subordinated clause or chain. This construction is used both for (lone) independent clauses and final clauses in chains.

Complementized (*-chi*) independent clause

(163) *"kiŋki kwãkwã kẽkwã"*   *mɨgɨ*   *akãmpmichi*   *mɨkani.*
[[kiŋki kwãkwã kẽkwã mɨ-gɨ   **akam-pm-i-chi**]   mɨ=ka-nɨ-i]]
(onomatopoeic)   DIST-thus   **speak-IPFV-IRR-NMLZ** DIST=PROX.COP-IPFV-IRR
'It is thus that (the reed bird) speaks: *kiŋki kwãkwã kẽkwã.*'
(Anton Manna, afi220412iii_41:09)

Here Anton explains how he defers to what his father had told him about the genealogical

histories of some foreigners claiming autochthonous status in Andamang:

Complementized (*-chi*) final clause

(164) *ku*   *ŋgɨrkŋiti*   *maŋamɨkɨ*
[[ku   ŋgɨ=ɨrk-ŋɨ=tɨ   mɨ=aŋa-m-i=kɨ]_{MEDIAL}
1SG.NOM   3SG.POSS=talk-PC=VIA   ALL=go/come-IPFV-COH=CNT.R

kanɨ   *ñikɨpmichi*   *mɨkani.*
[kanɨ   **ñi=ki-pm-i-chi**]]_{FINAL=COMPLEMENT}   [mɨ=ka-nɨ-i]_{COPULAR MAIN CLAUSE}
here   **PL=tell-IPFV-IRR-NMLZ**   DIST=PROX.COP-IPFV-IRR
'Mi sa bihainim tok bilongen na tokim yupela ia.'
'It is thus that I go along with his (Anton's father) talk (lit. follow the path of his talk)
and am telling you all.' (Anton Manna, afi250814iv_35:12)

Chini possesses a variety of verbless clause constructions, and any of these may, not

surprisingly, serve as a final clause. But this possibility raises an important question for Chini

and for other languages with realis/irrealis chaining constructions, which is what exactly

determines the use of realis versus irrealis linkers in such examples. If, as in the examples

below, realis linkers can be used despite the absence of any verbal categories in the final

clause, then this can be seen as a clue that the choice between realis and irrealis linkers does

not depend on the information in the final clause at all. (As I argue in 8.2, this turns out to be

true for Chini).

Final clause headed by verbal adjective
(165) *tok "ñi makŋi akɨgayima,*
'Said: "That which they did," '

migŋɨ	*krɨrkɨ*	*amarkɨ*	*krɨrkɨ*	*raŋgava*
[mɨ=gŋɨ	krɨrkɨ	am-ar-kɨ	krɨrkɨ	rɨ-aŋgɨ-a=va]MEDIAL
DIST=later	crisis	woman-DIM-PC	crisis	exist.PC-LH.PC-R=PRE.R

makŋi	*pirkɨ.*"
[ma-kŋi	pi-r-kɨ]FINAL
DIST.DEF-way	bad-ADJ-PC

' "afterwards if the woman suffers a crisis, that sort of thing is bad." '
(Frank Manna, afi040814iii_11:34)

Final clause consists of a noun phrase (adjective-headed clause)
(166) *mbarɨ ŋuwa.*
'Wokim kanu.'
'(He) carved a canoe.'

mbarɨ	*ŋuwandaka*	*mbarɨ*	*aŋimŋa.*
[mbarɨ	ŋu-wa=ndaka]MEDIAL	[mbarɨ	aŋimŋa]FINAL
canoe	carve.R=SEQ.R	canoe	new

'Wokim kanu na, nupela kanu.'
'Having carved the canoe, (it was) a brand new canoe.'
(Anton Manna, afi220414iii_36:23)

Final clause consists of a noun phrase (numeral-headed clause)
(167) *wuyikɨ* *kɨtu* *michagɨyindaka*

[wu-yi=kɨ]MEDIAL	[kɨ=tu	mɨ=chagɨ-yi=ndaka]MEDIAL
go/come-R.PC=CNT.R	PROX=riverbend	ALL=arrive-R.PC=SEQ.R

manɨ	*ambɨgɨ*	*nugu.*
[manɨ	ambɨgɨ	nugu]FINAL
there	house	one

'Went and arrived at this riverbend and (there was) one house there.'
(Dorothy Paul, afi250814iv_15:46)

There are other variations as well. In the example below, the final clause consists of a noun

phrase in an exclamative construction:

232

Final clause consists of a noun phrase
(168) *mɨtwavɨ*   *rɨgandaka*
[mɨ=twavɨ   rɨ-ga=ndaka]_{MEDIAL}
DIST=with   go/come_downriver-R.PL=SEQ.R

aŋgurkŋu   *ambɨŋɨmɨndaka*
[aŋgurkŋu   ambɨŋɨ-m-ɨ=ndaka]_{MEDIAL}
grass_species   crush-IPFV-COH=SEQ.R

ŋgu   *atavambia!*
[ŋgu   atavɨ-ambi=a]_{FINAL}
fish   pearl_perch-AUG.PL.INTENS=EXCL
'All having headed downriver with it (the bamboo) and then crushing the *aŋgurkŋu* grass, oh what truly enormous pearl perch!' (Paul Guku, afi011116iv_16:00)

In the examples seen thus far, the final clauses consist of constructions that can normally serve as independent clauses in their own right. But final clauses can also consist of constructions that may not otherwise serve as independent clauses. In the next example, the final clause consists of a bare infinitive verb form in special type of clause chain nominalization. The function resembles complementation (as suggested in the English translation) in that the distal demonstrative *mɨ=* 'that' in the independent clause refers back to the entirety of the information encapsulated in the previous chain:

Bare infinitive final clause (in clause chain nominalization construction)
(169) *ñi*   *kanɨ*   *mbɨgɨ*   *cpmichigakɨ*   *riri,*
[ñi   kanɨ   mbɨgɨ   cpmichi-ga=kɨ]_{MEDIAL}   [ri~ri]_{FINAL}
PL   here   stand   get_up.PL-R=CNT.R   go/come_downriver~NMLZ

mɨvkurkŋɨ   *chini.*
[mɨ=ɨvku-ɨrk-ŋɨ   ch-i-ni-i]_{MAIN CLAUSE}
DIST=old-talk-PC   exist-IRR-IPFV-IRR
'Ol i kirap long hia na i go daun, nogat stori bilongen.'
'That they (the Breri tribesmen in question) originated (lit. 'stood-arise') here (i.e. in Andamang) and went downriver (to their present-day territory), there is no such (true) story.' (Anton Manna, afi250814iv_29:24)

There are other possibilities as well. A final clause may also consist of an ideophone or a combination of an ideophone and some other part of speech:

233

Final clause consists of an ideophone
(170) *anɨ avkɨkɨ*
[anɨ av-kɨ=kɨ]MEDIAL
3SG descend-R.PC=CNT.R

ŋarachigɨ yukɨ krokrokrokrokrokro.
[ŋɨ=arachigɨ yu=kɨ]MEDIAL [krokrokrokrokrokro]FINAL
POSS.REFL=bundle grab.R.PC=CNT.R IDEO
'He went down and grabbed his bundle of arrows and *krokrokrokrokrokro*
(the sound of the arrows in the bundle).' (Joseph Manna, afi150514ii_33:10)

Final clause consists of a noun phrase and ideophone
(171) *ñi nkugwundaka*
[ñi nkugwu=ndaka]MEDIAL
PL swim.R.PC=SEQ.R

kɨyi amikɨ awamami "bro bro!".
[kɨyi am-i=kɨ]MEDIAL [awamɨ=ami bro bro]FINAL
whatsit ingest-IRR=CNT.R ariid_catfish=SIM IDEO
'Once they'd swum around they'd eat whatsit like an ariid catfish (going) "*bro
bro*!" ' (Anton Manna, afi220414iii_32:19)

A very different possibility for final clauses is when code-switching from Chini to Tok Pisin

occurs at the juncture between a medial clause and the final one:

Code-switching in the final clause
(172) *ndvayikɨ*   Chini
[ndvɨ=ayi=kɨ]MEDIAL
3SG.BEN=spear.R=CNT.R

karim kam.   Tok Pisin
[karim kam]FINAL
bring cislocative
'Having speared fish for him, then brought it over.'
(Joseph Manna, afi150514ii_29:51)

Code-switching in the final clause

(173) *michaprimɨ*   Chini
[mɨ=chap-rɨ=mɨ]MEDIAL
DIST=fill-MOD=PRE.IRR

hap   ya   givim   em.   Tok Pisin
[hap   ya   giv-im   em]FINAL
part   TOP   give-TR   3SG
'Once it (the bag of betel nut) is full, part of it give to him.'
(Emma Airɨmarɨ, unrecorded utterance, fieldnotes)

To my knowledge, the opposite possibility does not occur (i.e., where one or multiple medial clauses are expressed in Tok Pisin with the final clause in Chini). For reasons that are unclear, there is some important connection Chini speakers make between their ancestral language and the offline or 'background' information produced in medial clauses. Speakers make a parallel connection between the language of shift and the online or 'focal' information produced in the final clauses. Whatever the underlying reasons may be, the pragmatic difference between medial and final clauses appears to be fairly powerful and cognitively real for speakers.[133]

---

[133] One possible explanation is that the pragmatic contrast in the information types expressed in medial versus in final clauses, which we can describe shorthandwise as background versus foreground respectively, lends itself to the rhetorical contrasts that code-switching between the vernacular and Tok Pisin is often used to express. In his book on language shift in Gapun village, Kulick (1992) describes how code-switching between Taiap and Tok Pisin provides villagers with much richer rhetorical resources than either language alone would do. Although the discourse-syntactic structures in Chini and Taiap have nothing to do with one another (i.e. Taiap lacks clause chaining), one of the uses Kulick describes for Taiap-Tok Pisin code-switching is to highlight contrastive information. One of the examples he gives involves a transition from backgrounded Taiap material to foregrounded Tok Pisin material: [Wasɔnɛta bɔta, nɔŋɔr kiwɔk, ŋa kakun]Taiap ('Dying, I went and the woman took me and I ate some enchanted herbs,') [nau mi stap nau]Tok Pisin ('now I'm alive today') (Kulick 1992:79).

Code-switching in the final clause

(174) ñi   kwandamiŋi   nduti   Chini
[ñi   ku=andam-iŋi   ndu=ti]ₘₑDIAL
PL   1SG.POSS=footprint-PC   perceive.PROX.MOD=CNT.IRR

nogut   ol   bai   suspek.   Tok Pisin
[nogut   ol   bai   suspek]FINAL
apprehensional   3PL   FUT   suspect
'They might have seen my footprints and suspected me.'
(Gordon Dingaram, afi150514ii_2:41)

A related though somewhat tangential point is that code-switching proper in clause chains is not to be confused with the grammatical incorporation of Tok Pisin words or phrases into Chini grammar. In this type of construction, the Tok Pisin element co-occurs with an inflected form of the Chini verb ki- 'tell'. There are no restrictions for grammatically-incorporated elements from Tok Pisin with respect to clause type (i.e. medial clauses are no less likely to be affected than final clauses). In the example below, both the medial and final clauses are headed by an incorporated Tok Pisin verb (which are straightforwardly cognate with the English for 'missed call' and 'ring'):

Grammatically-incorporated Tok Pisin material in medial and final clauses

(175) nu   kiyi   iki   nimist   kal   kirava
[nu   kiyi   iki   ni=**mist**   **kal**   **ki-ra**=va]ₘₑDIAL
2SG   whatsit   only   3SG=[TP:**missed**   **call**]   **tell-IMP**=PRE.R

ku   ŋguringim   chi.
[ku   ŋgu=**ring-im**   **chi**]FINAL
1SG.NOM   2SG.DAT=[TP:**ring-TR**]   **tell.IRR**
'You just do a missed call to him and I'll ring you back.'
(Frank Manna, afi040814iii_43:11)

Finally, there is the entirely separate matter of the clausal status of the final 'clause'. In natural discourse, people use constructions for their purposes and sometimes do so in ways that run counter to our understanding. We have already seen, for example, that final clauses need not be independent at all but can be relativized or complementized, and that they need

not even be in Chini. Another complexity is that a 'final clause construction' need not in fact consist of a single clause. In the example below, the final clause construction is biclausal. The first clause refers obliquely to the focal event (here, through the use of the indeterminate or 'dummy' verb *kɨyim-* 'do whatsit'). The focal event is then clarified in the following epitatic clause, where the speaker makes direct reference to building a village store:

(176) *ñi andɨvɨyi*   *Andmarɨŋɨnɨ ŋgɨrvapɨnɨ*   *mundwikɨ*
    [ñi andɨvɨyi   Andmarɨŋɨnɨ ŋgɨ=ɨrvapɨnɨ   mɨ=ndwi=kɨ]_{MEDIAL}
    PL day_before_yesterday Andmarɨŋɨnɨ   3SG.POSS=mouth   DIST=perceive.PROX.R=CNT.R

    ñi   *nayuku*   *mɨkɨyimamkɨ*   *yori,*
    [ñi   nɨ=ayuku   mɨ=kɨyim-a~m-kɨ   yori]_{FINAL (1)}
    PL   INS=quickly   DIST=do_whatsit-NMLZ   declare.R

    mɨwokim   *chi.*
    [mɨ=wok-im   chi]_{FINAL (2) (EPITASIS)}
    DIST=[TP:build-TR]   tell.IRR
    'The other day they heard it from Father Daniel's (Andmarɨŋɨnɨ) mouth and they declared (they would) do it quickly, (that they) would built it (the store).'
    (Dorothy Paul, afi260814v_31:22)

As Sarvasy (2015) points out in her article on non-canonical chaining constructions, final clauses are sometimes unexpressed in natural discourse. In Chini, the primary circumstance when this occurs is in the *=vakɨ* chaining construction but only when the information is highly given in the context at the time of speech. One day while I was wrapping my leg sores (which had become exacerbated by the swarming flies) with a cordyline leaf, Paul Guku, who was sitting right in front of me, said the following medial clause in isolation. The focal event (here, representing the effect in a chain interpreted as having a relation of cause and effect) of me wrapping my sores was highly given information, evident to both me and Paul who was watching me:

Unexpressed final clause (when the focal information is highly given in the context)
(177) *vra   amamichivakɨ.*
[vra   ama-m-i-chi=**va**=**kɨ**]_{MEDIAL}
fly   ingest-IPFV-IRR-NMLZ=**PRE.R**=**CNT.R**
'The flies have been biting (lit. eating) (and that's why you're wrapping your sores).' [Free translation: Due to the flies having bitten.]
(Unrecorded utterance, fieldnotes)

The presence of this possibility supports my general analysis of final clauses as containing the focal event and expressing it as new and dynamic information. If that information is not new and dynamic but rather given, this will be evident in the absence of a final clause in the chain.

The diverse possibilities for final clauses as I have described them reflect the fundamental organizing principle of Papuan-style clause chains as alluded to most vividly by Longacre (1972), who described clause chains as engines with strings of cars attached. The analysis I have provided in this chapter is in a sense an elaboration on this general principle. Final clauses are first and foremost pragmatic vehicles that convey a focal event in a sequence of events as the dynamic or new information. (Or, when the focal event is given information, then the final clause is not expressed.) The examples in this section, including those from code-switched speech, show that the syntax follows this pragmatic principle so faithfully that there are strikingly few syntactic constraints in clause chaining in Chini apart from the obligatory marking of medial clauses by chaining enclitics.[134]

---

[134] Another syntactic constraint that could be seen as implicit throughout this discussion is the occurrence of the final clause. Although I do not discuss it here, in Chini discourse certain medial clauses can, under the right pragmatic conditions, occur without a final clause.

7.4   Summary of chapter 7

In this chapter, I have described the workings of the clause chaining constructions in Chini, in order to set the stage for the discussion in the following chapter about the realis and irrealis component.

In the last section, I discussed the grammatical heterogeneity of final clauses (7.3). In Chini there are virtually no constraints on what type of segmental information a final clause may contain (everything from inflected verbs to noun phrases and even ideophones), what its syntactic status is (whether independent or subordinated/embedded), or even whether it is expressed at all. I also discussed code-switching in clause chains, which involves (exclusively) shifts from Chini in medial clauses to Tok Pisin in (some) final clauses. In other words, the defining structural and functional properties of Chini clause chains pertain to the medial clause construction.

The morphology of medial verbs differs from that found in all other clause types in the language. The diverse possibilities include: medial verbs inflected for either the basic realis or basic irrealis category (7.2.4), derived imperfectives that take the marker of cohesion (-*i*) and cohere with the realis or irrealis marking in the final clause (7.2.2), derived modal (7.2.1) or (much less frequently) negative (7.2.5.1) base forms with no inflectional marking. Medial verbs consisting of negative base forms always have the same categorical interpretation as the negative category in the final clause, whether prohibitive or negative realis (7.2.5.1). Similarly, irrealis-inflected medial verbs in chains with standard-negated final clauses always have the same interpretation (in terms of standard negation) (7.2.5.2). This last point is especially important for the discussion in Chapter 8. The realis/irrealis marking in the chain linkers does not indicate information about polarity, since these diverse

matters of negation are resolved in the medial verb morphology and the effect of scope from the negation category in the final clause.

I also discussed the three dependency relation functions of the seven chain linkage constructions (7.1). This is also quite important for the discussion in Chapter 8, since Chini has the luxury of indicated two independent types of information in each of the six linkage enclitics, i.e. the realis (=*ndaka*) and irrealis (=*ndata*) markers of temporal contingency (7.1.1); the realis (=*kɨ*) and irrealis (=*tɨ*) markers of continuity of information (7.1.2); the realis (=*va*) and irrealis (=*mɨ*) presuppositional framing devices (7.1.3). We are now in a position to investigate the realis and irrealis component that crosscuts all three dependency relations.

Chapter 8
Realis and Irrealis Clause Chain Linkage Constructions

By now a number of languages of otherwise diverse genealogical and areal backgrounds have been described as marking a realis/irrealis distinction in clause linking morphology. This type of clause combining structure has been described for languages of: the Americas in Pomoan languages of California (Mithun 1995 for Central Pomo); in the forms of complementizers in Alsea, a language of the Oregonian coast (Frachtenberg 1918[135]; Buckley 1988); in the switch-reference linkers in the Siouan language Mandan of North Dakota (Mixco 1997); in Yuman languages of southern California and Baja California in Mexico (Miller 1990 for Jamul Digueño); and in the switch-reference chain linkage devices in Yurakaré, an isolate spoken in central Bolivia (van Gijn 2006). Another region known for having languages with the distinction in this area of grammar is northeast New Guinea, in particular the region of what is now Madang Province. Realis/irrealis clause chain linkage constructions been described for languages of at least three branches of the Madang subgroup of Trans New Guinea (Roberts 1987, 1990, 1994 for Amele and many other languages; Hepner 1995 and 2006 for Bargam; Ingram 2004 for Anamuxra; Daniels 2015 for Kursav, Gants, and Proto-Sogeram) and for languages of the Bel subgroup of Austronesian spoken on and off the Madang coast (Ross 1987, 2002).

The focus of this chapter is the investigation of realis and irrealis clause chain linkage constructions in Chini, both with respect to the diachronic processes that have brought them about and the functional motivations that keep them going. The realis/irrealis component as

---

[135] N.B. Unlike the later analysis of Alsea in Buckley (1988), Frachtenberg (1918) did not analyze the relevant pair of complementizers in Alsea by using the terms or concepts 'realis' and 'irrealis', however.

obligatorily marked in the three sets of clause chain linkage devices in Chini can be seen in the forms in Table 19.

Table 19: Clause chain linkage devices in Chini

	Dependency relation		
	Temporal succession & contingency	Continuity of information	Framing of presuppositional information
Realis	*=ndaka*	*=ki*	*=va*
Irrealis	*=ndata*	*=ti*	*=mi*

The crux of my argument in this chapter is that these devices, which appear likely to have been acquired through contact with Trans New Guinea languages, have a pragmatic function, one quite different from the relatively formally analogous Trans New Guinea constructions. Realis chaining constructions are considered pragmatically unmarked while the irrealis constructions that are pragmatically marked. The realis constructions signal that the information in the medial clause(s) is straightforwardly part of the normative course of reality (whether past, present, or future), as it is understood in Chini-specific terms. Contexts of use for the realis constructions include: (positive or negative) events in the past, complaints and prohibitions where the outcome on the part of the addressee(s) can be reasonably assumed, (positive or negative) future events where the outcome is not in doubt, and cohortative suggestions (among many others). Speakers rely on the irrealis constructions to signal a contrast between the segmental information in the medial clause(s) and the question of its outcome in the real world. Contexts of use for the irrealis constructions include: thwarted events in the past, complaints about others' behavior that run counter to normative expectations, uncertain or contingent futures, and suggestions that do not assume compliance on the part of the addressee(s) (among others). The social-pragmatic function of the realis/irrealis distinction in Chini clause chains is thus very different from the (fundamentally semantic) function of the inflectional distinction as described in Chapter 5.

This chapter is divided into three main parts. In (8.1) I discuss the likelihood that Chini acquired its realis/irrealis distinction in the chaining devices through contact with Trans New Guinea languages, as well as other aspects of the historical development of clause chaining in Chini. In the second and third parts I discuss the Chini data. In (8.2) I argue that, in contrast to other related systems in other languages of northeast New Guinea, the realis/irrealis component in the Chini clause linkage devices is in fact grammatically independent of the information in the final clause. This part of the chapter also serves more generally as a reference to the patterns of co-occurrence evident in the corpus between final clause constructions and the realis versus irrealis marking of medial clauses. Then, in (8.3), I take a closer look at the functions of the realis versus irrealis chaining constructions across different types of contexts, and conclude with a discussion of their use in directive speech acts, that is, the context where irrealis marking is used the most frequently relative to other types of speech acts.

8.1   Areal and historical overview of realis and irrealis chain linkage constructions

Here I show that in addition to what we know about clause chaining as a general contact-induced structure in northeast New Guinea (Ross 1987), the marking of a realis/irrealis distinction in medial clauses represents another contact-induced layer in northeast New Guinea, from Karkar Island and the Rai Coast in the east and at least as far west as Chini (8.1.1). After discussing some of the evidence for pre-existing medial verb morphology in Chini and other Ramu languages, I suggest how clause chaining and the realis/irrealis component appears to have been further elaborated in Chini through contact with nearby Sogeram (Trans New Guinea) languages (8.1.2).

8.1.1 Realis/irrealis chaining devices as an areal feature of northeast New Guinea

The marking of realis and irrealis in the chain linkage morphology of medial clauses is an areal feature of northeast New Guinea. It has spread via contact across languages of at least three unrelated genealogical groups: Trans New Guinea (Madang subgroup), Austronesian (Bel subgroup), and Ramu (Tamolan subgroup).[136] Ross (1987) was the first to recognize that several Bel languages underwent metatypy through their contact with Trans New Guinea, a process that resulted in the borrowing of clause chaining (among other structural changes). Roberts (1994) provides a deep discussion of the similarities and differences in the realis/irrealis chaining constructions found in a number of Trans New Guinea language. Separately, Daniels (2015) provides a rich account of the historical development (including, the loss) of the realis/irrealis distinction in the Sogeram languages (also Trans New Guinea). Taken together, the available descriptive materials for Trans New Guinea languages of this region reveal that of the five branchings from the Madang (primary) subgroup, realis and irrealis are distinguished in medial clause constructions in the Croisilles (secondary) subgroup (Roberts 1987 and 1990 for Amele; Hepner 1995 and 2006 for Bargam; Aeschliman 1988 for Nobonob & also in Roberts 1994); in the Rai Coast (secondary) subgroup (Rucker 1992 for Anjam); and in the South Adelbert (secondary) subgroup that further divides into the tertiary branches, Josephstaal (Ingram 2004 for Anamuxra) and Sogeram (Sweeney n.d. for Mum; Daniels 2015 for Gants, Kursav, and Proto-Sogeram).[137;138]

---

[136] In a short article on Angaataha (Angan family) of nearby Morobe Province, Huisman (1973) describes that language as having a non-future/future distinction marked on medial verbs. To what extent the system in Angaataha is related to the discussion here is unclear.

[137] A realis/irrealis distinction in the medial morphology is unattested in the remaining two branchings of the Madang subgroup of Trans New Guinea, namely Kalam-Kobon and Korak-Waskia. Languages of the former subgroup are well-described notably in the works of Pawley (for Kalam) (1966) and Davies (for Kobon) (1981).

Given what we know from these authors' descriptions and/or other discussions about clause chaining in languages of northeast New Guinea, there is little doubt that the source constructions (for realis/irrealis chain linkage devices) were those as found in multiple Trans New Guinea languages and spread via contact not one but at least two (if not more) times (i.e. once from Trans New Guinea to the Bel languages, and again from other Trans New Guinea languages to Chini). Thus, while we know that clause chaining itself has spread via contact in northeast New Guinea (Ross 1987), it is now furthermore clear that the realis/irrealis distinction itself, as indicated in the medial morphology, has spread through diffusion and thus represents a major areal feature extending deep into modern-day Madang Province, all the way from Karkar Island and the Rai Coast to the Middle Ramu/lower Sogeram region where Chini is spoken. The distribution of languages with at least some degree of descriptive evidence pointing to such a realis/irrealis distinction can be seen in the map in Figure 26.

There are less materials available for the Korak-Waskia subgroup, but Ross' (1978) sketch grammar for Waskia suggests that this language at least lacks a realis/irrealis distinction in the medial morphology.

[138] Wahgi, a Trans New Guinea language of the Wahgic subgroup spoken far from the Trans New Guinea languages discussed here, distinguishes past, non-past, and imperative chains in the forms of medial verb suffixes (Phillips 1976). Similar to languages of the Madang subgroup (i.e. of Trans New Guinea) that distinguish realis and irrealis chains, the TAM marking is exclusive to different-subject combinations. I do not know of any discussion about whether these constructions are the result of homologous and have a common historical relationship in Trans New Guinea (and thus, presumably a very old one), or if they represent independent but analogous developments. Another language described as having a (mostly but not entirely) tense-based distinction in its switch-reference morphology is Fore (Scott 1978).

Figure 26: Realis/irrealis medial constructions in northeast New Guinea (map)
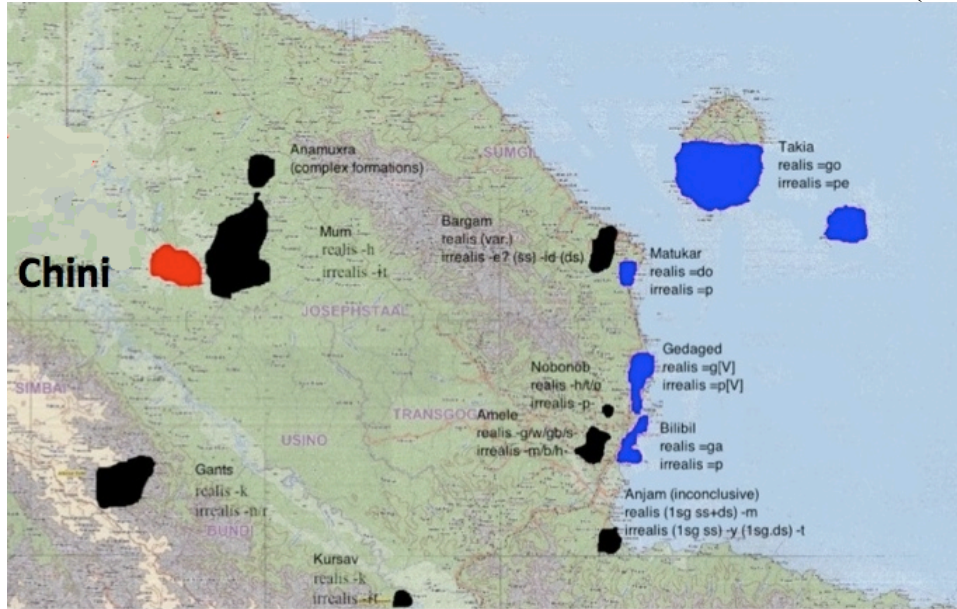
Black = Trans New Guinea languages ; Blue = Austronesian ; Red = Ramu

It is also worth mentioning that what we understand about the social and cultural context and history of this part of the world reveals the distribution of diverse languages with realis/irrealis chaining devices much less surprising. We know by now that contact-induced linguistic changes are driven fundamentally by social factors (Thomason & Kaufman 1988; Thomason 2008). In his paper on contact-induced morphosyntactic change from Trans New Guinea languages to Austronesian languages on the Madang coast, Ross (1987) describes a key sociolinguistic principle that applies throughout northeast New Guinea (and elsewhere in Melanesia):[139]

> [I]t is syntax, not lexicon — which has passed into the borrowing language. The reason why borrowing did not begin with lexicon is that it is precisely the words of the language which are perceived by its speakers as its substance and therefore as the emblem of identity. Adaptive changes in morphosyntax, on the other hand, occur unconsciously and hence have no emblematic significance (Ross 1987:597).

---

[139] See Dobrin (2014) for a discussion of the sort of cultural-ideological framework that is deterministic for language use in many Melanesian societies. She writes: "[A] person's 'native language' traditionally contributed to the construction of Arapesh local identity in a place-based way, in that expectations about the way individuals should speak were tied to the kin-based group from which they hailed. Yet at the same time, the command of speech variation helped create a person's ethnolinguistic identity, in that control of foreign varieties was an index of an individual's social reach, and hence influence and power" (Dobrin 2014:132-3).

Considering the social context of northeast New Guinea and pervasive linguistic ideologies about the emblematic quality of lexical items (especially: nouns) over grammatical morphemes and constructions, it is no surprise that we keep finding evidence of the hand of contact-induced change in areas of the grammar such as clause combining. Although there is undoubtedly much more to the story, one possibility is that the social mechanism that led to such changes as it did throughout this region centers around the historical exchange of ritual dances (Tok Pisin *singsing*) between groups. Recall from (2.3) that the main route through which the singsing trade found its way to Chini country was from upriver along the Sogeram, specifically in the Josephstaal area, and (more recently but perhaps in ancestral times as well) all the way from Karkar and the Rai Coast through the Josephstaal area and down the Sogeram. We cannot know for sure, but the fact that these trade routes correspond exactly to the location of languages of three genealogical groups that distinguish realis and irrealis medial clause constructions — suggests that it may have been those socially important occasions for groups to interact, and the specifics of the discourse types used in those interactions (i.e. presumably involving no small amount of clause chaining, or else these contact-induced changes could not have come about), that gave realis and irrealis chaining constructions so much room to spread in this particular region.

8.1.2 On the possible historical development of clause chaining in Chini

Here I suggest briefly how clause chaining, and in particular the realis/irrealis distinction in the clause chain linkers, appears to have developed in Chini. The reader should keep in mind that what I discuss here is intended only as a general view rather than an in-depth discussion of the details involved in these historical processes.

Chini, along with several other Ramu languages in the region, has a medial verb enclitic or suffix of the form *nda* (or *nde*) used in clause chains. Although the documentation of most of these languages is nowhere near robust enough to know for sure, it appears based on the available data that this morpheme has reflexes in chaining constructions in Chini, Rao [rao] (Capell 1951; Christensen 1977, 1978a, 1978b), Kaje [aod] (Brooks 2018), as well as Aram [anj] and possibly in Aren [aki] as well (Daniels 2010 and 2014, respectively).[140] For the sake of visualization, the map of the Ramu languages is repeated below from (2.5).

Figure 27: Map of the languages of the Ramu family (tentative)
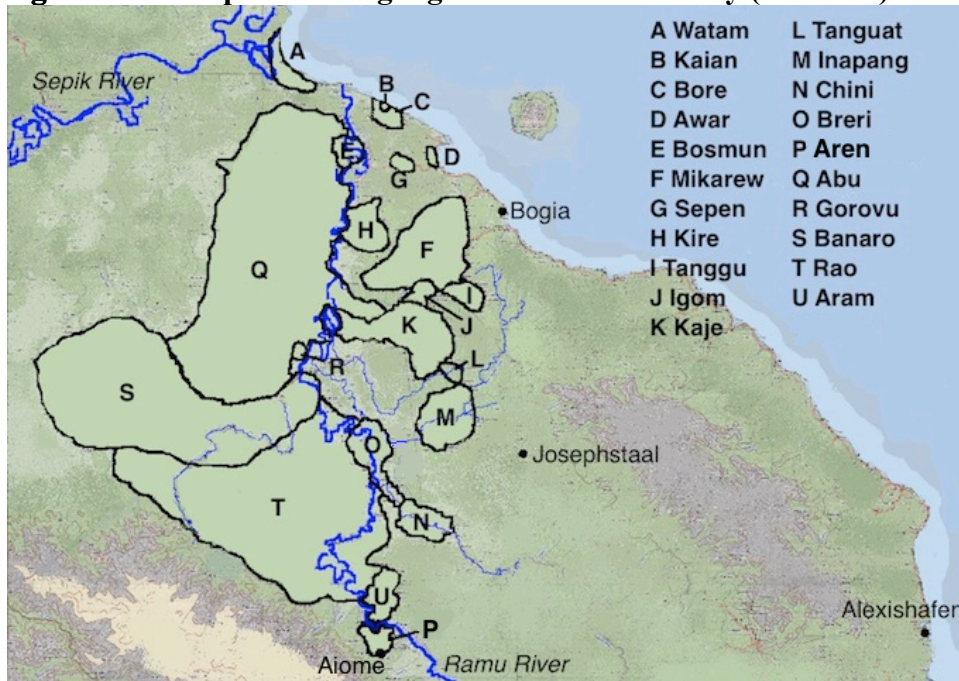
As Rao is the better described of these other Ramu languages, the following few examples can be considered at least some evidence in support of the claim that *=nda* (and also *=nde*) has reflexes in Ramu beyond just Chini. Christensen (1978a:16-17) describes *=nda* and *=nde*

---

[140] While it is not clear how many Ramu languages have reflexes of *-nda/-nde*, available materials suggest for instance that Tanggu lacks them (see Lotterman 2005) as do languages farther afield like Watam (see Foley 2018).

in Rao as allomorphs of the same enclitic that occurs on all medial clauses as a dependency

marker of some kind.[141] This marker is often followed by a tense or aspectual suffix.

> The medial dependency marker *=nda* in Rao (Christensen 1978a:20)

(178)	*nggu*	*le*		*nggu*	*kulindae*		*mɨ*	*wo*		*mɨ*	*dre.*
	[nggu	le		nggu	kuli=**nda**-e]MEDIAL		[mɨ	wo		mɨ	dr-e]FINAL
	1SG	betel_nut		1SG	pick=**DEP**-IMM.PST		3SG	coconut		3SG	pick-IMM.PST

'(While) I was picking betel nut, he was picking coconuts.'
'I was picking betel nuts, (but) he was picking coconuts.'

That it is an enclitic rather than a suffix is suggested by its attachment to diverse syntactic

domains:

> The medial dependency marker *=nda* in Rao (Christensen 1978a:21)

(179)	*mamvru*		*memakɨndakɨ*		*tu*	*kuchi*	*lobendakɨ*
	[ma-mvru		me-makɨ=**nda**-kɨ]MEDIAL		[tu	kuchi	lobe=**nda**-kɨ]MEDIAL
	3SG.POSS=wife		3-DU=**DEP**-FPST		pig	there	big=**DEP**-FPST

	tupundɨ	*pelendakɨ*		*memakɨ*	*ngi'bi*	*manɨ*	*tisakɨ.*
	tupundɨ	pele=**nda**-kɨ]MEDIAL		[me-makɨ	ngi'bi	manɨ	tisa-kɨ]FINAL
	big	become=**DEP**-FPST		3-DU	bone	then	throw-FPST

'While his wives were there, the pig was growing, and becoming big, and then they
threw down a bone.'

Given such data, it seems reasonable to assume that prior to contact with languages of the

Sogeram subgroup, Chini was like several other Ramu languages in the general region and

formed medial clauses by means of the dependency enclitic *=nda*. (How exactly Chini

developed the *=nda* medial construction, i.e. either through genealogical inheritance or

through contact with Rao or another Ramu language, remains unclear at this time.)

What happened next is not entirely clear. However, there is good evidence to support

the possibility that Chini not only acquired the realis/irrealis distinction in clause chaining

---

[141] The examples I have provided here involve temporal overlap. Temporal succession is distinguished by means of the suffix *-m* (or its allomorph *-nam*) that precedes the dependency marker. It is only when *-nda/-nde* occurs without *-m* preceding it that an interpretation of overlap, as evident in the examples I provide, is possible (without being the sole possible interpretation, however, as the multiple translations above from Christensen's original analysis suggest). Separately, note that in her analysis, Christensen describes (and glosses) *-nda/-nde* as indicating a state (in a general sense). I have changed the gloss here for the sake of the presentation, but this does not diverge from the fuller extent of her description.

through contact with Sogeram languages like Mum (and its sister language variety Manŋga spoken just upriver from Akrukay), but that it borrowed the morphological substance of the realis and irrealis marking itself. Of Ramu languages within reasonable proximity of Chini and for which there are sufficient descriptive materials, none show clear evidence of realis/irrealis distinction marked in medial clauses.[142] So it does not seem likely that Chini acquired the distinction (i.e. irrespective of the origin of the morphological substance itself) from another Ramu language, but rather that it was indeed through contact with Sogeram. These languages surround Chini territory to the east, northeast, and southeast. Their location is seen in the map below, in which Chini lies just about directly north of Manat territory:[143]

---

[142] The Ramu languages in question are: Rao (Capell 1951; Christensen 1977, 1978a), Tanggu (Lotterman 2005), and Kaje (referred to in the literature as 'Andarum'), where the latter is based on my own brief fieldwork with Henry Gendom, a young speaker of the language from Humdor village. As far as I am aware based on the available materials, these languages have clause chaining but lack realis/irrealis distinctions in the medial verb morphology.

[143] To be clear about what specific languages the influence may have come from, Chini has had intensive contact with at least four Trans New Guinea languages, three of which belong to the Sogeram subgroup Daniels (2015) describes. Chini people in Andamang have particularly strong links to Manat-speaking people in Paynamar village and Nend people in Akavaŋku, while Chini people in Akrukay have strong links to Manŋga (a Mum dialect spoken in one village not far upriver from Akrukay) people in Tokegnam and (to a lesser extent) Mum people in Katiati. Manŋga people in Tokegnam village not only speak Chini with a higher degree of fluency than I have witnessed people from other groups do, perhaps due to intensive intermarriage over the years, Manŋga people even have Chini names. Based on Sweeney's (n.d.) grammar of Mum, Daniels (2015) describes it as being the only Sogeram language of those three that has maintained its realis/irrealis distinction in medial forms.

Figure 28: Map of the Sogeram languages (from Daniels 2015:4)
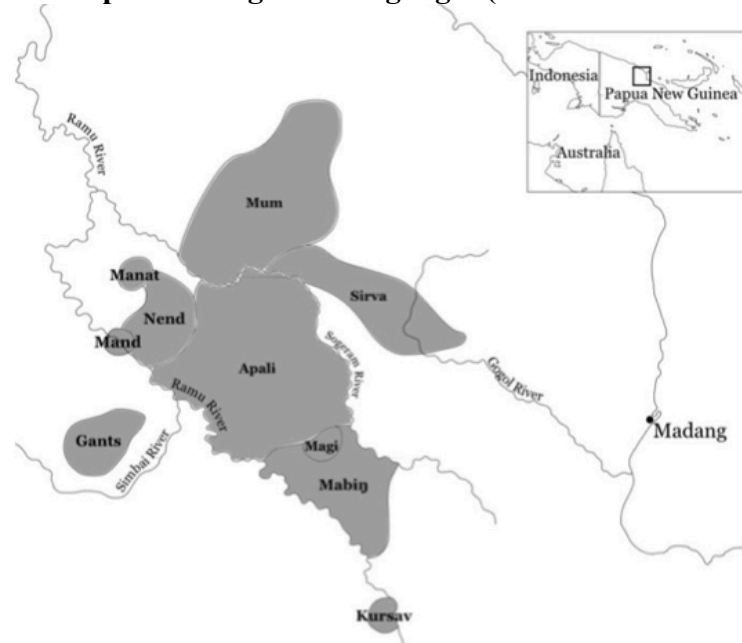
Although not all of these languages maintain a realis/irrealis distinction in certain different-subject medial forms, some still do, namely Kursav, Gants, and Mum (Daniels 2015). For Proto-Sogeram, Daniels very convincingly reconstructs realis *-*ka* (2015:186) and irrealis *-*it* (2015:178). These forms are maintained in Kursav, as the following examples show:

Realis chain in Kursav (Daniels 2015:970)
(180) *at*   *d-eke*_{MEDIAL}   *m-o?*_{FINAL}
what do-**3SG.DS[.R]**   go-3PL.NFUT
'Why did they go (lit. 'what happened and they went')?'

Irrealis marking is used when the final verb is marked for other categories, for instance the imperative and the future:

Irrealis chain in Kursav (Daniels 2015:179)
(181) *nuaya kura niga, rabira-t-a*_{MEDIAL}
white man   SPEC send-**[DS.]IRR**-2SG

ve-da_{MEDIAL}   ya   soro   inu-koro_{FINAL}
come-SS   1SG   COM stay-3SG.IMP
'Send a white man to come (lit. 'and he should come') stay with me.'

Irrealis chain in Kursav (Daniels 2015:231)

(182) ba-m   neite   waka, guro   kev-**it**-Ø_{MEDIAL}
      QD-TEMP   time   maybe speech throw-**[DS.]IRR**-1SG

      Vikura   gwayam   ariga   ve-md-o_{FINAL}
      Fikura   old.man   two   come-FUT-3PL
      'Whenever I send word, two Fikura (clan) elders will come.'

The *k/t* association with realis/irrealis is precisely the distribution marked in two pairs of the clause chain linkage devices in Chini: realis *=(nda)ka* and *=ki* versus irrealis and irrealis *=(nda)ta* and *=ti* in Chini. This evidence suggests that, at least for two out of three pairs of chain linkage devices, Chini may have borrowed the morphological substance of Sogeram realis/irrealis marking.[144] It did so, it seems, while also borrowing its own interpretation based on the Sogeram source constructions, and proceeded to develop the borrowed constructions in a Chini-specific way, just like we expect occur in language contact (Heine & Kuteva 2005).[145] There is, needless to say, much that remains uncertain in terms of when and how exactly this contact-induced change took place, and what all was involved. What is clear is the general picture of contact in northeast New Guinea, where Trans New Guinea chaining

---

[144] The historical origins of the other pair of linkers, realis *=va* and irrealis *=mi*, are less clear. *=va* appears to be cognate with the switch-reference suffix *-uva* in the (related) language Tanggu (Lotterman 2005). As far as I am aware, there are no cognates for irrealis *=mi* in languages related or unrelated to Chini. One plausible explanation is that it grammaticalized from the distal deictic (also *mi*), perhaps on the basis of analogy with the realis/irrealis contrast already present in the forms of the other linkage devices.

[145] Note, however, that although this analysis may seem compelling, it is not without the complications that come with analyzing the historical origins of markers as phonetically slender as /k/ and /t/. There are two major problems of which I am aware. One is the existence of the combination of the *-nda* dependency enclitic in Rao with the far past tense enclitic *-ki*, forming *=ndaki*. One (albeit very infrequent) reflex of Chini *=ndaka* happens to be *=ndaki*, and the fact that Chini is in contact with Rao means it could have (possibly) borrowed *=ndaki* wholesale, and simply reanalyzed the far past meaning as realis. Rao lacks any medial linkage construction with the form *ndati*, however (Christensen p.c., 2016), so this would not explain the origin of the two irrealis linkers in Chini that contain /t/. The other issue involves the Ramu language Banaro, which Butler (1981b) describes as having a realis/irrealis distinction at least in main clauses, but where the marking pattern happens to be realis *-ka* and irrealis *-ta*. Banaro is spoken far from where Chini is, and the genealogical relationship would be very old. (The two groups have no knowledge of one another's existence, so unlike with Rao, a Chini-Banaro contact situation would be rather implausible.) The existence of these constructions in these other Ramu languages is a complicating factor to say the least, and it precludes the possibility to know with a high degree of certainty how Chini developed the realis/irrealis distinction in the chain linkage enclitics. The formal distribution of *k/t* for realis/irrealis in the medial morphology in the Sogeram languages, which we know were in intensive contact with Chini and/or other Ramu languages in the region in prehistoric times (Daniels & Brooks, forthcoming), is the more likely candidate for the origin of the look-alike linkage forms in Chini.

constructions can be seen to have led to metatypic changes (or at least wielded considerable grammatical influence) on languages of the two other major families in the Madang region (i.e. Ramu and Austronesian).

Apart from the diachronic complexities which lie beyond the scope of this dissertation, there is the important question of whether the realis/irrealis distinctions in these languages are comparable in their synchronic functions. As I have suggested already, in Chini, realis and irrealis chain linkers have independent functions in the grammar, while in languages of the Sogeram subgroup and other Trans New Guinea languages in northeast New Guinea, realis and irrealis marking is a secondary grammatical effect of the category marked in the final clause. In the following sections I present the evidence in favor of my analysis about the grammatical independence of realis and irrealis in Chini.

8.2 The grammatical independence of realis and irrealis chain linkage devices

Here I argue that, in contrast to the workings of a number of Trans New Guinea and Austronesian languages in Chini's region, the realis and irrealis chaining devices in Chini do not depend on the information or categories in the final clause in a mechanistic way. In (8.2.1) I introduce the forms and functions of the realis and irrealis linkers and provide some working definitions. In (8.2.2) I describe the general co-occurrences between realis and irrealis according to different final clause constructions. In (8.2.3), I show that whether or not the information in the final clause has scope over previous medials is wholly independent of the use of realis or irrealis linkers. Lastly, in (8.2.4) I describe the phenomenon of mid-chain realis/irrealis shifts in Chini conversation.

8.2.1 Introducing the forms and functions of realis and irrealis linkage devices

In Chapter 7, among other grammatical properties of Chini clause chains, I described the three types of dependency relation functions associated with each pair of linkage devices. At this point in the discussion, I turn now to the other function that crosscuts the dependency relations, namely realis and irrealis, and what exactly that means in terms of function. The linkage enclitics themselves can be seen in the table below. Perhaps the intellectually safest starting point for our discussion, is that regardless of what I mean by 'realis' and 'irrealis' here, the binarily distinguished forms for each dependency relation leaves no doubt whatsover that there is some sort of important grammatical difference that these 'realis' and 'irrealis' linkers are used for. Repeated from the beginning of this chapter, the forms and functions are as follows:

Table 20: CLAUSE CHAIN LINKAGE DEVICES IN CHINI

	Dependency relation		
	Temporal contingency	Continuity of information	Framing of presuppositional information
Realis	*=ndaka*	*=ki*	*=va*
Irrealis	*=ndata*	*=ti*	*=mi*

One of the most important elements for both our current areal, as well as more general cross-linguistic, understanding of realis/irrealis distinctions in clause combining — is whether the markers have independent functions or dependent ones that only pattern with other categories marked elsewhere in the clause or sentence. Palmer describes the former type of system as 'non-joint' and the latter as 'joint' (2001:145-6). The realis and irrealis categories of the medial verb constructions in the aforementioned Trans New Guinea and Austronesian languages all are described as exclusively joint (or dependent) systems with no independent functions for realis or irrealis marking. So, for instance, Hepner (1995) describes realis marking in Bargam as being determined by present tense and past perfective tense-aspect,

while irrealis marking is determined by future tense and by the imperative, desiderative, and contrafactual moods. Similarly, Roberts (1994) attributes the marking of realis/irrealis on medial clauses to a "system of agreement or concord between final verb forms and medial verb forms" (1994:35). This analysis has been used to describe a number of languages with comparable constructions (Daniels 2015; Hepner 1995; Ingram 2004; Roberts 1990 & 1994; Ross 1987). However, as we will see, the workings of realis and irrealis chain linkage constructions in Chini would not be describable in terms of agreement, since they have independent functions in the grammar.

Our starting point, again, is that the regular and obligatory marking of all medial clauses as either 'realis' or 'irrealis' has some communicative importance. Were the Chini distinction to depend on the category in the final clause, it would suffice to present a table of the co-occurrences, show an example for each co-occurrence, and then describe the semantic parameters for realis and irrealis in Chini as well as how those parameters differ from other languages, in a format similar to Roberts (1994) in his keystone work on the topic.

Going forward, then, one way we might approach these constructions in Chini is by considering Haiman's 'humble rule of thumb' with respect to the issue of identity of form in this area of grammar:

> That the logic of grammatical categories in an alien language is (somewhat) accessible to us is beyond question: this continues to be the best evidence for language universals of some sort. But it is equally clear that the categories we expect to find in all languages are not necessarily universals at all, and when it comes to clause combining, we are really on virgin soil... our best strategy is to... adhere to the humble rule of thumb that identical form is motivated by some significant similarity of meaning (Haiman 1988:68-9).

Haiman's insight about the significance of identity of form extends fairly uncontroversially to the significance of a formal distinction as found in the realis versus irrealis chain linkers in Chini. That is, while there is formal identity for two pairs of linkers, where /k/ is associated

with realis and /t/ with irrealis, the third pair of linkers lack this phonetic distinction but are nevertheless still formally distinguished.

That said, the argument that I aim to provide support for in this chapter can be summarized as follows. The way in which I have come to understand these constructions is primarily in pragmatic terms, where the realis versus irrealis chain linkage constructions are, respectively pragmatically unmarked and marked relative to one another. The most straightforward concept for a Western (or at least, anglophone) mindset which approximates the language-specific meaning is that of 'expectation' or 'expectability'. The following grammatical minimal pair (of sorts) from the corpus, which I will repeat in the discussion later on, gives some impression of what I mean. Both of the following chains are headed by a final clause consisting of the periphrastic desiderative construction, and both have just one medial clause. In the first example below, the medial clause is marked by the realis linker =kɨ (signaling also its dependency relation function of continuity of information). The chain simply describes something that occurred; there is nothing pragmatically marked here:

(183) ñi avkɨkɨ   ñjimanɨ ŋgu amamɨ vɨndɨ.
[ñi av-kɨ=**kɨ**]   [ñji-manɨ ŋgu amɨ~amɨ vɨ-ndɨ]
PL descend-R.PC=CNT.**R** downhill-there fish ingest~NMLZ BEN-think
'They went down bushwards in order to eat some fish down there.'
(Dorothy Paul, afi051116ii_33:04)

But the following chain, in which the corresponding (i.e. having the same dependency relation) irrealis linker =tɨ is used, the speaker is retelling a story that happened long ago, and in doing so expresses that the chain represents not just something that happened, but rather a frustrated situation in the past:

(184) *"aga! ku aŋiti mikɨyi ŋginɨŋginɨ vɨnda!"*
       aga   [ku   aŋi=**ti**]   [mɨ=kɨyi   ŋginɨ~ŋginɨ   vɨ-ndɨ=a]
       oh_no 1SG.NOM go=CNT.**IRR** DIST=whatsit perceive.DIST~NMLZ BEN-think=EXCL
       " 'Oh no! I had wanted to go check out some whatsit (fish)!' "
       (Joseph Manna, afi150514ii_28:07)

Regardless of the terms we might use to approximate the semantic-pragmatic contribution of the irrealis marking (e.g. 'expected' versus 'unexpected' etc.), this minimal pair leaves little doubt that the realis and irrealis linkage devices indicate their own, independent meaning. When the periphrastic desiderative construction heads a clause chain (i.e. occurs in a final clause), either realis or irrealis linkers may occur on previous medials. It is also important to point out that while that meaning is grammatically independent from the Chini desiderative construction, it nevertheless interacts with, and provides a particular interpretation for, the use of the desiderative construction. However, as I argue in this chapter, the fact that the meanings of realis and irrealis (i.e. specific to the chain linkage constructions) do not merely arise from alternative possible interpretations of whatever construction is used in the final clause can be seen in chains where there are two, three, or (in the corpus) as many as four shifts back and forth between realis and irrealis linkers (8.2.4).

Whatever the emic meaning of the distinction in this part of the grammar is, there is additional evidence from token frequency that points to the general relevance of realis as pragmatically unmarked and irrealis as pragmatically unmarked. Based on the data I counted from conversational Chini discourse, realis linkers constitute a token frequency of 78.3% relative to a token frequency of 21.7% for the irrealis linkers.[146] The token counts for each medial construction can be seen in Table 21:

---

[146] The irrealis linkage constructions are vastly more infrequent in all genres of narrative discourse represented in the corpus. This is not surprising once we consider the fact that they are pragmatically marked: pragmatically marked contexts occur in narrative almost exclusively in reported speech, but not in the sequence of events in narrative, which are pragmatically unmarked, and (formally) marked using realis linkage devices.

Table 21: TOKEN FREQUENCY OF MEDIAL CLAUSE CONSTRUCTIONS*

Realis medial constructions				Irrealis medial constructions		
=ndaka	=kɨ	=va	=vakɨ	=ndata	=tɨ	=mɨ
131	216	155	4	40	55	45

*in 1.5 hours of Chini conversation

So, the best approach going forward is to understand the difference in use (and thus, in meaning) between realis and irrealis chain linkage constructions in terms of pragmatic markedness. Going forward, then, we can rely on the following working definitions, with the express caveat that these definitions are general (and conservative) rather than specific (i.e. emic):[147]

> A WORKING DEFINITION FOR THE REALIS COMPONENT IN THE CHAIN LINKAGE DEVICES
> Realis linkers are used to indicate a pragmatically unmarked form of discourse, where the speaker conveys the information in a chained sequence of events 'as is', i.e. as being within the real world of expected or expectable events.

> A WORKING DEFINITION FOR THE IRREALIS COMPONENT IN THE CHAIN LINKAGE DEVICES
> Irrealis linkers are used to signal a pragmatically marked form of discourse, in which the speaker does not convey their talk 'as is' with respect to the *prima facie* or normative interpretation of the segmental information in a clause chain. The alternative interpretation makes reference to an imaginary course of events over which agents have less control and/or knowledge than is expressed through the use of realis marking.

In the rest of this chapter, I describe the patterns of co-occurrence for realis and irrealis chain linkage devices according to the range of inflectional and periphrastic final clause construction types. The general point is simply that the meaning of the realis and irrealis component in clause chain linkage constructions is independent from, as opposed to the more common analysis assuming dependence on, the information in the final clause.

8.2.2   Co-occurrence of final clause constructions with realis versus irrealis medials

Recall from (7.3) that there are scarcely any limitations in Chini on what can occur in a final clause. For our purposes here, however, I will limit the discussion about the patterning of

---

[147] I would not have been able to articulate these definitions in this way had it not been for some enlightening conversations with Lise Dobrin. In that regard I also thank Tony Webster, for his comments and suggestions at my doctoral colloquium in Santa Barbara.

realis versus irrealis linkers to the main inflectional categories of the Chini verb as well as the main periphrastic constructions as they occur in final clauses in clause chains. Especially for this section and all its subsections, I would stress to the reader to always keep in mind that the patterns I discuss and the insights these permit are only those that the corpus in its current state of annotation allows. The rich tapestry of nuance that clause chaining constructions in Chini are used to express delve into so much semantic and pragmatic territory, and it would be impossible to represent the full richness of the system. Despite that shortcoming, I believe that the data in the corpus are sufficient to provide a reasonable basis for analyzing and understanding the workings of realis and irrealis clause chain linkage constructions in Chini. The patterns in the corpus are represented in Table 22.[148]

Table 22: FINAL CLAUSE CONSTRUCTIONS AND REALIS/IRREALIS-LINKED MEDIALS*

	Main (final) clause construction	Inflectional realis/irrealis marked in final verb morphology?	Evidence in the corpus for co-occurrence with chain linkage constructions?	
			Realis linkers	Irrealis linkers
Aspectual base categories	Basic realis**	(yes)	yes	no
	Basis irrealis**	(yes)	yes	yes
Modal base categories	Imperative**	no	no	yes
	Immediate imperative (*-nda*)	no	(unattested in corpus)	
	Delayed future (*-ndiki*)	no	no	yes
	Uncertain future (*-ri*)	no	no	yes
	Potential (*-ru*)	no	no	yes
	Anterior future (*-ndati*)	no	no	yes
Negative base categories	Negative realis (*-mati*)	(yes)	yes	yes
	Negative irrealis (*-rati*)	(yes)	yes	no
	Prohibitive (*-ndi*)	no	yes	yes
Periphrastic constructions	Apprehensional (*kavindi*)	no	yes	yes
	Desiderative (*vindi*)	no	yes	yes
	Declarative (*yori*)	no	yes	no
	Remissive (*ndi*)	no	yes	no

*Evident only as attested in the corpus
**Formed by lexically-conditioned allomorphy

---

[148] My emphasis on 'the corpus' in this table is intentional. There is no doubt in my mind that a much larger corpus would reveal more about the use of realis and irrealis chain linkage constructions that what the current corpus, even with 10.5 hours of annotated naturalistic speech in Chini, permits for our understanding. So many of the patterns and the uses that are found in the corpus draw on such nuanced types of semantic and especially pragmatic meaning, ones that arise very rarely or for others, just every so often. For instance, there is only one chain in the corpus headed by the uncertain future (*-ri*) final verb form. There are only a handful of chains headed by the negative realis (*-mati*) final verb form.

When we consider our current cross-linguistic understanding of how realis and irrealis chain linkage constructions are understood to operate, many patterns in Table 21 are unsurprising. That realis linkers pattern with both basic and negative realis as inflectional categories, as well as the periphrastic declarative construction, is as we might expect. That irrealis linkers pattern with imperatives, all three modal future categories and the potential mood as well, is also as expected from the point of view of our cross-linguistic understanding. But other patterns run counter to what we might expect; in particular, the possibility as evident in the corpus for all of five of the above final clause constructions to co-occur with either realis or irrealis chain linkage devices points clearly to the likelihood that it is not in fact the information in the final clause that determines what type of linkage device the speaker uses.

Before I describe the patterns seen in Table 22 in greater detail in the following section, a cautionary note about my use of 'realis' and 'irrealis' merits a moment of serious attention, because it is (admittedly) not unproblematic. What the patterns in the table allow us to see immediately is the 'mismatch' (i.e. where the terms are concerned) between *realis and irrealis as inflectional categories of the verb* versus *realis and irrealis chain linkage devices*. In particular, the negative *irrealis* inflectional category patterns with *realis* linkers. The basic irrealis inflectional category as well as the negative realis inflectional category both pattern with realis as well as irrealis linkers. From this point onwards, let us then assume that the meanings and functions of realis and irrealis as they are marked in different parts of the grammar do not align. The ways in which inflectional realis and irrealis categories carve up the semantic-pragmatic space of modality as I describe in Chapter 5 are essentially irrelevant from this point forward in our discussion as we seek to understand the patterns (and, more deeply in (8.3), the functions) of realis versus irrealis chain linkage devices. This confusion,

to which I have not been able to find any entirely satisfying solution, is a product of the terminology 'realis' and 'irrealis', which developed to discuss the very general phenomenon of binarily marked modal distinctions as they occur cross-linguistically in almost always just one part of the grammar. That Chini distinguishes realis and irrealis in its verb morphology as a language-internal development and then again in the forms of clause chain linkers as a result of contact with Sogeram languages, is in a sense a matter of historical happenstance that the previous literature on realis/irrealis distinctions certainly could not have predicted.

Throughout the rest of this chapter (and dissertation), what I mean by 'realis' and 'irrealis' with respect to the clause chain linkage devices is something rather different from what I described in Chapter 5 (and also Chapter 6) for 'realis' and 'irrealis' with respect to the verb morphology. The condensed over-arching point of this dissertation, is that the functions of realis and irrealis in the verb morphology is essentially semantic (and with diverse semantic-pragmatic contexts of use) while the functions of realis and irrealis clause chain linkage constructions is essentially pragmatic (and with its own diverse semantic-pragmatic contexts of use). To reiterate a point made at the very beginning of this dissertation, what they have in common (and all they have in common) is "the idea of locating situations according to a dualistic division of the multi-dimensional semantic-pragmatic space of modality (or reality and irreality) is a purely conceptual notion, and is as such potentially independent of the range of distinctions made in any particular language" (à la Comrie 1985:7, from his discussion of the conceptual basis of tense categories).

8.2.2.1   Final clause constructions that co-occur regularly with realis-linked medials

In this section I outline the four primary clause final clause constructions that pattern robustly with realis chain linkage constructions: basic realis (as an inflectional category), the

261

periphrastic declarative construction, the periphrastic remissive construction, and negative

irrealis (as an inflectional category). Because my aim is primarily to display and describe the

patterns, I will refrain from decorating the examples with too much discussion.

8.2.2.1.1 Final verbs marked by the basic realis inflectional category

Perhaps the least surprising pattern, and by far the most frequent one as well, is the fact that

the marking of final (and/or medial) verbs with the basic realis inflectional category co-

occurs with realis clause chain linkers. There are no exceptions to this that I know of. Chains

like those seen in the following examples are abundant in the corpus:

Realis-inflected final verb patterns with realis clause chain linkers
(185) *ake   Mariam   avkɨkɨ   makuwava*
      [ake   Mariam   av-kɨ=**kɨ**]   [mɨ=aku-wa=**va**]
      DM   Mariam   descend-R.PC=**CNT.R**   DIST=perform_exchange_dance-R=**PRE.R**

      ñi   mirɨŋa.
      [ñi   mɨ=rɨ-**ŋa**]
      PL   DIST=buy-**R**
      'Ok given that/once (the exchange dance) Mariam went down and (the Andamang
      folks) performed it, they bought it.' (Paul Guku, afi141016iv_44:25)

Realis-inflected final verb patterns with realis clause chain linkers
(186) *kɨyi   ŋgu   nɨkɨyi   ŋgwanaŋgɨ   muŋgwãmpmɨkɨ*
      [kɨyi   ŋgu   nɨ=kɨyi   ŋgwana=ŋgɨ   mɨ=ŋgum-pm-i=**kɨ**]
      whatsit   fish   INS=whatsit   kumu_grass=COM   DIST=smash-IPFV-COH=**CNT.R**

      mamamapa.
      [mɨ=ama-**m-apa**]
      DIST=ingest-**IPFV-R**
      'Whatsit, with fish whatsit by hand (she) would smash it up with kumu grass and eat
      it.' (Anton Manna, afi220414iii_35:12)

There are various other types of categories (at various points on the inflectional-derivational

continuum) that fuse with realis inflectional marking or co-occur with it. There is no

evidence whatsoever that any of these affect the medial clause linkage constructions with

respect to realis/irrealis: realis linkers are used in all situations so long as the final verb is

inflected as realis.[149] As just one example, interrogative marking in the final clause has no effect on whether realis or irrealis linkers are used:

Realis-inflected final verb patterns with realis clause chain linkers
(187) *mɨni*   *mbaratmɨkɨ*   *mamamapaya?*
      [mɨ-ni   mbɨ=ara-tm-i=**kɨ**]   [mɨ=ama-**m-apa-y-a**]
      DIST-who   DIST.BEN=walk-IPFV-COH=**CNT.R**   DIST=ingest-**IPFV-R-NMLZ-Q.R**
      'Who has been going there and eating them (the bananas)?'
      (Emma Airɨmarɨ, afi160714iv_43:56)

It likewise does not matter what the interpretation of the basic realis meaning is in the relevant verbs in the chain: realis linkers are still used regardless.

Realis-inflected final verb patterns with realis clause chain linkers
(188) *na*   *nu*   *kanɨ*   *agɨyikɨ*
      [na   nu   kanɨ   agɨ-yi=**kɨ**]
      CONJ   2SG   here   go/come_upriver-R.PC=**CNT.R**

      mɨti   *añonɨ*   *pɨyina?*
      [mɨ-ti   añonɨ   **pɨ-yi**-n-a]
      DIST-which   land   **sit-R.PC**-NMLZ-Q.R
      'Na long hia yu kam antap bai yu sindaun long wanem graun?'
      'And so to here you will come upriver and then what land will you settle (lit. sit)?'
      (Paul Guku, afi250814iv_22:54)

Finally, there are two specialized periphrastic constructions that make use of a basic realis verb form preceded by an infinitive: the declarative construction based on the realis form *yori* 'declare (REALIS)' and the remissive construction based on the realis form *ndi* 'cease, dislike, leave aside (REALIS)'. These do occur terribly frequently in chaining constructions in the corpus, but when they do, they pattern with realis chain linkage devices:

---

[149] There are many possible combinations of translocativity, the various aspectual derivations, verbal number (paucactionality or pluractionality), and interrogatives (yes-no questions versus question-word questions). Tokens of most if not all these possible combinations can be found in the corpus, but I have not included all possibilities since to do so would involve a great many examples. There is no token of any of these constructions (when combined with realis marking in the final verb) being used with anything but realis clause chain linkers.

Realis-inflected final verb patterns with realis clause chain linkers
(The declarative *yori* construction)

(189) *ñi   andɨviyi   Andmariŋini   ŋgɨrvapini   mundwikɨ*
[ñi   andɨviyi   Andmariŋini   ŋgɨ=irvapini   mɨ=ndwi=**ki**]
PL   day_before_yesterday Andmariŋini   3SG.POSS=mouth   DIST=perceive.PROX.R=**CNT.R**

ñi   nayuku   mikɨyimamkɨ   yori,
[ñi   ni=ayuku   mɨ=kɨyim-a~m-kɨ   **yori**]
PL   INS=quickly   DIST=do-NMLZ   **declare.R**

mɨwokim   chi.
[mɨ=wok-im   chi]
DIST=[TP:build-TR]   tell.IRR
'The other day they heard it from Father Daniel's (Andmariŋinɨ) mouth and they declared (they would) do it quickly, (that they) would built it (the store).'
(Dorothy Paul, afi260814v_31:22)

Realis-inflected final verb patterns with realis clause chain linkers
(The remissive *ndi* construction)

(190) *añi   natɨ   gwunuŋgɨ   avkɨkɨ*
[añi   natɨ   gwunu=ŋgɨ   av-kɨ=**ki**]
1PL   presently   net=COM   descend-R.PC=**CNT.R**

mumbumbru   ndi.
[mɨ=mbu~mb.ru   **ndi**]
DIST=cut~NMLZ   **neglect.R**
'We neglected to come down with the fishing net presently and put it across (lit. cut off) it (the marsh).' (Emma Airɨmarɨ, afi260814v_4:07)

8.2.2.1.2 The use of negative irrealis-inflected final verbs

In the corpus, when the negative *irrealis* inflectional *-rati* construction is used in a final clause, it patterns exclusively with *realis* clause chain linkage devices. This is true regardless of the interpretation of the inflectional irrealis meaning. I discuss this further in (8.3).

(191) *ñi   mɨgɨ   wuyikɨ   miŋigandaka*
[ñi   mɨ-gɨ   wu-yi=kɨ]   [mɨ=ŋiga=**ndaka**]
PL   DIST-thus   go-R.PC=CNT.R   DIST=catch.R.PL=**SEQ.R**

nɨbmakañi   andubmakañi   mbaŋɨrati.
[ni=bmakañi   andu.bmakañi   mbɨ=aŋɨ-**ra-ti**]
REP=tomorrow   day_after_tomorrow   DIST.ALL=go/come-**IRR-NEG**
'Ol kam olsem na pulim (pis), i no tumoro haptumoro ol bai kam bek gen.'
'They having come thus and caught fish, they won't be returning there tomorrow or the day after tomorrow' (Joseph Manna, afi150514ii_27:50)

(192) *añi* *nuvkunu* *paŋɨ* *ñindaka*
  [añi nuvkunu pa=aŋɨ ñi=**ndaka**]
  1PL again before=LH.PC get.IRR=**SEQ.R**

  naŋɨmŋa *ambwavɨ* *mɨkɨniŋɨrati.*
  [nɨ=aŋɨmŋa ambwavɨ mɨ=kɨ-nɨŋi-**ra-ti**]
  REP=new ahead_of ALL=propel-NEG-**IRR-NEG**
  'We should not be taking old talk/gossip from before and mixing it in with the current (i.e. new) discussion.' (Joseph Manna, afi040814iii_9:19)

The chain in the next example involves a situation surrounding a proposed marriage for a young couple, about which there is considerable dispute. Mbaŋgay is one of the bride's brothers and he's part of the negotiation about deciding when the marriage can proceed. Here Anton makes use of the *-rati* construction to express the concept of inability with respect to the future situation.

(193) *... Mbaŋgay* *kaŋɨ* *mɨkɨyimkɨva*
  [Mbaŋgay kɨ=aŋɨ mɨ=kɨyim-kɨ=**va**]
  Mbaŋgay PROX=LH.PC DIST=do_whatsit-R=**PRE.R**

  mara *gigi* *ndiva,*
  [mɨ=ara gi~gi ndi=**va**]
  DIST=good recede~NMLZ leave.R=**PRE.R**

  añi *bmakañi* *miñirati.*
  [añi bmakañi mɨ=**ñi-ra-ti**]
  1PL tomorrow DIST=**get-IRR-NEG**
  'Assuming Mbaŋgay's (situation) makes it such that it doesn't turn out good, we won't be able to get her (the bride-to-be) tomorrow.' (Anton Manna, afi040814iii_6:38)

(194) *ñi* *ŋgu* *vuyuva* *kɨñi* *ŋgu* *arɨgɨrati.*
  [ñi ŋgu vɨ=yu=**va**] [kɨ=ñi ŋgu arɨ-gɨ-**ra-ti**]
  PL fish BEN=go.IRR=**PRE.R** CNT.R=PL fish catch_fish-NEG-**IRR-NEG**
  'They would go fishing but they would not be able to catch any fish.'
  (Anton Manna, afi220414_32:11)

8.2.2.2 Final clause constructions that co-occur regularly with irrealis-linked medials

In this section, I will show how a basic effect of clause chaining is to bring all main-clause constructions under the grammatical jurisdiction of realis/irrealis. It does so irrespective of

whether realis/irrealis is marked in the inflectional morphology when those constructions occur in single independent clauses. In the next example, the imperative verb form *vgwu* 'cover' occurs in a single independent clause. Realis/irrealis is not indicated in any way:

(195) *nɨmuvgwu!*
     nɨ=mɨ=**vgwu**
     REP=DIST=**cover.IMP**
     'Cover it up (the video camera) again!' (Emma Airɨmarɨ, afi011116iv_28:43)

In the immediately following discourse, the speaker repeats the verb but this time as part of a medial clause construction in a chain. The irrealis form =tɨ links the two imperative clauses. This is what is meant by clause chaining bringing main clause constructions within the grammatical purview of realis/irrealis: it is only in the clause chaining data that the connection between the imperative category and irrealis becomes apparent.

(196) *avata*   *muvgwutɨ*   *mamu!*
     [avata   mu=vgwu=**tɨ**]   [mɨ=**amu**]
     above   DIST=cover.MOD**=CNT.IRR**   DIST=**hold.IMP**
     'Cover it (the video camera) on top and hold it!' (Emma Airɨmarɨ, afi011116iv_28:43)

The vast majority of imperative chains in the corpus pattern with irrealis linkers:

(197) *"nu*   *ŋɨmanɨ*   *kɨramɨ*
     [nu   ŋɨ=manɨ   kɨ-ra=**mɨ**]
     2SG   POSS.REFL=husband   tell-MOD=**PRE.IRR**

     anɨ   *avɨgɨtɨ*   *mayi."*
     [anɨ   avɨ-gɨ=**tɨ**]   [mɨ=**ayi**]
     3SG   descend-MOD=**CNT.IRR**   DIST=**spear.IMP**
     ' "You tell your husband he must come down and spear it (the crocodile)." '
     (Anton Manna, afi260514i_2:28)

The same is true of other constructions where realis/irrealis plays no role in the inflectional category in the main clause, but comes to play a role when a clause containing a verb inflected by that category heads a clause chain:

266

(198) *prɨ mamɨgarɨ!*
     'Just keep hold of it (the fishing net)!'

     ŋgwamɨŋɨ   *gŋɨ*   *ndvwavɨgɨrɨndɨkɨ.*
     ŋgu=am-ɨŋɨ   gŋɨ   ndvu=avɨ-gɨ.rɨ-**ndɨkɨ**
     2SG.POSS=mother-PC   later   2SG.BEN=descend-MOD-**D.FUT**
     'Later your mother will come down to (see) you.'
     (Emma Airɨmarɨ, afi011116iv_22:49)

When a delayed future verb form occurs in the final clause in a chain, that construction will

co-occur with the use of irrealis linkers on previous medial clauses:

(199) *bmakañi*   *ŋganŋgŋamɨ*   *ŋaparɨŋgɨ*   *chitɨ*
     [bmakañi   ŋgɨ=anŋgŋɨ-amɨ   ŋaparɨŋgɨ   chi=**tɨ**]
     tomorrow   3SG.POSS=younger.sib-FEM   on.ones.own   ascend.MOD=**CNT.IRR**

     nitwavɨ   *akamrɨndɨkɨ.*
     [ni=twavɨ   akam-rɨ-**ndɨkɨ**]
     3SG=with   speak-MOD-**D.FUT**
     'Tomorrow his little sister will go up on her own and speak with him.'
     (Joseph Manna, afi150514ii_11:37)

And similarly with the potential construction when it occurs in a lone main clause:

(200) *gwrwaŋɨ,*   *dmu*   *ngarugruru.*
     gwru-aŋɨ   dmu   ngɨ=**aru-gru-ru**
     bush-go/come.IMP   sorcerer   3SG.DAT=**harm-MOD-POT**
     'Go on (i.e., follow him), a sorcerer could harm him.'
     (Emma Airɨmarɨ, afi011116iv_21:37)

Its use in final clauses patterns with irrealis linkers:

(201) *ɨvkuyi*   *agɨmɨ*   *anɨ*   *ñikɨyimrɨru.*
     [ɨvkuyi   agi=**mɨ**]   [anɨ   ñi=kɨyim-rɨ-**ru**]
     folks   go/come_upriver=**PRE.IRR**   3SG   PL=cause-MOD-**POT**
     'Nogut ol lain i go antap na em i mekim long ol.'
     [Free translation: 'It's likely the folks'll go upriver and he'll negatively affect/do
     thus to them.'] (Frank Manna, afi220414iii_26:26)

8.2.2.2.1 Use of irrealis linkers in apprehensional chaining constructions

The periphrastic apprehensional construction expresses a risk of something happening:

(202) *ŋgwamurwa*   *nwaŋguŋgu*   *kavɨndɨ,*
    [ŋgu=amurwa   nu=aŋgu~ŋgu   kavɨndɨ]
    2SG.POSS=eye   2SG=sleep~NMLZ   be_risk_of

    nu   *akamrɨ!*
    [nu   akam-rɨ]
    2SG   speak-IMP
    'Nogut ai bilong yu slip, yu toktok!'
    'Lest you fall asleep, (lit. lest your eyes sleep you), you talk!'
    (Emma Airɨmarɨ, afi011116iv_38:25)

Its use in a final clause patterns with irrealis linkers on previous medials:

(203) *ŋgamurku*   *nagɨndatɨmkŋɨ*
    [ŋgɨ=amurku   nɨ=agɨ=**ndatɨ**=mkŋɨ]
    3SG.POSS=wife   REP=go/come_upriver.MOD=**SEQ.IRR**=TOP

    ñjavwavɨ   *kavɨndɨ.*
    [ñji=avwa-vɨ   **kavɨndɨ**]
    1PL.DAT=tell_off-NMLZ   **be_risk_of**
    'Lest once his wife comes back upriver that (she) tell us off (for leaving a mess).'
    (Dorothy Paul, afi051116ii_23:51)

(204) *ñi*   *kwandamɨŋɨ*   *ndutɨ*
    [ñi   ku=andam-ɨŋɨ   ndu=**tɨ**]
    3PL   1SG.POSS=footprint-PC   perceive.PROX.MOD=**CNT.IRR**

    ŋɨmbamba   *kavɨndɨ.*[150]
    [ŋɨ=mba~mba   **kavɨndɨ**]
    1SG.ACC=suspect~NMLZ   **be_risk_of**
    'They might have seen my footprint(s) and suspected me.'
    (Annotation notes for afi150514ii_2:41)

8.2.2.3 Final clause constructions that occur alternately with realis or irrealis linkers

Ross' (2002) description of Takia is the first and only discussion (to my knowledge) that

provides evidence for occasional mismatch between clause-internal realis/irrealis and

realis/irrealis as used in chaining: "Usually, the mood of the final clause in a chain matches

---

[150] This chain does not represent speech in the actual corpus, but rather the speaker's amended, Chini-only transcription of what was originally uttered as code-switched speech. See (174).

the mood [realis/irrealis] of the last-order enclitics of its dependent clauses" but notes exceptions for habitual sequences where the final clause is marked as imperfective or realis, in which case irrealis linkers are used instead of realis ones.

In Chini, somewhat similar patterns of apparent mismatches can be observed in the corpus: not all final clause constructions pattern reliably with either realis or irrealis linkage constructions. In this section, I discuss those constructions where there is evidence in the corpus for both patterns. This suggests rather strongly that whatever the function of these devices is, it cannot be mere grammatical dependence on a more 'specific' semantic category marked in the final clause. Note that here my goal is primarily to display the patterns in the data, to provide evidence for my claim that the choice of realis versus irrealis linkage devices does not depend on the final clause. More in-depth discussion of the functions of the realis and irrealis component is found in (8.3).

8.2.2.3.1 Use of realis versus irrealis linkers in desiderative chaining constructions

In the corpus, the periphrastic desiderative ('think to + verb') construction generally co-occurs with realis linkers. This is true so long as the desiderative action was or will be carried out, i.e. with everything according to plan:

(205) *gwru gwu   akɨgandaka*
     [gwru gwu   akɨ-ga=**ndaka**]
     bush   fire   make-R=**SEQ.R**

     aku   ñjimanɨ   amandaka
     [aku   ñji-manɨ   am-a=**ndaka**]
     DM   downhill-there   cook-R=**SEQ.R**

     aku   ñi   kanɨ   anmɨ   tutu   vɨndɨ.
     [aku   ñi   kanɨ   anmɨ   tu~tu   **vi-ndɨ**]
     DM   PL   here   water fill~NMLZ   **BEN-think**
     'Build a fire in the bush and then cook down there in the bush and then they thought
     to go fill up water over here.' (Joseph Manna, afi150514ii_26:51)

269

(206) *andɨvɨyi*   *ikɨ*   *Augrumarɨ*   *riyikɨ*
      [andɨvɨyi   ikɨ   Augrumarɨ   ri-yi=**kɨ**]
      day_before_yesterday   only   Augrumarɨ   go/come_downriver-R.PC=**CNT.R**

      avarkɨ   *ñimbakɨ*
      [avar-kɨ   ñi=mba=**kɨ**]
      INCONS-PC   PL=deceive.R=**CNT.R**

      twamɨŋgañi   *amarkɨ*   *ñiñi*   *vɨndɨ.*
      [twamɨŋgañi   am-ar-kɨ   ñi~ñi   **vɨ-ndɨ**]
      child.PC   woman-DIM-PC   get~NMLZ   **BEN-think**
      'Just the other day Augrumarɨ went downriver and deceived them and now they
      would like to get (adopt) the little girl.' (Frank Manna, afi250814iv_16:09)

(207) *ñi*   *avkɨkɨ*   *ñjimanɨ*   *ŋgu*   *amamɨ*   *vɨndɨ.*
      [ñi   av-kɨ=**kɨ**]   [ñji-manɨ   ŋgu   amɨ~amɨ   **vɨ-ndɨ**]
      PL   descend-R.PC=**CNT.R**   downhill-there   fish   ingest~NMLZ   **BEN-think**
      'They went down bushwards in order to eat some fish down there.'
      (Dorothy Paul, afi051116ii_33:04)

But the following chain, in which the corresponding (i.e. having the same dependency relation) irrealis linker =*tɨ* is used, the speaker is retelling a story that happened long ago, and in doing so expresses that the chain represents not just something that happened, but rather a frustrated situation in the past and one arguably running counter to the (original) speaker's expectations:

      Irrealis linker and the desiderative construction (desiderative action is thwarted)
(208) *"aga! ku*   *aŋitɨ*   *mɨkɨyi*   *ŋginɨŋginɨ*   *vɨnda!"*
      aga   [ku   aŋɨ=**tɨ**]   [mɨ=kɨyi   ŋginɨ~ŋginɨ   **vɨ-ndɨ**=a]
      INTER   1SG.NOM go=**CNT.IRR**   DIST=whatsit   perceive.DIST~NMLZ   **BEN-think**=EXCL
      " 'Agh! I had wanted to go check out some whatsit (fish)!' "
      (Joseph Manna, afi150514ii_28:07)

8.2.2.3.2 Use of realis versus irrealis linkers in prohibitive chaining constructions

The prohibitive category co-occurs mostly with irrealis-linked medial clauses:

(209) *nu   myagɨ   yiminɨkaya,*
      [nu   myagɨ   yim-i-n-ɨ=ka=ya]
      2SG   betel_nut   chew_betel_nut-IRR-NMLZ-PC=PROX.DEF=TOP
      'This betel nut you are in the midst of chewing,'

      myagɨ   kɨyi   iŋkɨri   ŋinɨŋɨ   magwupmɨtɨ
      [myagɨ   kɨyi   iŋkɨ-ri   ŋɨ=nɨŋɨ   mɨ=agwu-pm-ɨ=**ti**]
      betel_nut whatsit quid-PL   POSS.REFL=inside ALL=fill-IPFV-COH=**CNT.IRR**

      makamɨndɨ.
      [mɨ=akamɨ-**ndɨ**]
      DIST=speak-**PROH**
      'don't keep filling the inside of your (mouth) with betel nut quid and talking.'
      (Emma Airɨmarɨ, afi260814v_2:48)

But when the prohibition makes only a very minor demand on the addressee, for instance to

speak up to be heard better, realis linkers may be used:

(210) *avarɨtɨ   mumwamɨkɨ   ka   akamɨndɨ.*
      [avarɨ=tɨ   mɨ=mwa-m-ɨ=**kɨ**]   [ka   akamɨ-**ndɨ**]
      below=VIA   ALL=mumble-IPFV-COH=CNT.**R**   PROX.DEF   speak-**PROH**
      'Don't keep mumbling low and talking.' (Anton Manna, afi011116iv_16:34)

8.2.2.3.3 Realis versus irrealis linkers with negative realis-inflected final verbs

The negative realis *-mati* construction patterns particularly freely with realis and irrealis

linkers. In the description of events as they occurred, realis linkers are used:

(211) *ku ambɨgɨ ɨvkapa.*
      'I was sitting at home.'

      ku   ambɨgɨ   ɨvkapava   ku   ñiŋginɨmati.
      [ku   ambɨgɨ   ɨvk-apa=va]   [ku   ñi=**ŋgini-ma-ti**]
      1SG.NOM   house   sit.PC-R=**PRE.R** 1SG.NOM PL=**perceive.DIST-R-NEG**
      'I was sitting at home and I did not see them.'

      ñi bmurupa wuwa.
      'They went in the morning.' (Paul Guku, afi161014iv_23:53)

When the occurrence or lack of occurrence of an event runs counter to what we might have

expected or how things could have been, irrealis linkers are used instead:

(212) ñi   makumɨ
     [ñi   mɨ=aku=**mi**]
     PL   DIST=perform_exchange_ dance.NEG=**PRE.IRR**

     añi   miŋginimati.
     [añi   mɨ=ŋginɨ-ma-ti]
     1PL   DIST=perceive.DIST-R-NEG
     'It's not as if they (our parent's generation) performed them (the ancestral exchange
     dances) that we might know (how to perform) them.'
     (Anton Manna, afi141016iv_34:29)

A very different type of speech act that the negative realis construction is used for is

complaints. For very minor gripes and complaints that make little or no demand on the

addressee, realis linkers are used. In the next example, Anton complains to the others that

they have just been jabbering on about historical things they don't know enough about and

have been speaking carelessly. He uses that to launch into a long discourse in which he

conveys some more expert knowledge about the events in question. His complaint to them is

thus minor and in fact places no demand on the addressees (since in fact, he is only using it to

take the floor himself):

(213) ñi   ɨvkurkŋi   ñi   mbindɨndmiki
     [ñi   ɨvku-irk-ŋɨ ñi   mbɨ=ndɨ~nd-mɨ=**ki**]
     PL   old-talk-PC PL   BEN.TOP=think~IPFV-IPFV-COH=CNT.**R**

     makãmpmɨ   prɨmati.
     [**mɨ=akam-pmi**   **pri-ma-ti**]
     DIST=speak-NMLZ   **do-R-NEG**
     'With respect to this old (i.e., from ancestral times) story you all haven't been thinking
     while speaking.' (Anton Manna, afi250814iv_35:05)

In more significant complaints, for instance regarding other community members' failures to

act as one might expect them normatively to act for whatever reason, irrealis linkers are used:

(214) *achikɨniya...*   *bmurupa*   *ritmɨtɨ*
       [achi-kɨni=ya   [bmurupa   ri-tm-ɨ=**ti**]
       upriver-whosit=TOP   morning   go/come_downriver-IPFV-COH=**CNT.IRR**

       nɨtwavɨ   *akãmpmɨtɨ*   *nɨtwavɨ*   *pɨnɨcpmɨ*   *prɨmati.*
       [nɨ=twavɨ   akam-pm-ɨ=**ti**]   [nɨ=twavɨ   **pɨ-nɨ-cpmɨ**   **prɨ-ma-ti**]
       3SG=with   speak-IPFV-COH=**CNT.IRR**   3SG=with   **sit-IPFV-NMLZ**   **do-R-NEG**
       'That upriver whatshisface guy... he does not come downriver mornings and talk
       with him (i.e., me) and sit down with him.' (Anton Manna, afi260814v_ 11:56)

8.2.2.3.4 Realis versus irrealis linkers with irrealis-inflected final verbs

Similar to the negative irrealis inflectional marker *-rati*, the basic *irrealis* inflectional

category patterns generally with *realis* linkers.

       Irrealis in past habitual context (with realis linkers)
(215) *ñi*   *mumbupmɨkɨ*   *chitmɨkɨ*
       [ñi   mɨ=mbu-pm-ɨ=kɨ]   [chi-tm-ɨ=kɨ]
       PL   DIST=lay_floor-IPFV-COH=CNT.R   ascend-IPFV-COH=CNT.R

       kandmɨ   *arwari*   *ñi*   *mambɨyitmi.*
       [kandmɨ   arwa-ri   ñi   ma=mbɨyi-tm-ɨ]
       stick   long-PL   PL   FOC=stand-IPFV-IRR
       'They would lay the floor, move upwards, and they would stand up a bunch of
       long sticks (i.e., to build a yam house).' (Frank Manna, afi080514i_7:29)
       Irrealis in hypothetical context (with realis linkers)

(216) *ŋgara ikɨ ku makamkɨ, kanɨ ainkaŋgɨ,*
       'I'm talking about that very bird, over here in our region,'

       mɨkɨyimɨyiva,   *mɨkavɨ*   *riva,*
       [mɨ=**kiyimi-yi**=va]   [mɨ=kavɨ   **ri**=va]
       DIST=**do_whatsit-IRR**=PRE.R   DIST=here   **go/come_downriver.IRR**=PRE.R

       añi   *ma*   *ikɨ*   *ami.*
       [añi   ma   ikɨ   **am-i**]
       1PL   DEF.DIST   only   **ingest-IRR**
       'were it to be brought here, we would eat only that.'
       (Dorothy Paul, afi220414iii_23:57)

Recall as well from (7.2.5) that negation is resolved clause-internally, and has no influence

on what sort of linkage devices is used:

Irrealis in negative context (with realis linker)

(217) *ku*   *nandɨvɨyɨ*   *krukanɨ*   *avɨyɨkɨ*
[ku   nɨ=andɨvɨyɨ   krukanɨ   avɨ-yi=**ki**]
1SG.NOM   REP=day_before_yesterday   meanwhile   descend-IRR=**CNT.R**

mɨŋgɨninda.
[mɨ=ŋgɨn-i-nd-a]
DIST=perceive.DIST-IRR-PFV-R
'Meanwhile the day before yesterday I did not go back down (to the marsh) and
check (the water level).' (Anton Manna, afi260814v_6:41)

Everything changes once the irrealis inflectional construction is recruited for use in directive

speech acts. Most of these chains pattern with irrealis, and not realis, linkage devices:

(218) *aku*   *ñi*   *ma*   *ŋuñi*   *mɨgɨ*   *mɨtɨrɨndata*
[aku   ñi   ma   ŋuñi   mɨ-gɨ   mɨ=tɨ-ri=**ndata**]
DM   PL   DIST.DEF   two   DIST-thus DIST=cut-MOD=SEQ.IRR
'So that (money) the two of them should take out (lit. 'cut') and,'

ñi   *vriñi*   *andu*   *nugu*   *ñi.*
[ñi   vriñi   andu   nugu   **ñi**]
PL   rice   bag   one   **get.IRR**
'they should buy one bag of rice.'

andu nugu ñiŋindata añi amamaŋgɨ manda.
'once you get one bag it's not for us to eat.' (Joseph Manna, afi040814iii_37:25)

But not always. Realis linkers are used when the suggestion conveyed by the irrealis

inflectional category only makes a very negligible demand on the addresse. This is true for

instance in what we might call cohortative chains:

(219) *nugu, añi nugu, nugunmɨ mamɨndɨ.*
'Alone, we shouldn't be eating each off on their own.'

añjirvapɨnɨ   *agamkɨ*   *nɨmɨyorɨkɨ*   *mamia!*
[añji=ɨrvapɨnɨ   agamkɨ   nɨ=mɨ=yori=**ki**]   [mɨ=am-**i**=a]
1PL.POSS=mouth   everyone   INS=DIST=declare.R=CNT.**R**   DIST=ingest-**IRR**=EXCL
'Each of us sounding off (declaring, calling out) together with our mouths, let's eat
(that way)!' (Dorothy Paul, afi260814v_5:42)

Realis linkage devices can even be used in more creative circumstances, for instance to

convince the addressee(s) that the content of the directive does not constitute too great a

demand. In the example below, Anton is trying to convince the others to join in for some gardening work. He uses the realis linkage construction together with the irrealis form of the verb 'slash' (i.e. with respect to slash-and-burn gardening techniques), and then stresses in the following clause that the work will not be that big of a deal:

(220) *avataŋgɨ   añi   papmɨ   maŋgunɨŋikɨ*
      [avata=aŋgɨ   añi   papmɨ   mɨ=aŋgunɨ-ŋɨ=**kɨ**]
      above=LH.PC 1PL   completely   DIST=go_along-IRR=CNT.**R**
      'For that part (of the bush) up there let's go along altogether and'

      papmɨ   muñu.
      [papmɨ   mɨ=**ñu**]
      completely   DIST=**slash.IRR**
      'let's slash it all completely (i.e., to prepare the ground for gardening).'

      i no olsem kɨyi gwrwamkɨ kandmɨ aŋinɨmbriyi.
      'It's not as if, whatsit, huge trees in old-growth bush.'
      (Anton Manna, afi260814v_10:57)

8.2.3   The independence of realis and irrealis linkers from scope of final clause

The fact that otherwise identical final clause constructions can pattern with either realis or irrealis linkage constructions suggests strongly that it is the interpretation of information in the medial clause, and not the final one, that is related to the choice of realis or irrealis marking. Further evidence in support of this claim is the fact that even when a final clause construction co-occurs with its 'expected' or more usual linkage type (i.e. realis or irrealis), this does not necessarily involve the extension of scope of the final clause category to the medial clause(s) in question.

So, in (8.2.2.2.1) we saw that apprehensional chains consistently pattern with irrealis linkers, and in the examples I discussed in that section, the irrealis-linked clauses were all interpretable as being within the apprehensional scope of the final clause. But they need not be. In discourse, the apprehensional clause is often xpreceded by an avertive clause that has the illocutionary force of a directive, as seen in the following example:

(221) *añɨ*   *ayuku*   *mɨkɨyimrɨndata*   Avertive clause
     [añɨ   ayuku   mɨ=kɨyim-ri=**ndata**]
     1PL   quickly   DIST=do_whatsit-MOD=**SEQ.IRR**

     ŋaparɨ   *mamurgɨ*   *kavɨndɨ.*   Apprehensional clause
     [ŋɨ=aparɨ   mɨ=amu-rgɨ   kavɨndɨ]
     POSS.REFL=hand   DIST=hold~NMLZ   **be_risk_of**
     'Mipela mekim hariap na nogut mipela holim long han,'
     'We need to do it quickly lest (we) languish (lit. 'hold it in our hands').

     anɨ mavɨndɨ kakŋi ñjvakapmi.
     'olsem na em mekim olsem long mipela.'
     'That's why he (the parish priest) does thus (i.e. gets frustrated) with us.'
     (Anton Manna, afi260814v_34:18)

In other words, it is not the apprehensional meaning that determines the use of the irrealis

linkage devices. If it were, we would expect all irrealis-linked medials in apprehensional

chains to have the same apprehensional meaning as the final clause.

The same principle applies in other types of chains. Prohibitive chains generally

(though not always) co-occur with irrealis-linked medial clauses (8.2.2.3.2). Those medial

clauses are generally interpreted as having the same illocutionary and perlocutionary force as

the prohibitive meaning in the final clause. But not always. In (7.2.5.1), I showed how

negation for prohibitives (in addition to other negative categories in the language) is in fact

resolved clause-internally, i.e. in the morphology of the medial verb. In prohibitive chains,

any medial verb derived in the negative base construction is always interpreted as a

prohibitive itself even though it is not directly marked as such:

(222) *kri*   *atunu, mɨyigɨya*   *nɨmakɨyimɨgɨtɨ*
     [kri   atunu mɨ=yigɨ=ya   nɨ=ma=**kɨyimi-gɨ**=tɨ]
     things.PC   too   DIST=name=TOP   INS=FOC=**do_whatsit-NEG**=CNT.IRR

     mandã   *mɨyirurɨgɨndɨ.*
     [mɨ=andã   mɨ=**yiru-ri.gi-ndɨ**]
     DIST=side   DIST=**declare-NEG-PROH**
     [Free translation: With things, with their names, don't do that and pronounce them
     on their side (i.e. with bad enunciation).] (Anton Manna, afi011116iv_3:06)

276

In (223), however, the medial verb is derived not in the negative base but in the modal base (I refer the reader to 4.3 for a description of the three verb bases in Chini.) It is this clause-internal marking that tells us that the clause lies outside the scope of the prohibitive, as the translations suggest. The irrealis marking here is thus unrelated to the prohibitive category per se; instead, as I argue later on in (8.3.2), its function is to signal to the addressee that the directive as a whole has no perlocutionary force (i.e. no true imposition of agency is intended):

(223) *mɨyurɨtɨ*   *nɨvkunɨ*   *mɨyirurɨgindɨ.*
      [mɨ=yurɨ=**tɨ**]   [nɨvkunɨ   mɨ=yiru-rɨ.gɨ-**ndɨ**]
      DIST=declare.MOD=**CNT.IRR**   again   DIST=declare-NEG-**PROH**
      'Yu kalim pinis na noken toktok gen/ripitim sem tok.'
      'You declare something (i.e. once) and don't declare it over again.'
      (Dorothy Paul, afi250814iv_6:21)

Finally, consider the realis-linked medial clauses in the prohibitive chains in the following two examples. In (224), the medial clause is clearly outside the scope of the final clause, since its verb is inflected for basic realis meaning. It is linked via realis chaining device, and at first it might not seem unreasonable to analyze the realis linker as functioning to block scope. But the use of the realis chaining device in (225), where the medial clause is in fact within the prohibitive scope of the final clause, shows that this cannot possibly be the function of the realis linker.

(224) *kɨchukwayi*   *anɨ*   *mivarkɨkɨ*
      [ki=chukwayi   anɨ   mɨ=var-kɨ=**ki**]
      PROX=tobacco   3SG   TOP=garden/work-R=**CNT.R**

      chukwayi   *anɨ*   *avarkɨ*   *mamɨndɨ.*
      [chukwayi   anɨ   avar-kɨ   mɨ=amɨ-**ndɨ**]
      tobacco   3SG   INCONS-PC   TOP=ingest-**PROH**
      'This tobacco, once they have planted it, they can't smoke the tobacco idly.'
      (Frank Manna, afi080514i_1:22)

(225) *avariti*   *mumwamiki*   *ka*   *akamindi.*
      [avari=ti   mi=mwa-m-i=**ki**]   [ka   akami-**ndi**]
      below=VIA   ALL=mumble-IPFV-COH=**CNT.R**   PROX.DEF   speak-**PROH**
      'Don't keep mumbling low and talking.' (Anton Manna, afi011116iv_16:34)

It might at first seem reasonable to imagine that the realis or irrealis linkers have the effect of indicating scopal relationships between medial and final clauses. The point here is that they most certainly do not. Whether or not information in the final clause extends to previous medials is unrelated to the use of realis versus irrealis linkers, whose function is altogether independent of such matters.

8.2.4 Mid-chain realis/irrealis shifts

The example below is about planning a journey by river. The chain is headed by an irrealis-inflected verb. There is a single shift in the medial clauses, from irrealis to realis:

(226) *ŋgu*   *anmi*   *aŋinimkati*   *ñiŋimi*
      [ŋgu   anmi aŋini-mki-ati   ñi-ŋi=**mi**]   **IRR**
      2DU   fuel   big-AUG.PC-ATT.PC   get-MOD=**PRE.IRR**
      'You two get a rather large amount of fuel,'

      añi   *ŋuñi* *o*   *nugu* *kigi*   *miñiki*
      [añi   ŋuñi o   nugu ki-gi   mi=ñi=**ki**]   **R**
      1PL   two   or   one   PROX-thus   DIST=get.IRR=**CNT.R**
      'we'll get one or two (gallons) and'

      nitwavi   *nitwavi*   *ri.*
      [ni=twavi-- ni=twavi   ri]
      3SG=with   3SG=with   go/come_downriver.IRR
      'we'll take him downriver.' (Frank Manna, afi040814iii_48:57)

The example below is about getting ready for the fishing at the end of the dry season (and dividing the marsh between Watabu and Andamang villages). Again, there is a single shift, from irrealis to realis linkers:

(227) *añi   ŋiyãrkŋɨ   ndumɨ*
    [añi   ŋɨ=yãrk-ŋɨ   ndu=**mɨ**]   **IRR**
    1PL   POSS.REFL=way-PC   perceive.PROX.MOD=**PRE.IRR**
    'We need to know what the deal is (with our own people):'

    agŋiŋri   rindata   vyenɨ   agarɨndata
    [agŋi-ŋri ri=**ndata**]   [vyenɨ   agari=**ndata**]   **IRR**
    boy-PL   go/come_downriver.MOD=**SEQ.IRR**   morota   cut.MOD=**SEQ.IRR**
    'once the boys have gone downriverwards and cut morota (dried sago palm fronds) and'

    ŋaŋgɨ   tɨrimɨ
    [ŋɨ=aŋgɨ   tɨ-ri=**mɨ**]   **IRR**
    POSS.REFL=LH.PC   cut-MOD=**PRE.IRR**
    'fenced off (lit. cut) our (side of the marsh),'

    iŋkaŋgɨ   gɨkanɨ   agɨ   iŋkɨva
    [iŋkɨ=aŋgɨ   gi-kanɨ   agɨ   iŋkɨ=**va**]   **R**
    PL.FOC.POSS=LH.PC   downriver-here another   be_located=**PRE.R**
    'whereas their (the Watabu villagers') bit of the marsh will be located downriver over here,'

    ainkaŋgɨ   kanɨ   agɨ   ñjiyi.
    [ainkɨ=aŋgɨ   kanɨ   agɨ   ñji-yi]
    1PL.FOC.POSS=LH.PC here   another   plant-IRR
    'ours will be placed (lit. planted) here in its own spot.'
    (Anton Manna, afi260814v_1:57)

The following chain concerns the villagers' plans to establish a village store. There are three

shifts between realis and irrealis in the medial clauses:

(228) *ñi   mɨgɨ,   makŋi   achinɨmaya*
    [ñi   mɨ-gɨ   ma-kŋi   achi-n-ɨ=ma=ya]   (REL)
    PL   DIST-thus   DIST.DEF-way do.IRR-NMLZ-PC=DIST.DEF=TOP
    'That which you all must do,'

    ñi   kri   naugra   nɨmakŋi   akramɨ
    [ñi   kri   nɨ=augra   nɨ=ma-kŋi   akɨ-ra=**mɨ**]   **IRR**
    PL   things.PC INS=money   INS=DIST.DEF-way do-MOD=**PRE.IRR**
    'you all get the things (i.e., products to sell in the store) in such a way
    with money,'

    aku   papmɨ   chinɨndamɨ
    [aku   papmɨ   chi-nɨ-nd-a=**mɨ**]   **IRR**
    ok   completely exist-IPFV-PFV-R=**PRE.IRR**
    'if/when it's completely finished,'

    aku   añi   ambɨgɨ   ñjinkɨkɨ
    [aku   añi   ambɨgɨ   ñjin-kɨ=**kɨ**]   **R**
    ok   1PL   house   sort_out-R=**CNT.R**
    'well've sorted out the house and,'

    kri   ñiratɨ   makramɨ
    [kri   ñi-ra=**tɨ**]   [mɨ-akɨ-ra=**mɨ**]   **IRR**
    things.PC   get-MOD.PL=**CNT.IRR** DIST=put-MOD=**PRE.IRR**
    '(you all) get all those things and put them'

    aku   anɨ   gŋɨ   añi   aŋri   pirkɨndaka
    [aku   añi   gŋɨ   añi   aŋ-ri   pirk-ɨ=**ndaka**]   **R**
    'ok   1PL   afterwards 1PL   man-PL   sit.PL-PFV=**SEQ.R**
    'ok afterwards we men will sit down and,'

    ndɨnkɨ   ñjañiŋandaka
    [ndɨ~n.kɨ   ñji=añi-ŋa=**ndaka**]   **R**
    think~NMLZ   PL.DAT=give-R.PL=**SEQ.R**
    'having proposed ideas back and forth to each other and then,'

    makŋiŋgɨ   añi   vavrɨ andmɨ   achi.
    [mɨ=akŋi=ŋgɨ   añi   vavrɨ andmɨ   achi]
    DIST=time=COM   1PL   work   start   do.IRR
    'at that point we will begin the work.' (Anton Manna, afi260814v_33:06)

280

And the following chain, headed this time by an imperative verb form, has a total of four shifts back and forth between realis and irrealis chain linkage constructions, the most of all clause chains in the corpus:

(229) *aku   ñi   mɨkɨyimrɨndata*
[aku   ñi   mɨ=kɨyim-rɨ=**ndata**]   **IRR**
ok   PL   DIST=do_whatsit-MOD=**SEQ.IRR**
'You all do so and,'

aku   gŋɨ   marvurkɨnɨŋindaka   aku
[aku   gŋɨ   mɨ=arvurkɨ-nɨŋi=**ndaka**   aku]   **R**
ok   afterwards   DIST=reveal.TLOC-IRR=**SEQ.R**   DM
'afterwards having revealed (what you have to contribute),'

ñi   gŋɨ   ɨrkŋɨ   avarkɨ   akamrɨmɨ
[ñi   gŋɨ   ɨrk-ŋɨ   avar-kɨ   akam-rɨ=**mɨ**]   **IRR**
PL   afterwards   speech-PC   INCONS-PC   speak-MOD=**PRE.IRR**
'afterwards if you all just feel like talking,'

iŋkɨmiyaŋgikɨ
[iŋkɨ=mɨyi=aŋgi=**kɨ**]   **R**
PL.FOC.POSS=stomach=LH.PC=**CNT.R**
'it's up to you (lit. of y'all's stomach) and'

makãmpmɨ   nɨwuwandaka   aku
[mɨ=akam-pmɨ   nɨ-wu-wa=**ndaka**   aku]   **R**
DIST=speak-NMLZ   GER=go/come-R.PL=**SEQ.R**   DM
'once the conversation has gone on'

ñi   mɨprɨmɨ   michinɨndamɨ
[ñi   mɨ=pri=**mɨ**]   [mɨ=chi-nɨ-nd-a=**mɨ**]   **IRR**
PL   DIST=finish.MOD=**PRE.IRR**   DIST=exist-IPFV-PFV-R=**PRE.IRR**
'if you all want to finish it then let it be finished and,'

ñi   mɨprɨndata
[ñi   mɨ=pri=**ndata**]   **IRR**
PL   DIST=finish.MOD=**SEQ.IRR**
'you all finish it and'

aŋiti
[aŋi=**ti**]   **IRR**
go/come.MOD=**CNT.IRR**
'go and,'

mɨkɨyi   *mɨstopim*   *kɨra.*
[mɨ=kɨyi   mɨ=stop-im   kɨ-ra]
DIST=whatsit   DIST=[TP:stop-TR]   do-IMP
'turn the whatsit (the recorder) off.'
(Dorothy Paul, afi010514v_7:36)

What I have argued for here is that the realis and irrealis chain linkage markers represent grammatically independent devices. Were they dependent on the information in the final clause, it would be quite difficult to explain why some final clause constructions can pattern with either linkage type, and furthermore, why there is nothing unusual in speakers' switching back and forth between realis and irrealis linkers in a single chain. These cannot possibly be mechanistic devices, i.e. ones that are determined in by the final clause construction, or that speakers are necessarily planning the entire chain in terms of that construction, through their use of realis or irrealis linkers. In Chini, realis and irrealis chaining devices signal their own type of information, one I have described roughly in terms of 'expected' information (realis) or 'unexpected/unexpectable' information (irrealis). In the next section, I take a closer look at those functions across different contexts of use.

8.3   The functions of realis and irrealis chain linkage constructions:

Toward a deeper understanding

In (8.2) I argued that the use of realis versus irrealis chain linkage devices is determined independently on a clause-by-clause basis, and as such is not dependent on information in the final clause like in previously described languages with these types of constructions. In this second part of the chapter, I turn our attention more squarely to the question of what the functional basis of these devices is, that is, what sort of principle(s) could explain why speakers choose realis versus irrealis linkage devices. First, I discuss the use of realis and irrealis linkage constructions across several frames involving temporal and other meanings,

all in non-directive speech acts (8.3.1). In these grammatical contexts, realis linkers occur very frequently while the use of the irrealis linkers is constrained to a set of infrequent constructions. This distribution can be explained in terms of 'within the realm of the expected course of reality' (realis) and 'beyond the realm of the expected course of reality' (irrealis). In (8.3.2) I discuss the use of realis versus irrealis linkage devices in directive speech acts, since this is where irrealis linkage devices occur most frequently in Chini discourse. I argue that the functional basis of the distinction in directives is similar to non-directive contexts, but is also influenced by certain Melanesian cultural principles pertaining to the autonymy of individuals, the related preference against imposing one's will upon others, and the perceived uselessness of talk to convince others to do things, something which pervades much of Melanesian social life.

8.3.1   Realis and irrealis chain linkage constructions across contextual frames

In (5.3), I framed the analysis of the inflectional realis/irrealis marking in the Chini verb according to temporal contexts of use (as well as a directive contexts of use). This was possible because, at least in Chini, temporal reference does not constrain the usage of either realis or irrealis inflectional categories (except in a couple minor ways). Temporal reference can thus be seen as a good candidate for a "control", i.e. a way to frame the data. In this part of the chapter, I will follow a similar structure, and frame the data according to the following "grammatical contexts" where realis and irrealis chaining constructions are used: non-future temporal contexts, future temporal contexts, contexts involving the notion of 'possibility', and negative contexts.

My argument in this section can be boiled down to the following set of statements. The consistent meaning of realis and irrealis chaining constructions across diverse contexts

of use is fundamentally pragmatic, and based on the notion of realis as the pragmatically unmarked category (and in that sense is used to express 'expected' information) and irrealis as the pragmatically marked category (and in that sense is used to express 'unexpected' or 'unexpectable' information). But there is more to the story, since the function of these constructions is dependent on the type of speech act (broadly defined) and more general interactional context in which they are used. The first four contexts of use for chaining constructions involve a range of specific types of (what we can refer to as) speech acts with assertive or interrogative illocutionary force. Across those types of speech acts, realis linkage constructions dominate in usage except when the information is expressed as being beyond the expectations of the speaker, for example thwarted desired courses of action, uncertain futures, or in deflective interactive events where the speaker seeks to derail their addressee's contribution, among others.

As I argue in (8.3.2), in directive speech acts, the speaker's use of realis versus irrealis chaining devices is not so much based on the speaker's own expectations about the information in the chain, but on how that information is oriented toward the listener. In directive speech acts, realis chaining constructions can be said to have perlocutionary force; there is an expectation, grounded in various possible principles, that the directive should lead to a consequential action on the part of the listener. Irrealis chaining constructions package the directive as being without perlocutionary force and leaving the consideration of the suggestion or request in the hands of the listener. This type of social function of realis and irrealis chaining devices can be seen as originating in the aforementioned Melanesian-specific cultural principles and related ideologies about language.

8.3.1.1 Non-future temporal contexts

Both realis and irrealis linkage constructions can be used in chains with non-future (past or present) temporal reference. The use of realis devices in chains with non-future temporal reference expresses the information as 'real' in the sense that the events in the sequence are known to have gone according to plan, i.e. the normatively expected course of events:

Realis linkers: expected course of events in non-future context
(230) *ñi*   *mumbupmɨkɨ*   *chitmɨkɨ*
[ñi   mɨ=mbu-pm-ɨ=kɨ]   [chi-tm-ɨ=kɨ]
PL   DIST=lay_floor-IPFV-COH=CNT.R   ascend-IPFV-COH=CNT.R

kandmɨ   *arwari*   *ñi*   *mambɨyitmi.*
[kandmɨ   arwa-ri   ñi   ma=mbɨyi-tm-i]
stick   long-PL   PL   FOC=stand-IPFV-IRR
'They would lay the floor, move upwards, and they would stand up a bunch of long sticks (i.e., to build a yam house).' (Frank Manna, afi080514i_7:29)

Realis linkers: expected course of events in non-future context
(231) *ake*   *Mariam*   *avkɨkɨ*   *makuwava*
[ake   Mariam   av-kɨ=kɨ]   [mɨ=aku-wa=va]
DM   Mariam   descend-R.PC=CNT.R   DIST=perform_exchange_dance-R=PRE.R

ñi   *mɨriŋa.*
[ñi   mɨ=ri-ŋa]
PL   DIST=buy-R
'Ok given that/once (the ritual dance) Mariam went down and (the Andamang folks) performed it, they bought it.' (Paul Guku, afi141016iv_44:25)

Realis linkers: expected course of events in non-future context
(232) *añi*   *avarkɨ*   *avɨgakɨ*   *manɨ*   *ñjvayavapa.*
[añi   avar-kɨ   avɨ-ga=kɨ]   [manɨ   ñjvɨ-ayi-avɨ-apa]
1PL   INCONS-PC   descend-R.PL=CNT.R   there   PL.BEN-wait-TLOC-R
'We (the Andamang women) went down there (to the meeting-point for the crop exchange) in vain and were waiting there for them (the Dibu women).'
(Emma Airɨmarɨ, afi042414i_0:45)

Realis linkers: expected course of events in non-future context

(233) añɨ   natɨ   gwunuŋgɨ   avkɨkɨ
      [añɨ   natɨ   gwunu=ŋgɨ   av-kɨ=kɨ]
      1PL   presently   net=COM   descend-R.PC=CNT.R

      mumbumbru   ndi.
      [mɨ=mbu~mb.ru   ndi]
      DIST=cut_off~NMLZ   neglect.R
      'We neglected just now to come down bushwards with the fishing net and section it
      (the marsh) (i.e., put the net across the marsh to catch fish).'
      (Emma Airɨmarɨ, afi260814v_4:07)

Realis linkers: expected course of events in non-future context

(234) ñi   mɨgɨ   wuyikɨ   mɨŋɨgandaka
      [ñi   mɨ-gɨ   wu-yi=kɨ]   [mɨ=ŋɨga=ndaka]
      PL   DIST-thus   go-R.PC=CNT.R   DIST=catch.R.PL=SEQ.R

      nɨbmakañi   andubmakañi   mbaŋɨrati.
      [ni=bmakañi   andu.bmakañi   mbɨ=aŋɨ-ra-ti]
      REP=tomorrow   day_after_tomorrow   DIST.ALL=go/come-IRR-NEG
      'They having come thus and caught fish, they won't be returning there tomorrow or
      the day after tomorrow' (Joseph Manna, afi150514ii_27:50)

Realis linkers: expected course of events in non-future context

(235) mɨni   mbaratmɨkɨ   mamamapaya?
      [mɨ-ni   mbɨ=ara-tm-ɨ=kɨ]   [mɨ=ama-m-apa-y-a]
      DIST-who   DIST.BEN=walk-IPFV-COH=CNT.R   DIST=ingest-IPFV-R-NMLZ-Q.R
      'Who has been going there and eating them (the bananas)?'
      (Emma Airɨmarɨ, afi160714iv_43:56)

Irrealis linkage constructions are used only very infrequently in chains with non-future
temporal reference and positive polarity. In the example below, use of the irrealis linkage
construction together with the desiderative construction in the final clause indicates a
thwarted course of action in the past:

Irrealis linkers: unexpected course of events in non-future context

(236) "aga! ku   aŋiti   mɨkɨyi   ŋginɨŋginɨ   vɨnda!"
       aga   [ku   aŋɨ=ti]   [mɨ=kɨyi   ŋginɨ~ŋginɨ   vɨ-ndɨ=a]
       oh_no 1SG.NOM go=CNT.IRR DIST=whatsit perceive.DIST~NMLZ   BEN-think=EXCL
       " 'Oh no! I had wanted to go check out some whatsit (fish)!' "
       (Joseph Manna, afi150514ii_28:07)

286

8.3.1.2 Future temporal contexts

Future temporal reference has been shown in other clause-chaining Papuan languages, especially those of northeast New Guinea, to pattern consistently with irrealis linkage morphology (Daniels 2015; Roberts 1994). In Chini, however, futurity alone is not predictive for which chaining construction will be used. Some future constructions pattern with realis-linked medials while other future constructions pattern with irrealis-linked medials. A finer-grained approach reveals that the split is between those future-oriented constructions where the outcome is in no particular doubt (realis) and those where the outcome is either in doubt/uncertain or otherwise not highly expected (irrealis).

The default (and monoclausal) expression of futurity in Chini relies on the irrealis inflectional category of the verb. Although the events in the chain may all be unrealized (as expressed by the inflectional irrealis marking), this neither entails nor connotes uncertainty or doubt about the event. So, though it may seem contradictory at first, the language-internal logic requires the use of realis linkers for these clauses (headed as they are by irrealis-*inflected* verbs). The events in the sequence have not yet come to pass, but there is a reasonably good expectation that they may. Or at the very least, there is no reason to expect they will not come to pass:

Realis linkers (no express uncertainty about outcome)
(237) ...*ñi*   *nimbumbu*   *nɨgɨ*   *vɨchikɨ*
    [ñi   nɨ=mbu~mbu   nɨgɨ   vɨ=ch-i=kɨ]
    PL   REP=play~NMLZ   another   BEN=ascend-IRR=CNT.R

    akwamɨ   *nɨpapmɨ*   *ñjañiñi.*
    [akwamɨ   nɨ=papmɨ   ñji=añi~ñi]
    day   NEW.P/ALL=exact   PL.DAT=give~IRR
    '...they (the Paynamar folks) will come back up again to play soccer and (we) will set an exact date with them.' (Anton Manna, afi260814v_16:50)

Recall from (5.3.5) that the use of the inflectional realis category to indicate futurity represents the stated outcome of the situation as highly presupposed. Being presupposed, if not the exact same thing as being expected, certainly connotes it. For this reason, realis linkers are also used in clause chains with future temporal reference:

Realis linkers (highly presupposed outcome)
(238) *na*   *nu*   *kanɨ*   *agɨyikɨ*
[na   nu   kanɨ   agɨ-yi=kɨ]
[TP:CONJ   2SG   here   go/come_upriver-R.PC=CNT.R

mɨti   *añonɨ*   *pɨyina?*
[mɨ-ti   añonɨ   pɨ-yi-n-a]
DIST-which   land   sit-R.PC-NMLZ-Q.R
'Na long hia yu kam antap bai yu sindaun long wanem graun?'
'And so to here you will come upriver and then what land will you settle (lit. sit)?'
(Paul Guku, afi250814iv_22:54)

Realis linkers (highly presupposed outcome)
(239) *"ñi*   *mekŋi*   *ŋaŋgɨ*   *kɨyimkɨva*
[ñi   mi-kŋi   ŋɨ=aŋgɨ   kɨyim-kɨ=va]
PL   DIST.PL-way   POSS.REFL=LH.PC   do_whatsit-R=PRE.R

añi   *mundwina?"*
[añi   mɨ=ndwi-n-a]
1PL   DIST=perceive.PROX.R-NMLZ-Q.R
' "Wanem taim bai ol mekim bilong ol na bai mipela lukim?" '
' "When exactly are they going to do theirs (i.e., the exchange dance) already so that we can watch it already?!" ' (Peter, afi260814v_24:29)

In addition to the use of the inflectional irrealis category and (to a lesser extent) the inflectional realis category to express futurity, Chini has the distinction of having three modal future categories. Unlike inflectional realis and irrealis categories, futurity is part of their basic, consistent meaning. The differences between them aside, they also have in common an indication of a less-than-certain ('unexpectable') outcome. So, while the examples in this section show that futurity (as a semantic interpretation) does not require the use of irrealis linkers, in the following section I show how the same principle of unexpectable outcomes

helps explain why irrealis linkers are used in chains headed by any of the three modal future categories.

8.3.1.2.1 Three future modal categories that pattern with irrealis linkers

In Chini the following verbal categories built on the modal base all express futurity in addition to some other modal concept: uncertain future *-ri*, delayed future *-ndɨkɨ*, and anterior future *-ndatɨ*. Their rather fine-grained semantic-pragmatic properties as well as information on frequency are summarized in Table 23.

Table 23: THE THREE FUTURE MODAL CATEGORIES

		Uncertain future *-ri* ('UFUT')	Anterior future *-ndati* ('A.FUT')	Delayed future *-ndiki* ('D.FUT')
Consistent semantics	Temporal orientation	future	future	future
	Implicit tense-aspect	—	return trajectory to situation at time of speech	bounded delay leading up to future situation
	Epistemic modality	unknowable future situation (contingent on forces beyond human control)	—	—
Pragmatic distribution and use	Assertive	yes	yes	yes
	Interrogative	yes	never	never
	Directive	unattested	diverse possibilities	unattested
	Common interactional use	deflection of epistemic authority	hiatus from presupposed or expected course of events	derailment from addressee's current course of action or perceived expectation
Token frequency in 5 hours of interactional speech[151]	Independent clauses	2	15	23
	Final clauses	0	7	3

---

[151] The recording events I draw on for the token frequencies are locatable in the corpus in ELAR under the following identifiers. For afi051116ii, counts from only the first 47 minutes were included and for afi231016ii only the first 9 minutes were included since neither recording has been transcribed beyond those respective points. The other recordings are fully transcribed, and their identifiers are as follows: afi011116iv, afi111016ii, afi250814iv, afi141016m, afi220414iii, and afi271016ii.

A challenge for our understanding is the fact that these constructions are all very infrequent even in lone main clauses much less in clause chains. At least in the data available, they all pattern consistently with irrealis linkage devices. This is not surprising once we consider their pragmatic functions in discourse, which are all amenable to an interpretation in terms of a lack of expectability about the sequence of events.

The uncertain future construction is used to indicate one's lack of epistemic authority about a state of affairs, typically in reference to the doings of non-human entities, such as the climate, geological events, or animals. There is just one chain in the corpus headed by a final verb in the uncertain future construction:

(240) *añi   pa   miŋgini,*
    [añi   pa   mɨ=ŋgɨn-i]
    1PL   yet   DIST=perceive.DIST.IRR

    mavɨgɨtɨ   *muvwariri.*
    [mɨ=avɨ-gɨ=**ti**]   [mɨ=vu-arɨ **-ri**]
    DIST=descend-MOD=**CNT.IRR**   DIST=break_apart-MOD **-UFUT**
    'Mipela lukluk pastaim, em bai kam brukim o.'
    'We'll see yet. Whether it (the pig) will come down and break it (the fence) apart.'
    (Dorothy Paul, afi160714iv_9:18)

The anterior future category indicates a future course of action that occurs prior to another (almost always implicit but occasionally explicitly expressed) course of action. It has a strong tendency to be used in delicate social situations, as a means to seek or give permission for leave-taking. Like the other categories discussed thus far, when the anterior-future occurs in a final clause in a chain, it patterns with irrealis linkers:

(241) *"ku   pri   agiti   mimbrindati!"*
    [ku   pri   agɨ=**ti**]   [mɨ=mbrɨ-**ndati**]
    1SG.NOM   DM   go/come_upriver.MOD=**CNT.IRR**   DIST=try.MOD-**ANT**
    ' "Let me/I'll go upriver (to Madang) and try (buying) it (the fishing net) first." '
    (Paul Guku, afi011116iv_23:16)

Finally, the most frequently used of these three categories is the delayed future. It is used primarily to deflect from or derail the addressee's proposed course of action and is roughly comparable to such uses in English of the 'do X in a bit' construction.

(242) *ku*   *..agɨtɨ*
      [ku   agɨ=**tɨ**]
      1SG.NOM   go/come_ upriver.MOD=**CNT.IRR**

      ku   *ñjindutɨ*   *mɨtarɨndɨkɨ.*
      [ku   ñji=ndu=**tɨ**]   [mɨ=ta-rɨ-**ndɨkɨ**]
      1SG.NOM   PL.DAT=perceive.PROX.MOD=**CNT.IRR**   DIST=remove-MOD-**D.FUT**
      'I'll go upriver and see them and take it out (the stick used to aid the banana tree seedling in its growth).' (Dorothy Paul, afi160714iv_45:18)

(243) *bmakañɨ*   *ŋganŋgŋamɨ*   *ŋaparɨŋgɨ*   *chitɨ*
      [bmakañɨ   ŋgi=anŋgŋi-amɨ   ŋaparɨŋgɨ   chi=**tɨ**]
      tomorrow   3SG.POSS=younger_sib-FEM   on_ones_own   ascend.MOD=**CNT.IRR**

      nɨtwavɨ   *akamrɨndɨkɨ.*
      [nɨ=twavɨ   akam-rɨ-**ndɨkɨ**]
      3SG=with   speak-MOD-**D.FUT**
      'Tomorrow his little sister will go up on her own and speak with him.'
      (Joseph Manna, afi150514ii_11:37)

What the uses of these three future categories have in common is their expression of an alteration to an expected course of events. This could explain why irrealis linkers pattern consistently with these three categories but not in other chains that have future reference. Despite the general independence of realis and irrealis linkage devices from the information in final clauses as I argued in (8.2), it could be that these chaining constructions do involve a kind of mechanistic patterning, but one that is entirely consistent with the pragmatic functions of the linkers as I have described them. A similar type of pattern is discussed in the next section.

8.3.1.3 Contexts involving the notion of possibility

Irrealis linkage devices are used consistently in chains that express possibility (rather than actuality). This can be seen in the two examples below.

(244) *ɨvkuyi*   *agɨmɨ*   *anɨ*   *ñikɨyimrɨru.*
      [ɨvkuyi   agɨ=**mɨ**]   [anɨ   ñi=kɨyim-rɨ-**ru**]
      folks   go/come_upriver.MOD=**PRE.IRR**   3SG   PL=do_whatsit-MOD-**POT**
      'Nogut ol lain i go antap na em i mekim long ol.'
      [Free translation: 'It's likely the folks'll go upriver and he'll negatively affect/do thus to them.'] (Frank Manna, afi220414iii_26:26)

(245) *ñi*   *kwandamɨŋɨ*   *ndutɨ*
      [ñi   ku=andam-iŋɨ   ndu=**ti**]
      PL   1SG.POSS=footprint-PC   perceive.PROX.MOD=**CNT.IRR**

      nogut   *ol*   *bai*   *suspek.*   (Tok Pisin)
      [**nogut**   ol   bai   suspek]
      apprehensional   3PL   FUT   suspect
      'Nogut ol i lukim lek mak bilong mi na suspektim mi.'
      'They might have seen my footprints and suspected me.'
      (Gordon Dingaram, afi150514ii_2:41)

The use of irrealis linkers in these chains is consistent with the idea that irrealis chaining devices signal the information as being beyond the realm of our expectations and thus within the realm of imagined possibilities.

8.3.1.4 Negative contexts in assertive speech acts

We saw in (7.2.5) that in clause chaining, types of negative polarity as expressed by the standard negation category, the negative realis and irrealis categories, and the prohibitive category are all resolved clause-internally, in the morphology of the medial verb. We also saw in (8.2.2.3.1) that the use of irrealis chaining devices can be interpreted as expressing a type of negation, specifically a thwarted attempt at some action. There is more to the story, however. The use of realis versus irrealis chaining devices can signal certain nuances about negation when negation is marked in the final clause. Realis signals that the negated

information in the chain is part of the normative, expected course of events. The example below concerns how a pig had broken the fence to the silt garden (*murupmu*). The speaker is merely describing the state of affairs of the poor construction of the fence that allowed the pig to break through:

(246) *"ah   nu   matɨ   nu   mamiakɨ   marumati."*
      ah   [nu   mɨ=atɨ   nu   mɨ=ami-a=kɨ]   [mɨ=aru-ma-ti]
      ah   2SG   DIST=INDET   2SG   DIST=be_fit-R=CNT.R   DIST=fence_off-R-NEG
      ' "That part (of the fence) you did not fence off very well." '
      (Dorothy Paul, afi250814iv_8:42)

This use of realis linkers indicates a speech act we might label as a 'minor grumbling' rather than a complaint of a higher order. Somewhat similarly, in the example below, Anton is just acknowledging the foolishness of the others as they fail to take proper care in the historical account they gave of local affairs. His use of the realis linkage device indicates what we might call a 'minor corrective', which he immediately follows with a long monologue to tell the correct version from his point of view.

(247) *ñ̃i   ɨvkurkŋɨ   ñi   mbɨndɨndmɨkɨ*
      [ñi   ɨvku-irk-ŋɨ   ñi   mbɨ=ndɨ~nd-m-ɨ=kɨ]
      PL   old-talk-PC   PL   BEN.TOP=think~IPFV-IPFV-COH=CNT.R

      makãmpmɨ   prɨmati.
      [mɨ=akam-pmɨ   prɨ-ma-ti]
      DIST=speak-NMLZ   do-R-NEG
      'With respect to this old story (about the history of Breri migrations into Andamang territory) you all haven't been thinking while speaking.'
      (Anton Manna, afi250814iv_35:05)

These uses of realis linkers contrast with uses of irrealis linkers in chains headed by the *-mati* (inflectional realis, negative polarity) construction. The use of irrealis linkers indicates a much stronger complaint about a situation that runs counter to normative expectations about behavior. This can be seen in the following example, where Anton complains that his brother who lives in Aŋgwanmɨŋɨ hamlet never comes down to Akapmɨŋɨ:

293

(248) *achikɨniya...*   *bmurupa*   *ritmɨtɨ*
         [achi-kɨni=ya   [bmurupa   ri-tm-ɨ=tɨ]
         upriver-whosit=[TP:TOP]   morning   go/come_downriver-IPFV-COH=CNT.IRR

         nɨtwavɨ   *akãmpmɨtɨ*   *nɨtwavɨ*   *pɨnɨcpmɨ*   *prɨmati.*
         [nɨ=twavɨ   akam-pm-ɨ=tɨ]   [nɨ=twavɨ   pɨ-nɨ-cpmɨ   prɨ-ma-ti]
         3SG=with   speak-IPFV-COH=CNT.IRR   3SG=with   sit-IPFV-NMLZ do-R-NEG
         'That upriver whatshisface guy... he does not come downriver mornings and talk with
         him (i.e., me) and sit down with him.' (Anton Manna, afi260814v_ 11:56)

Uses of irrealis linkers to express more major complaints or disapproval tend to have certain effects in the subsequent discourse. For instance, people might provide some sort of account as to why the individual(s) in question has not been behaving according to normative expectations. Immediately after Anton said (248), Emma offered her own account as to why Joseph Manna hardly ever comes downriver to Akapmɨŋɨ. Here she alludes to information that is known in the community, concerning the fact that Joseph set up his own private homestead in Aŋgwanmɨŋɨ years ago:

 (249) *anɨ atunu achimanɨ ñjaravkɨkɨ yanɨ achimanɨ mki.*
        'Em tu em planim em yet na em wan em stap antap.'
        'It was he himself who homesteaded himself upriver and resides there upriver on his
        own.' (Emma Airɨmarɨ, afi260814v_12:00)

8.3.2   On the social functions of realis versus irrealis chain linkage constructions in directive speech acts

By this point I have described the use of the realis and irrealis linkage constructions in non-directive but otherwise diverse speech acts with non-future temporal reference (8.3.1.1), future temporal reference (8.3.1.2), contexts involving the concept of possibility (8.3.1.3), and negative contexts (8.3.1.4). Across those types of uses, realis chaining constructions are much more frequent than irrealis ones. The opposite is true of directive speech acts, where irrealis chaining constructions are very frequent and their realis counterparts very infrequent.

Directives turn out to be key to understanding the Chini-specific functional distinction between realis and irrealis in this area of the grammar. As I argue in this part of the chapter, what is needed is an approach that considers some of the cultural principles at work when people seek to get others to follow one's own wishes. (I will limit the discussion here only to realis- and irrealis-marked directives, with the caveat that the full range of directive constructions in the language is somewhat wider, including things such as the use of desubordinated clauses.) To that effect, here I argue that the use of irrealis chaining devices in directive chains serve as overt, socially-defined signals that the directive is without perlocutionary force. That is, irrealis-linked clauses with directive content are directives explicitly marked as being without expectations for compliance. The much less frequently used possibility for directive chains to have realis-linked clauses can be found in contexts where the speaker has some reason to expect that the addressee(s) will comply.

First, however, it is important to understand a bit about how people in this part of the world perceive language as a means to get others to do things for them, and what the repercussions are for directive speech acts. The Western cultural principle that one can command someone else and exert agency over them does not really exist in the same way in many Melanesian societies. What Kulick (1992) writes about Gapun villagers' cultural aversion to overextensions of agency applies exactly to Chini society (at least, as far as I understand it):

> The villagers consider that to overtly attempt to influence the actions of another individual is one of the most serious offences that one person can commit against another. This idea is reflected in every type of relationship in the village, from the way parents coax and plead with their children to go ask a neighbor for a betel nut, to the ways in which village big men carefully monitor their oratorical speeches so as not to appear pushy. To overtly attempt to influence another person is to violate them and challenge them, and among adults, this will almost inevitably result in an argument or a fight, sooner or later ... [T]o openly ask a person to borrow something is considered a provocation, for example, because the direct request will put the giver out by giving him shame, whereupon he will feel constrained to lend out his

295

possession, even if he doesn't want to, and this will in turn lead to "*planti toktok*" [i.e. complaints] (Kulick 1992:51).

Like in Gapun, in Chini society, it is entirely possible for any person regardless of status — including children toward their parents — to completely deflect or disregard almost any sort of directive, without any social consequence whatsoever. So, in Chini society, there are scarcely any 'directives' at all, at least not in the generally assumed Western sense. With the exception of low-demand affairs like directing another's motion (see also 5.3.6), there is too strong and fundamental a taboo against using speech to direct the actions of others. To do so would be in serious conflict with the culturally sacred autonymy of the individual, as discussed to some extent in the ethnographic profile I provided in (2.2).

This fundamental cultural ideology is constantly reinforced in everyday formulas and other expressions in both Chini and Tok Pisin. The Chini *ɨnkumɨyaŋgɨ!* (lit. 'a matter of your internal belly!') or alternatively the Tok Pisin *laik bilong yu!* (lit. 'your desire/wish') are used as vehement affirmations against any intended coercion or exertion of agency, e.g. should a listener confirm their own intention to comply. Upon any indication that one has imposed their agency on another person, the person who perceives themself to be at fault will inevitably assert (in Tok Pisin) *nogut mi pushim yu!* ('lest I pressure/push you!'). Similar denials of claims to one's control over others include other Tok Pisin expressions that permeate day-to-day life: *em stap long yu yet!* ('it's up to you yourself to decide!') and *mi no inap tokim yu!* ('I cannot tell you, i.e. what to do.'), among others. The apologetic formula *matɨ achirkɨ* is used exclusively when, to one's horror, an addressee has observably submitted to a demand, even just a small one. The literal meaning of this expression, (*mɨ-atɨ achi-r-kɨ* DIST-INDET little-ADJ-PC) 'that little amorphous space' makes direct reference to the social space hovering around other people, that is, individual autonymy itself. In this type of

296

society, we should not be surprised to find evidence of even more routinized parts of the grammar within the larger apparatus of constructions that are used to avoid and mitigate exertions of agency as a matter of social obsession.

This general social phenomenon is nothing new and has been described in various ways for other Melanesian societies and in places beyond Melanesia. The repercussions for our own theoretical understanding about speech acts and directives in particular, are significant. Based on her fieldwork among the Ilongot people in the Philippines, Rosaldo (1982) writes:

> [W]hile Searle's category of directives may hold in Ilongot as much as in English speech, the rules and significances associated with Ilongot directive acts are, in most important ways, quite different from the ones that Searle proposes... [W]here Ilongots may differ most significantly from ourselves is that, for them, *overt directive formulae are not construed as harsh or impolite* [her emphasis]. And this, I would suggest, is true because directive use is seen as having less to do with actor-based prerogatives and wants than with relationships affirmed and challenged in their ongoing social life (Rosaldo 1982:216).

So, it is only with the social context in mind that we can begin to understand what it means to 'direct' others, since 'directing' others in societies that operate according to this general principle is ultimately a matter of persuading, and not a matter of exerting control over others.[152] That this runs counter to some of our own deeply-rooted cultural assumptions about what directives are, goes without saying.

The analysis I present here draws on my own experience doing fieldwork with Chini people and in my attempts to learn their ancestral language. The Chini learner has to figure out not only which directive category (or, category with directive uses) (imperative, immediate imperative, basic realis, basic irrealis, negative irrealis, prohibitive, anterior future) to employ but also, in clause chains with some type of directive illocutionary force,

---

[152] I am indebted to Lise Dobrin for several crucial insights here related to the social functions of the irrealis chain linkage constructions in Chini and how they relate to things like opacity doctrines and Melanesian ways of using directives to persuade others rather than telling them what to do per se.

whether to use realis or irrealis linkers. So, from the perspective of a foreign learner of Chini but (more importantly) also from the perspective of the social functions of the realis versus irrealis chaining constructions, the question of which type will be used in a directive chain is predictable from the following three principles:

<u>3 principles that determine whether to use realis or irrealis devices in directive chains</u>
1. If the reason for the directive content is presented as primarily externally-motivated (i.e. beyond the speaker's own preferences or desires), then realis linkers will be used.
(For example: warnings and social taboos)

2. If the directive results from the speaker's own internal preferences or desires, but the directive action(s) place little or no burden on the addressee(s), then realis linkers will be used.
(For example: cohortatives and very minor corrections of another's behavior)

3. But if the directive results from the speaker's own internal preferences or desires and the directive action(s) place a burden on the addressee(s), then irrealis linkers must be used to socially mark the directive as having no perlocutionary force. This derives purely from a social, rather than linguistic, rule that the listener's individual autonymy cannot be imposed upon, though it also means that certain specialized linguistic categories, namely the imperative, never co-occur with the realis constructions.
(For example, directing others what to do, how to do something, how to behave generally, etc.)

Earlier in (8.2.2.1.2), I described how the negative irrealis inflectional category *-rati* patterns exclusively with realis linkers in the corpus. One use of this construction is to express a specialized kind of warning or taboo in a type of speech act Aikhenvald (2016) refers to as a 'strong prohibition'. A strong prohibition is used instead of a 'general prohibition' which is typically based on the internal desire or wish of the agent (and for which Chini reserves the prohibitive *-ndɨ* construction). In narratives about restrictions on individual behavior during gardening, for instance, it is this *-rati* construction (rather than the *-ndɨ* construction) that is used. Realis linkers are used in *-rati* headed chains, because the reason for the prohibition is not any one person's private wish or desire but is in fact a social taboo that everyone in Chini society has common knowledge about:

(250) *apyenɨ,*   *makɨgandaka,*
     [apyenɨ   mɨ=akɨ-ga=**ndaka**]
     digging_stick   DIST=plant-R=**SEQ.R**

     nu   *mɨvarkɨndaka*
     [nu   mɨ=var-kɨ=**ndaka**]
     2SG   DIST=garden/work-R=**SEQ.R**

     apyenɨ   *nu*   *mɨkɨnɨŋɨratɨ.*
     [apyenɨ   nu   mɨ=kɨ-nɨŋɨ-**ra-tɨ**]
     digging_stick   2SG   TOP=throw-TLOC.NEG-**IRR-NEG**
     'Diging stik, planim pinis, yu planim pinis na bai yu no inap troimwe stik.'
     'The digging stick, once you've put it in the ground, and you've planted it, you should
     not throw the digging stick away.' (Frank Manna, afi080514i_0:53)

(251) *amamri*   *atunu,*   *nu*   *mɨvarkɨkɨ*
     [amamri   atunu   nu   mɨ=var-kɨ=**kɨ**]
     yams   too   2SG   TOP=garden/work-R=**CNT.R**

     nu   *awamɨ*   *amɨratɨ.*
     [nu   awamɨ   amɨ-**ra-tɨ**]
     2SG   ariid_catfish   ingest-**IRR-NEG**
     'Yam tu, yu planim pinis noken kaikai kondon.'
     'Yams too, once you've planted them, you should not eat any catfish.'
     (Frank Manna, afi080514i_2:04)

The other occasion when realis linkers are used in directive speech acts are when they are
expressed as being without any undue burden on the addressee. This can be seen in the
following chain, headed by an irrealis-inflected final verb used with the illocutionary force of
a suggestion, as described in (5.3.6). As a directive, it is a cohortative: by suggesting the
possibility of everyone gathering together over food, Dorothy is hardly making any serious
demand on her addressees. The low-demand and (thus) high expectation that everyone would
be willing to parttake can be seen as reflected (or signaled) in the use of the realis linker on
the medial clause:

(252) *nugu, añi nugu, nugunmɨ mamɨndɨ.*
'Alone, we shouldn't be eating each off on our own.'

añjirvapɨnɨ   agamkɨ   nɨmɨyorikɨ   mamia!
[añji=ɨrvapɨnɨ   agamkɨ   nɨ=mɨ=yori=**kɨ**]   [mɨ=am-**ɨ**=a]
1PL.POSS=mouth   everyone INS=DIST=sound_off.R=**CNT.R** DIST=ingest-**IRR**=EXCL
'Each of us sounding off together with our mouths, let's eat that (way)!'
(Dorothy Paul, afi260814v_5:42)

Similarly, the following suggestion to a couple of people that they go check out a certain tree

is a reasonably small demand to make:

(253) *kɨyi dmu mbankɨ ya,*
'Samting olsem kwila ya,'
'Resembles a whatsit *kwila* (type of tree),'

ñiambrɨ   wuyikɨ   ŋaparɨŋgɨ   mɨŋginia.
[ñi-ambrɨ   wu-yi=**kɨ**]   [ŋi=aparɨ.ŋgɨ mɨ=ŋgin-**ɨ**=a]
PL-lazy_bastard   go/come-R.PC=**CNT.R** oneself   DIST=perceive.DIST-**IRR**=EXCL
'You lazy bastards should go and check it out yourselves.'
(Dorothy Paul, afi260814v_44:36)

The same general principle can be seen in prohibitive chains when realis linkers are used. By

requesting that his addressee speak up, Anton is not making any significant demand per se; it

is just a minor request:

(254) *avarɨtɨ   mumwamɨkɨ   ka   akamɨndɨ.*
[avarɨ=tɨ   mɨ=mwa-m-ɨ=**kɨ**]   [ka   akamɨ-**ndɨ**]
below=VIA   ALL=mumble-IPFV-COH=**CNT.R**   PROX.DEF   speak-**PROH**
'Don't keep mumbling low and talking.' (Anton Manna, afi011116iv_16:34)

In the next example, however, Anton attempts to convince the listeners to join him for some

garden work he describes as being no big deal. To do so, he relies on the same type of

cohortative construction as seen in (252). Here, however, he appears to be manipulating the

function of this construction somewhat, perhaps in order to convince his addressees that the

garden work in question will not be too arduous. It is unusual for a request of this nature to

occur with realis-linked directive clauses. It is thus telling that after uttering this clause chain,

300

Anton follows it up immediately with an assurance ('It's not as if, whatsit, lots of huge trees in old-growth bush.'). Note, however, example (257) from the immediately prior discourse, where it seems that contrary to Anton's assurance in (255), the garden work is in fact no small undertaking. So, here we can see that Anton makes use of the realis linkage device in a cohortative construction as a means to try to persuade the others (irrespective of how true or not his assurance may be!):

Realis linker part of cohortative construction

(255) *avataŋgɨ*   *añi*   *papmɨ*   *maŋgunɨŋikɨ*
[avata=aŋgɨ   añi   papmɨ   mɨ=aŋgunɨ-ŋi=**kɨ**]
above=LH.PC 1PL   completely   DIST=go_along-IRR=**CNT.R**
'For that part (of the bush) up there let's go along altogether and'

papmɨ   *muñu.*
[papmɨ   mɨ=**ñu**]
completely   DIST=**slash.IRR**
'let's slash it all completely (i.e., to prepare the ground for gardening).'

i no olsem   *kɨyi*   *gwrwamkɨ*   *kandmɨ*   *aŋinimbriyi.*
i no olsem   kɨyi   gwru-amkɨ   kandmɨ   aŋinɨ-mbriyi
[TP: it's not as if]   whatsit   bush-AUG.PC   tree   big-AUG.PL
'It's not as if, whatsit, lots of huge trees in old-growth bush.'
(Anton Manna, afi260814v_10:57)

The use of realis linkers in directive speech acts are very infrequent in the corpus and in usage more generally. In the vast majority of directive chains and across diverse types of directives, irrealis linkers are used. The use of irrealis-linked medials has the social effect of leaving the decision about compliance fully in the hands of the addressee(s). All directive chains that impose a significant burden on the addressee(s) have irrealis linked-medials (and never realis ones). In the next example, Joseph Manna suggests that two others should use their money to contribute a bag of rice for a community gathering, and it is no mistake that he uses irrealis (and not realis) linkers:

(256) *aku* *ñi* *ma* *ŋuñi* *migɨ* *mitirindata*
[aku ñi ma ŋuñi mɨ-gɨ mi=ti-ri=**ndata**]
DM PL DIST.DEF two DIST-thus DIST=cut-MOD=**SEQ.IRR**
'So that (money) the two of them should take out (lit. 'cut') and,'

ñi *vriñi* *andu* *nugu* *ñi.*
[ñi vriñi andu nugu **ñi**]
PL rice bag one **get.IRR**
'they should buy one bag of rice.'

andu *nugu* *ñiŋindata* *añi* *amamaŋgɨ* *manda.*
[andu nugu ñi-ŋɨ=ndata] [añi am~amɨ=aŋgɨ manda]
bag one get-MOD=SEQ.IRR 1PL eat~NMLZ=LH.PC NEG
'Once you get one bag, it's not for us to eat.' (Joseph Manna, afi040814iii_37:25)

In (254), we saw the only example in the corpus of a prohibitive chain that includes a realis-linked medial clause. Otherwise, in prohibitive chains, any medial clause (i.e. only those within the scope of the prohibition in the final clause) will occur with an irrealis chain linker attached, because prohibitives lend themselves strongly to interpretation as impositions of the speaker's agency. In the following example from the discourse preceding his utterance in (255), Anton declares that it is not just a few people who will be needed for the garden work, since the specific area to be slashed and then burned calls for many people to cooperate in the endeavor:

(257) *ñi* *kɨyimɨgiti* *nugunmɨ* *mbarindɨ.*
[ñi kɨyimɨ-gɨ=**ti**] [nugu=nmɨ mbɨ=ari-**ndɨ**]
PL do_whatsit-NEG=**CNT.IRR** one=ASS.PC DIST.BEN=venture-**PROH**
'You all can't have just a few of you go do it (i.e., garden work).'
(Anton Manna, afi260814v_10:46)

In a rather different example of a prohibitive chain in (258), Anton seeks to persuade his addressees that they should follow his advice and adhere to a particular form of social organization, namely that they should base their decisions on their own knowledge and strength rather than merely copying what other people do. Again, the use of the irrealis chaining device marks the prohibition as a suggestion (and certainly not a command):

(258) *nu mɨgɨ ŋamurwa nɨmiñjini-- mɨŋinina? nu ŋamurwa nimɨŋginiŋgini, mirkŋɨ nakamindɨ...*
'Just how exactly will you discern (other people) using your eyes? You discerning them with your eyes! — you should not use that language...'

nu	*avaŋri*	*aŋgukŋiti*
[nu	ava-aŋ-ri	aŋgu.kŋi=**ti**]
2SG	other-man-PL	ask=**CNT.IRR**

ankɨpinichiŋɨ	*nipinichiŋinda.*
[ankɨ=pɨ-nɨ-chiŋɨ	nɨ=pɨ-nɨ-chiŋɨ-**ndɨ**=a]
3SG.POSS.FOC=sit-IPFV-NMLZ	INS=sit-IPFV-NEG-**PROH**=EXCL

'You should not go asking anyone else and living according to their way of living.'

ani ŋɨtãrkɨ nipinichiŋɨ, nu ŋɨtãrkɨ, añi kɨŋgigapramkɨ mɨgɨ ikɨ pinicpmi.
'You should live according to your strength, them according to their strength. The whole assembly of each and every one of us in this community (*ŋgɨgaprɨ*, lit. the entirety of village subparts) goes about life in that way only.'
(Anton Manna, afi260814v_35:48)

To summarize the above discussion, in both negative chains with directive illocutionary force, the data show evidence for realis linkers being used in two circumstances. One is when there is a clear external reason, e.g. a strong social taboo, against some course of action. The other is when a prohibition involves only a minor correction of the addressee's behavior about which compliance can be reasonably expected, e.g. telling someone to speak up. Otherwise, in negative directive chains, specifically those headed by a prohibitive (*-ndɨ*) in the final clause, irrealis linkers are used. The same principle also applies to positive directives. However, the positive directives I have discussed, namely those headed by irrealis-inflected final verbs (that co-occur with either realis or irrealis linkage devices) are not very frequent, since the standard verbal category for positive directives is the imperative. Without known exception, irrealis chaining devices are used in imperative chains (i.e. only those where the illocutionary force of the imperative extends to all clauses; see however 8.2.4 for discussion of mid-chain shifts). The following are just some of many examples that can be found in the corpus:

(259) *mɨgɨ*   *mɨkɨyɨ*   *magwunɨcpmɨtɨ*   *arɨ.*
       [mɨ-gɨ   mɨ=kɨyɨ   mɨ=agwuni-cpm-i=**ti**]   [**ari**]
       DIST-thus   DIST=whatsit   DIST=rotate_away-IPFV-COH=**CNT.IRR**   **walk.IMP**
       'Rotate it (the fishing net) outwards like that as you go.'
       (Emma Aɨrɨmarɨ, afi011116iv_22:00)

(260) *chagɨtɨ*   *andɨkanɨ*   *mbɨgɨndata*   *atwaŋrɨtɨ*   *nɨkra!*
       [cha-gɨ=**ti**]   [andɨka-nɨ   mbɨ-gɨ=**ndata**] [atwaŋ-rɨ=**ti**] [**ni**=**kɨ-ra**]
       emerge-MOD=**CNT.IRR** F.DIST.DEF-ADESS stand-MOD=**SEQ.IRR** call_out-MOD=**CNT.IRR** **3SG=tell-IMP**
       'You go outside, stand up and then call out and tell him!'
       (Paul Guku, afi141016iv_22:51)

(261) *"ñi*   *cpmichigarɨmɨ*   *añi*   *aŋɨ!"*
       [ñi   cpmichi-gɨ.arɨ=**mɨ**]   [añi   **aŋɨ**]
       PL   get_up.PL-MOD=**PRE.IRR**   1PL **go/come.IMP**
       ' "You all get up (and) let's go!" ' (Emma Aɨrɨmarɨ, afi141016iv_32:44)

The same principle applies to the subset of verbs which, as described briefly early on (4.3, footnote 72), have the grammatical quirk of lacking an imperative. Instead, these verbs rely on the inflectional irrealis *-ra* category. (Note that, despite the attachment of *-ra* to the negative base, the imperative meaning this construction has for these verbs is positive rather than negative.) This construction patterns just like standard imperatives when it is used in chains; it is an imperative in all but name. The following example is from a Chini folktale about the origin of the ariid catfish:

(262) *gŋɨ nau ñimkŋɨ ɨvku ñikuwa: "aku ñi gwrwaŋɨ!"*
      'Afterwards, those guys (the men) sent them (the women) back: "Ok off with you all!"

      "aŋɨtɨ   *ŋgu*   *argɨra!"*
      [aŋɨ=**ti**]   [ŋgu   ar-gɨ-**ra**]
      go/come=**CNT.IRR**   fish   catch_fish-NEG-**IRR**
      "Go and catch some fish!" ' (Emma Aɨrɨmarɨ, afi100714i_1:31)

One explanation for why irrealis linkers are used in all imperative chains is that, as the primary category for the expression of positive directive meaning (i.e. all 'vanilla' directives), an imperative is always interpretable as involving an imposition of the speaker's agency on the individual autonymy of the addressee. Perhaps for this reason, imperatives have come to

be associated 100% of the time with irrealis linkers in clause chains, while the other directive constructions continue to exhibit some variability in whether realis or irrealis linkers are used.

Here I have presented an argument that the pragmatically-based realis/irrealis distinction in Chini clause chaining is underlied by a system of social markedness involving cultural principles characteristic of many Melanesian societies. The pragmatically-based distribution of realis linkage devices in directive speech acts can be explained by the principle that realis-linked directives have perlocutionary force — the speaker expects the addressee(s) to comply with the (reasonable and/or minor) demand. Irrealis-linked directives, which figure much more frequently in directive chains, are a means of packaging the speaker's wish so that it is made known but yet with the message that there is no expectation per se about compliance. In other words, irrealis-linked directives have no perlocutionary force.

As mentioned at the beginning of this section, it is perhaps not terribly surprising to find this sort of linguistic structure in this part of the world, known as it is for communicative practices to be geared strongly and carefully in a listener-oriented direction. Slotta's (2015) description of Yopno society (in another part of northeast New Guinea) is a cogent representation of this facet of the social life of rural villages throughout New Guinea:

> The relatively acephalous political organization of Yopno villages is reinforced by conceptions and practices that stress the agentive role of recipients in swaying the outcome of communicative events... Speakers frame their contributions with an eye toward their addressees' uptake, submitting their speech to the receptive activity of others. While some may have the verbal skill to reliably stir their addressees to act, their influence remains precarious — they exercise verbal power at the pleasure of the communicative recipient (Slotta 2015:544).

What I have described here accounts for how the grammatical distinction between realis and irrealis chain linkage constructions obliges Chini speakers to frame a minority of

305

directive chains as having grounded consequences for the addressee(s) (realis), or, for the vast majority of directive chains, to have no overt consequence beyond lying fully in the agentive capacitiy of the addressee(s) (irrealis). This is quite different from the cultural contexts many linguists are arguably most at home in. That is, directives are generally thought of as a linguistic means to exert one's agency or control. But once we ask how directive speech acts are structured in societies that place a cultural prime on individual autonymy and where exertions of agency over other are a major faux pas, we may find structures that challenge some of our deeply held assumptions about what directive speech acts involve in the first place.

In a final comment on this topic, the anthropological literature can give us some clues about areas of the world where the linguistics of directive speech acts might be especially interesting, if not challenging, for our theories of language. Where the cultures and languages of Melanesia are concerned, we know that many societies in that region are steeped in opacity doctrines, where people do not expect to be able to know the contents of the minds of their fellows. As Robbins & Rumsey (2008) explain, the idea in some cultures that it is "impossible or at least extremely difficult to know what other people think or feel" happens to be "unusually well developed in many of the cultures of the Pacific, where it is ... a widely shared and taken-for-granted fact about the world, and one that shapes... everyday practice" (407-9). Opacity doctrines like those elaborated across Melanesia have repercussions for directives, since directives involve attempts to influence another person's actions, plans, ways of being, and arguably also, their thoughts and mental states. It is in this type of social context that we can begin to understand why realis directives 'direct' but irrealis directives, in a sense, do not. Rather than 'directing' an addressee's actions or assuming their compliance,

306

irrealis marking is used to lay the directive out into the shared social space, effectively rendering it a suggested possibility that is left to the decision of the addressee.

8.4   Summary of chapter 8

In this chapter I have discussed the realis/irrealis component present in the clause chain linkage enclitics. Realis and irrealis clause chaining constructions are not just an isolated fact about Chini but are a major areal feature in northeast New Guinea, spanning languages from the Trans New Guinea, Austronesian, and Ramu families. I argued that the realis and irrealis component in the Chini chaining structures is quite different from their Trans New Guinea counterparts. In those languages, realis and irrealis markers on medial clauses depend on the semantic information in the final clause and so their use in chaining structures is secondary — the realis and irrealis marking in those languages does not carry any independent type of meaning. In Chini, different types of evidence suggest that realis and irrealis markers are for the most part grammatically independent devices, produced online by speakers to signal a type of pragmatic meaning. Roughly speaking, that meaning hinges on the concept of expected (realis) versus unexpected/unexpectable (irrealis) courses of events. In non-directive speech acts (whether assertions or otherwise), irrealis marking is highly infrequent and found in chains expressing futurity or possibility, among others. In directive speech acts, it is instead the realis marking that is infrequent. I have also argued that there is a strong cultural component in the uses of the irrealis chain linkage devices in directives, in a way that reflects Melanesian prohibitions against telling other people what to do. Irrealis chain linkage devices are used to package requests, suggestions, and other subtypes of directives that do not involve exertions of agency over one's addressee(s) or expectations about compliance. The pragmatic meaning that lies at the functional basis of the realis/irrealis distinction in the

chaining constructions is, moreover, very different from the semantic meaning expressed by

the realis/irrealis distinction in the verb morphology as described in chapters 5 and 6.

Chapter 9
Conclusion

In this dissertation I have described the workings of realis/irrealis distinctions in a language where they are encoded and used to a degree of extraordinary elaboration. As much as possible, I have described how those distinctions fit into the grammatical infrastructure of the Chini language, while embedding that description within the larger context of the history, cultural framework, and linguistic practices that are part of the Chini-specific world. Along the way I have pointed out previously unidentified relationships and associations that the data shed light on, as well as others that bear undeniable resemblances to realis/irrealis distinctions previously described for other languages.

This dissertation comes at time when the existence of these categories remains somewhat controversial and their functions are often regarded as perplexing. Much of the data and analysis I have discussed serve to refute claims that realis and irrealis categories lack consistent meanings or that their meanings are too generalized to have any conceivable function. As the data from the Chini corpus show, these categories are not merely part of the grammar but are in fact so central to its workings that it would be impossible to describe the language without them. In my discussion of the Chini data, I have suggested that the controversy and challenges regarding the analysis of realis and irrealis constructions result to some extent from linguists' own metalanguage and theoretical notions about what information TAM categories can be expected to encode or not encode as part of their "emic" meanings vis-à-vis their "etic" semantic-pragmatic realizations as found across diverse construction types and contexts of use. In that respect this work adds to a growing body of literature suggesting a need for some approaches and views to be reconsidered.

I have also argued that the language-specific functions of realis and irrealis constructions involve an interplay between their semantic and/or pragmatic basis and the uses that speakers recruit them for across diverse contexts. From diverse uses of realis and irrealis constructions also spring diverse interpretations of realis and irrealis meaning. Once this is taken into consideration, it becomes less surprising that there is so much to be said about the cross-linguistic differences for these categories.

Another reason we expect differences across these systems is the combinatorial effect of the following three variables I have discussed at various points throughout this dissertation: i) the diverse historical possibilities for how realis/irrealis distinctions might arise (either language-internally or via contact); ii) the relationships these categories have to the rest of the grammatical system; iii) the diverse (socio-) linguistic practices used in different communities and the origins of those practices in culturally-particular ideologies and frameworks of meaning. Once we take those factors into account, we can appreciate how from a cross-linguistic point of view, it is not so much the differences but rather the recurrent *similarities* across these types of systems that are surprising. As we find for many other categories in the languages of the world, the cross-linguistic comparability for realis/irrealis distinctions can thus be said to involve degrees of functional resemblances as well as clear commonalities, including some very remarkable ones. In all languages that have them, realis/irrealis distinctions share a conceptual basis in modality where both halves are relational, as expected for any type of deixis.

In this work I have also drawn attention to a fourth variable, namely the locus of realis/irrealis marking in the grammar. In Chini, the marking in the verb morphology and (separately) in the clause chain linkage devices are not functionally identical. The former

310

type is based on semantic principles hinging on the presupposedness of the realization status of a situation. Inflectional realis and irrealis constructions are used to indicate whether a situation lies 'within (realis) or beyond (irrealis) experience'.

In contrast, the realis/irrealis distinction encoded in the clause chain linkers is based on pragmatic rather than semantic principles. Realis-linked medial clauses contain pragmatically unmarked information. Irrealis-linked medials, more than thrice less frequent in Chini conversation than their realis counterparts, are pragmatically marked in comparison. The Chini language thus requires its speakers to choose between one or the other linkage type in all clause types; the markers are obligatory signals about whether the event in each medial clause is 'within (realis) or beyond (irrealis) the realm of the expected or the expectable'.

The pragmatic functions of realis and irrealis linkage devices also differ according to the type of speech act. In directive speech acts, where the vast majority of irrealis linkage constructions are used, what counts as pragmatically marked ('beyond the expected or expectable') is largely a product of deeply rooted Melanesian cultural principles that place a primary value on individual autonymy and discourage exertions of anyone's agency over other people. Though perhaps somewhat counterintuitive from the perspective of an outsider, in Chini, irrealis-linked clauses with directive illocutionary force are best understood as all but lacking *perlocutionary* force. It is thus not 'commands' but rather 'suggestions' that take up most of the pragmatic space of directive speech acts. Here again, our own metalanguage (e.g. 'commands', 'directives', 'imperatives') and the accompanying theoretical notions (i.e., about people's use of language to get others to do things for them) fall short of capturing more diplomatically delicate but entirely grammatically robust systems in languages like

311

Chini. The data and analysis I have discussed thus provide evidence for a cultural component in some of the most routinized of grammatical markers.

Underlying the discussion in this work is the methodological point that naturalistic and especially conversational data are key to understanding realis/irrealis distinctions. Realis and irrealis constructions live first and foremost in multi-participant interactions, in verbal jousts, storytelling, plan making, or discussions about principles of morality and social conduct, among others. They are used in diverse speech acts such as assertions, requests, exclamations, predictions and guesses, major complaints and minor grumblings, warnings and prohibitions, deflections, and suggestions.

Much remains to be learned about realis/irrealis constructions in terms of their synchronic functions, their degrees of comparability across languages, how they develop diachronically, and the role of cultural influence in the uses and functions they take on. What we do know about them suggests they have much to contribute to our general understanding of language, due to how the semantic and pragmatic boundaries of their conceptual space are constrained by the grammatical systems and particularities of individual languages but also elaborated according to local cultural principles and linguistic practices, and always subject to the spontaneous communicative goals, interpretations, and creativity of the people who make use of them.

Appendix:
Chini texts

In order to provide greater context about Chini discourse in particular where the use of realis and irrealis constructions are concerned, here I have included three fully annotated texts representing three very different types of discourse. The first is a narrative text, the second an excerpt from conversation involving a verbal harangue and the deflection of the addressee, the third an excerpt from conversation concerning the negotiation of Melanesian-style morality.

1. *Rkrwamrɨ chagiyi nɨchagagɨ* 'How Rkrwamrɨ stream originated'

Most Chini stories are in the local genre referred to as *ɨvkurkŋɨ* 'old talk', a genre roughly akin to our fairy tales or 'just so stories' involving events not held to be true. This tale, where Anton explains how the stream originated, is one of a few that lie outside the ɨvkurkŋɨ genre, since it involves an event in the distant past held to be true. It is interesting for a number of different reasons. The stream in question is *Rkrwamrɨ*, which is situated in the south of Chini territory and rather deep in the jungle. Its existence is rather strange from a geological point of view. It is very deep, but is not connected to any other body of water. There is also no evidence that it represents a former course of the Sogeram River; it seems much too far from the Sogeram for that to be feasible, and there are no smaller tributary streams leading from it to the Sogeram. It lies inside the bush ground belonging to the Ɨvɨŋɨ clan, which in Chini oral history, corresponds to the original inhabitants of current Chini territory, who became subsumed into the new Chini ethnicity after a migration of people from the north (see also 2.3).

ake	*ku*	*kanɨŋgɨ*	*Rkrwamrɨ*	*chagiyi*	*nɨchagagɨya,*
ake	ku	kanɨ=ŋgɨ	Rkrwamrɨ	chagi-yi	nɨ=chagi~agi=ya
DM	1SG.NOM	here=COM	Rkrwamrɨ	emerge-R.PC	INS=emerge~NMLZ=[TP:TOP]

ku	*kaniŋgi*	*kimakami.*
ku	kani=ŋgi	ki=mi=akam-i
1SG.NOM	here=COM	PROX=DIST=speak-IRR

'Ok now, how Rkrwamɨ stream originated, right now I'm going to talk about that now.'

paŋu	*aŋgigañi*	*kiyi*	*pirkapa, Andamŋgi,*	*Akapmiŋgi*	*na*	*Avendviŋgi.*
paŋu	aŋgiga-ñi	kiyi	pirk-apa Andam-ŋgi	Akapmi-ŋgi	na	Avendvi-ŋgi
before	ancestor-all	whatsit	sit.PL-R Andam-hamlet	Akapmi-hamlet	[TP:CONJ]	Avendvi-hamlet

ñi	*mani*	*pirkapava*	*aruã*	*amiŋi*	*ŋgiyigi*	*Aŋgwami.*
ñi	mani	pirk-apa=va	aruã	am-iŋi	ŋgi=yigi	Aŋgwami
PL	there	sit.PL-R=PRE.R	bush	woman-PC	3SG.POSS=name	Aŋgwami

ani	*aŋini*	*raŋgi.*
ani	aŋ-ini	ri-aŋgi
3SG	man-PC	exist.PC-LH.PC

'Before, all the ancestors used to reside in whatsit, the hamlets Andamŋgi, Akapmiŋgi and Avendviŋgi. They resided there and, the maternal steward of that chunk of bush, her name is Aŋgwami. She had a husband.'

añjigi	*ñi*	*kiyi*	*muŋumapa,*	*Rkrwamba.*
añjigi	ñi	kiyi	mi=ŋu-m-apa	Rkrwamba
sago	PL	whatsit	TOP=harvest-IPFV-R	Rkrwamba

krumati,	*Rkrwamɨ*	*chagiyini*	*mati*	*aruã*	*iki*	*gigapa.*
kru-mi-ati	Rkrwamɨ	chagi-yi-n-i	mi-ati	aruã	iki	gi-gi-apa
middle-DIST-INDET	Rkrwamɨ	emerge-R.PC-NMLZ-PC	DIST-INDET	bush	only	lie-STAT-R

mati	*wãŋgri*	*chinapa.*
mi-ati	wãŋgri	chi-ni-apa
DIST-INDET	stream	exist-IPFV-R

'Sago they would harvest, at Rkrwamba (i.e. the name of that stretch of sago palms). In the middle of that general area, roughly where Rkrwamɨ stream emerged, there used to be just bush. In that area there did not used to be a stream.'

ñi	*mpmititiŋi*	*añjigi*	*iki*	*varatmapa.*
ñi	mpmiti=ti=ŋi	añjigi	iki	vi=ara-tm-apa
PL	ground=VIA=ADESS	sago	only	BEN=walk_about-IPFV-R

aku	*Aŋgwami*	*pata*	*ŋgimani*	*maŋuñi*	*bmu*	*nigi,*
aku	Aŋgwami	pata	ŋgi=mani	ma=ŋuñi	bmu	nigi
DM	Aŋgwami	CONJ	3SG.POSS=husband	DIST.DEF=two	nightfall	another

maŋuñi	*añjigi*	*vuwuyi.*
ma=ŋuñi	añjigi	vi=wu-yi
DIST.DEF=two	sago	BEN=go/come-R.PC

'They would go (harvest) sago along this route only. One day, Aŋgwami and her husband, the two of them went off to (harvest) sago.'

maŋuñi	*ŋimaninmi*	*avkiki*	*añjigi*	*ŋumapa,*
ma=ŋuñi	ŋi=mani=nmi	av-ki=ki	añjigi	ŋu-m-apa
DIST.DEF=two	POSS.REFL=husband=ASS.PC	descend-R.PC=CNT.R	sago	harvest-IPFV-R

muŋuwa	*mindavɨ,*	*vaŋgimiɲɨ*	*garɨ*	*avkɨva*
mɨ=ŋu-wa	mɨ=nd-avɨ.	va=ŋgimiɲɨ	garɨ	av-kɨ=va
DIST=harvest-R	DIST=cease-TLOC.R	PRE.R=afternoon	sun	descend-R.PC=PRE.R

maŋuñi	*niŋgɨ*	*michagiyi.*
ma=ŋuñi	nɨ=ŋgɨ	mɨ=chagɨ-yi
DIST.DEF=two	REP=village	ALL=arrive-R.PC

'The two of them, she together with her husband, went down bushwards and were harvesting the sago. Finished harvesting it, and in the afternoon the sun went down and the two of them arrived back in the village.'

chagiyindaka	*wavɨ*	*pata*	*ŋgrugunu*	*ambwã,*
chagɨ-yi=ndaka	wavɨ	pata	ŋgrugunu	ambwã
arrive-R.PC=SEQ.R	dried_palm	CONJ	sago_adze	coconut_shell

anuagrɨ,	*kri*	*achiriti*	*maŋuñi*	*makɨga.*
anuagrɨ	kri	achi-r-iti	ma=ŋuñi	mɨ=akɨ-ga
sago_adze_handle	thing.PC	little-ADJ-ATT.PL	DIST.DEF=two	DIST=put-R

kiniŋgigɨ	*mɨkwaviyi,*	*Andamŋgɨ.*
kɨ=nɨ=ŋgigɨ	mɨ=ku-avɨ-yi	Andam-ŋgɨ
PROX=REP=village	ALL=cross-TLOC-R.PC	Andam-hamlet

avkɨkɨ	*mbarɨ*	*mbuyukɨ*	*ŋgigɨ*	*michagiyiva*
av-kɨ=kɨ	mbarɨ	mbuyu=kɨ	ŋgigɨ	mɨ=chagɨ-yi=va
descend-R.PC=CNT.R	canoe	go_inside.R.PC=CNT.R	village	ALL=arrive-R.PC=PRE.R

avɨnɨ	*ŋgimiɲɨ*	*mbɨyi.*
av-ɨnɨ	ŋgimiɲɨ	mbɨ-yi
rain-PC	afternoon	stand-R

'Having arrived, the dried palm, the sago adze, the coconut shell bowl, the handle of the sago adze, all the itty bitty things, those two put all of that down on the other side, and crossed the river back over to the village, in Andamŋgɨ. Descended (down the river slope), got into the canoe and arrived in the village as the rain formed in the sky in the afternoon.'

ŋgimiɲɨ	*mbɨyindaka*	*avɨnɨ*	*achirkatɨ*	*manda.*
ŋgimiɲɨ	mbɨ-yi=ndaka	avɨnɨ	achi-r-kɨ-atɨ	manda
afternoon	stand-R=SEQ.R	rain-PC	little-ADJ-PC-ATT.PC	NEG

maurwutmapava	*ñjimiŋamkɨ*	*chagiyikɨ*
mɨ=aurwu-tm-apa=va	ñjimiɲɨ-amkɨ	chagɨ-yi=kɨ
DIST=wash-IPFV-R=PRE.R	strong_wind-AUG.PC	emerge-R.PC=CNT.R

aŋayivguvguŋgɨ	*chagiyikɨ*	*mantɨ*	*mɨmavugwa.*
aŋayivguvgu=ŋgɨ	chagɨ-yi=kɨ	mɨ=antɨ	mɨ=ma=vugu-a
cyclone=COM	emerge-R.PC=CNT.R	DIST=fig_tree	DIST=FOC=swirl_around-R

'It formed in the afternoon and it was no small amount of rain either. It kept pouring and a huge wind came and then a cyclone came and swirled around the fig tree.'

antɨ	*vugwandaka*	*matɨ*	*mbɨgakɨ*	*antɨ*	*mimikakɨ*
antɨ	vugu-a=ndaka	mɨ-atɨ	mbɨ-ga=kɨ	antɨ	mɨ=mɨ=ka=kɨ
fig_tree	swirl_around-R=SEQ.R	DIST-INDET	dig-R=CNT.R	fig_tree	DIST=TOP=uproot.R=CNT.R

315

anduku	*mɨmbɨyiva*		*aku*	*anmɨ*	*awugru*	*navkiva*
anduku	mɨ=mbɨ-yi=va		aku	anmɨ	awu-gru	nɨ=av-ki=va
twist	DIST=stand-R=PRE.R		DM	water	flow-NMLZ	GER=descend-R.PC=PRE.R

matɨ	*wãŋgrɨ*	*aŋinimkɨ*	*perkamkɨ*	*chagɨyi.*
mɨ-atɨ	wãŋgrɨ	aŋini-mkɨ	pe-r-kɨ-amkɨ	chagɨ-yi
DIST-INDET	stream	big-AUG.PC	very-ADJ-PC-AUG.PC	emerge-R.PC

'Once it swirled around the fig tree, it dug up that area and the fig tree it, it uprooted it and twisted the top of the fig tree downwards, then once the water went down flowing, a very big stream emerged in that place.'

chagɨyiva	*mutuŋwava*	*kandmɨ*	*achigamkɨ*	*mɨmayimakɨ*
chagɨ-yi=va	mɨ=tuŋu-a=va	kandmɨ	achigi-amkɨ	mɨ=mɨ=ayima=kɨ
emerge-R.PC=PRE.R	DIST=submerge-R=PRE.R	tree	all-AUG.PC	DIST=DIST=fell.R.PL=CNT.R

anmɨ	*kandmɨ*	*achigamkɨ*	*mɨmayimakɨ*
anmɨ	kandmɨ	achigi-amkɨ	mɨ=mɨ=ayima=kɨ
water	tree	all-AUG.PC	DIST=DIST=fell.R.PL=CNT.R

anminiŋi	*mɨkɨnimarkɨva*		*ma*	*anduku*	*avɨga.*
anmɨ=niŋi	mɨ=kɨ-nimar-ki=va		ma	anduku	avɨ-ga
water=TRANS	ALL=propel-TLOC.PL-R=PRE.R		DIST.DEF	twist	descend-R.PL

'Once it emerged and submerged that (area), all the trees it felled them, and felled all of the trees down into the water, and once it had transferred them all into the water, the trees turned and went down.'

aku	*mɨkakŋiŋgɨ*	*matɨ*	*wãŋgramkɨ*	*chagɨyi,*
aku	mɨ=kɨ-akŋi=ŋgɨ	mɨ-atɨ	wãŋgrɨ-amkɨ	chagɨ-yi
DM	DIST=PROX=time=COM	DIST-INDET	stream-AUG.PC	emerge-R.PC

mavkɨkɨ		*ñjikanɨ*	*ndɨkɨ*	*ŋakanɨ*	*ndi.*
mɨ=av-ki=kɨ		ñji-kanɨ	ndi=kɨ	ŋa-kanɨ	ndi
DIST=descend-R.PC=CNT.R		bushwards-here	reach.R=CNT.R	riverwards-here	reach.R

'So at this point a big stream emerged in that area, it went down bushwards, reached up until the bushwards area over here and continued/reached until the riverwards point over here.'

mɨmari	*ñi*	*kakŋiŋgɨ*	*mbaratmɨkɨ*
mɨ=mari	ñi	kɨ=akŋi=ŋgɨ	mbɨ=ara-tm-i=kɨ
DIST=marsh	PL	PROX=time=COM	DIST.TOP=walk_about-IPFV-COH=CNT.R

ŋgu	*amamichi*	*mɨkani,*	*mɨyigɨ*	*Rkrwamrɨ.*
ŋgu	ama-m-i-chi	mɨ=ka-ni-i	mɨ=yigɨ	Rkrwamrɨ
fish	ingest-IPFV-IRR-NMLZ	DIST=PROX.COP-IPFV-IRR	DIST=name	Rkrwamrɨ

aruã	*amɨŋi*	*ŋgiyigɨ*	*kɨni*	*Aŋgwamɨ.*
aruã	am-ɨŋi	ŋgi=yigɨ	kɨni	Aŋgwamɨ
bush	woman-PC	3SG.POSS=name	whosit	Aŋgwamɨ

ŋgimanɨ	*yigɨ*	*ku*	*mɨŋgininda.*
ŋgi=manɨ	yigɨ	ku	mɨ=ŋgin-i-nd-a
3SG.POSS=husband	name	1SG.NOM	TOP=perceive.DIST-IRR-PFV-R

ŋgimanɨ	*avamiñi*	*aŋinɨ.*
ŋgi=manɨ	avamiñi	aŋ-inɨ
3SG.POSS=husband	coconut_subclan	man-PC

316

ŋgamurku	*ivŋamarkɨ.*
ŋgɨ=amurku	ivɨŋɨ-am-ar-kɨ
3SG.POSS=wife	ivɨŋɨ-woman-DIM-PC

'It is thus to that very oxbow marsh they venture nowadays and eat fish, its name is Rkrwamrɨ. The maternal steward of that chunk of bush, her name is Aŋgwamɨ. Her husband's name, I don't know. He was a man of the coconut subclan (Avamiñi), his wife was a woman of the sago palm salt subclan (Ɨviŋɨ).'

mɨRkrwamrɨ	*chagɨyi*	*nimagagɨ*	*mɨvkurkŋɨ*	*mani.*
mɨ=Rkrwamrɨ	chagɨ-yi	nɨ=mɨ=agɨ~agɨ	mɨ=ɨvku-irk-ŋɨ	ma-nɨ-i
DIST=Rkrwamrɨ	emerge-R.PC	INS=DIST=paddle~NMLZ	DIST=old-talk-PC	DIST.COP-IPFV-IRR

ñi	*mɨgɨ*	*makãmpmapa.*
ñi	mɨ-gɨ	mɨ=aka-mpm-apa
PL	DIST-thus	DIST=do-IPFV-R

matɨ	*achirkatɨ*	*mani.*
mɨ-atɨ	achi-r-kɨ-atɨ	ma-nɨ-i
DIST-INDET	little-ADJ-PC-ATT.PC	DIST.COP-IPFV-IRR

Rkrwamrɨ	*chagɨyinika,*	*irkŋɨ*	*achirkatɨ*	*i go olsem,*
Rkrwamrɨ	chagɨ-yi-n-i=ka	irk-ŋɨ	achi-r-kɨ-atɨ	i go olsem
Rkrwamrɨ	emerge-R.PC-NMLZ-PC=PROX.DEF	talk-PC	little-ADJ-PC-ATT.PC	[TP: goes thus]

ku	*makamkɨ.*
ku	mɨ=akam-kɨ
1SG.NOM	DIST=speak-R

'How Rkrwamrɨ originated, that is its tale. They (the ancestors) used to tell it thus. Just that little bit. That about which Rkrwamrɨ originated, the rather small tale goes thus, as I told it.'

<div align="right">(Anton Manna, afi110814i_0:10-2:35)</div>

2. 'The two lazy bastards' (excerpt from conversation)

The following excerpt is taken from the end of an audiovisual recording in which I had followed Anton with the camera on the long (round-about) way to get from Akapmɨŋgɨ hamlet to Ravɨndɨ hamlet. We emerge in Ravɨndɨ and I'm about ready to turn off the camera, but just as I consider doing so, Ros engages Anton in a verbal joust, chastising him and me for neglecting to bring any bananas from the garden of Ikivim, Ros' recently deceased mother, even though we had passed right by it. Ros was annoyed because it was common knowledge that no Chini person could eat from a deceased relative's garden, but that taboo did not extend to me, so I could eat the bananas and avoid the food going to waste. Ros chastises Anton but Anton deflects, and then both Father Daniel ('Pater') and I try to piece

together what the two of them are on about (me because I did not understand the fast rate of speech in the joust, and Father Daniel because he lives in Kwanga and was not familiar with the situation at hand).

ANTON; *mumuŋhu*   *Agusta*   *andikani.*
        mumuŋhu   Agusta   andika-nɨ-i
        auntie   Agusta   F.DIST.COP-IPFV-IRR

        mumuŋhu   *Ros*   *ñi*   *ŋakɨ*   *pirki.*
        mumuŋhu   Ros   ñi   ŋakɨ   pirk-i
        auntie   Ros   PL   uphill/riverwards   sit.PL-IRR

        eh!   *Pater*   *atunu*   *andikɨ*   *ɨvki!*
        DM   Pater   atunu   andikɨ   ɨvk-i
        hey   Pater   too   F.DIST   sit.PC-IRR

        'There's Auntie Agusta over there. Auntie Ros and her kin are sitting riverwards. Hey! Pater (Father Daniel, the parish priest) is sitting over there too!'

AGUSTA; *anɨ*   *ambɨgɨ*   *kɨvki.*
         anɨ   ambɨgɨ   kɨ=ɨvk-i
         3SG   house   PROX=sit.PC-IRR

         anɨ   *andɨvɨyi*   *ikɨ*   *riyi,*
         anɨ   andɨvɨyi   ikɨ   ri-yi
         3SG   day_before_yesterday   only   go/come_downriver-R.PC

         natɨ   *kɨriyi.*
         natɨ   kɨ=ri-yi
         just_now   PROX=go/come_downriver-R.PC

         'He is sitting in the house now, he's just come downriver (from Madang) the other day, only just now came downriver.'

ANTON; *anɨ*   *kani!*
        anɨ   ka-nɨ-i
        3SG   PROX.COP-IPFV-IRR

        'He's here!'

(me);   *ah andika!*
        'Oh, over there!'

AGUSTA; *anɨ*   *natɨ*   *kɨriyi.*
         anɨ   natɨ   kɨ=ri-yi
         3SG   just_now   PROX=go/come_downriver-R.PC

         'He just now came downriver.'

ANTON;   *aku   chandia!   aŋɨ   chitɨ   ŋgindu.*
          aku   chandia   aŋɨ   ch-i=tɨ=CNT.IRR   ŋgɨ=ndu
          DM   onwards_then   1DU   ascend-IMP=CNT.IRR   3SG.DAT=perceive.PROX.IMP

'Onwards then, let us two go up and see him.'

ROS;   *ñi   arwãtɨ   muwuwa?*
        ñi   arwã=tɨ   mɨ=wu-wa
        PL   bush=VIA   ALL=go/come.R.PL

'You lot came via the bush path did you?' (i.e., while watching us come via that path)

ANTON;   *aŋɨ   arwãtɨ   muwuyi.*
          aŋɨ   arwã=tɨ   mɨ=wu-yi
          1DU   bush=VIA   ALL=go/come-R.PC

'We two came via the bush path.'

DOMINIKA;   *anɨ   kɨtɨtɨ   mɨriyi.*
             anɨ   kɨ=tɨ=tɨ   mɨ=ri-yi
             3SG   PROX=path=VIA   ALL=go/come_downriver-R.PC

'He (Pater) came downriver via this path.'

(me);   *ku miñaña miñi.*
         'I made a recording.'

AGUSTA;   *Ok.*

ROS;   *aku   aŋɨ,   ŋgiñaña   ñiŋɨ.*
        aku   aŋɨ   ŋgɨ=ñaña   ñi-ŋɨ
        DM   go/come.IMP   3SG.POSS=shadow   get-IMP.PC

'Then come over, record him (lit. get his shadow).'

AGUSTA;   *apakɨ   ñi   ŋgavɨgɨ   wuyi.*
           apakɨ   ñi   ŋgɨ=avɨgɨ   wu-yi
           uncle   PL   PL.DAT=with   go/come-R.PC

'They came together, Uncle (Anton) and him (me).'

ANTON;   *ya   anɨ   miñiñ̃ia!*
          ya   anɨ   mɨ=ñi~ñi=a
          sure   3SG   DIST=get~NMLZ=EXCL

'Sure, he'll get/record it (of him)!'

DOMINIKA;   *anɨ   miñini?*
             anɨ   mɨ=ñi-n-i
             3SG   DIST=get.R.PC-NMLZ-Q.IRR

'Did he make a recording? (lit. Did he take/get it?)'

(me);   *anɨ mɨyi akamkɨya?*
         'What did she (Agusta) say?'

319

ROS;   *anɨ*   *ka*   *makamkɨye,*
            anɨ   ka   mɨ=akam-kɨ-y-e
            3SG   PROX.DEF   DIST=speak-R-NMLZ-QUOT

            "nu   *kuñaña*   *atunu*   *nu*   *miñinia?!"*
            nu   ku=ñaña   atunu   nu   mɨ=ñi-n-i=a
            2SG   1SG.POSS=shadow   too   2SG   TOP=get.R.PC-NMLZ-Q.IRR=EXCL

            'She said: "My image you recorded with (the camera) too right?" '

(me);   *cha.*
            'Yep.'

ROS;   *mumuŋhu*   *ka*   *makamkɨ.*
            mumuŋhu   ka   mɨ=akam-kɨ
            auntie   PROX.DEF   DIST=speak-R

            'That's what auntie (Agusta) said.'

(me);   *ake, maku.*
            'Ok, enough of that (i.e., preparing to turn off the camera).'

PATER;   *ŋgu*   *miti--*   *migɨ*   *mɨ-- migɨ*   *muwuyina?*
            ŋgu   mɨ=ti--   mɨ-gɨ   mɨ-- mɨ-gɨ   mɨ=wu-yi-n-a
            2DU   DIST=path DIST-thus   DIST DIST-thus   ALL=go/come-R.PC-NMLZ-Q.R

            'What path-- what way--, what way did you two come?'

ANTON;   *aŋgɨ*   *kamɨ*   *avkɨndaka*
            aŋgɨ   ka-mɨ   av-kɨ=ndaka
            1DU   PROX.DEF-CISLOC   descend-R.PC=SEQ.R

            kamɨ   *riyindaka*
            ka-mɨ   ri-yi=ndaka
            PROX.DEF-CISLOC   go/come_downriver-R.PC=SEQ.R

            Rumtwamrɨ   *andãtɨ*   *muwuyindaka,*
            Rumtwamrɨ   andã=tɨ   mɨ=wu-yi=ndaka
            Rumtwamrɨ   edge=VIA   ALL=go/come-R.PC=SEQ.R

            kri   *achiriti,*   *gwru*   *kɨkri*   *achiriti*
            kri   achi-r-iti   gwru   ki=kri   achi-r-iti
            things.PC   little-ADJ-ATT.PL bush   PROX=things.PC little-ADJ-ATT.PL

                   aŋgɨ markŋɨ   *akãmpmɨ*   *niwuyi wuyi wuyi*   *wuyindaka*
                   aŋgɨ ma-irkŋɨ   akam-pmɨ   nɨ=wu-yi (x3)   wu-yi=ndaka
                   2DU DIST.DEF=speech-PC speak-NMLZ GER=go/come-R.PC   go/come-R.PC=SEQ.R

            kavɨ   *chagiyi*   *mɨkani.*
            ka-vɨ   chagi-yi   mɨ=ka-nɨ-i
            PROX.DEF-ELAT   emerge-R.PC   DIST=PROX.COP-IPFV-IRR

            'We two came down bushwards this way and then, came downriverwards this way then, went by way of the edge of Rumtwamrɨ (i.e, an oxbow marsh) and basically all the itty bitty things (i.e., plants and creatures), basically all the itty bitty things in the bush that's what we

continued to talk about as we came onwards onwards onwards onwards and — thus it is that (we two) emerged over here.'

Figure 29: Anton narrating our walk to Ravɨndɨ hamlet (video still)

ROS; *na   ñi   ŋiñinmɨ   aŋginɨ*
      na   ñi   ŋɨ=ñinmɨ   aŋginɨ
      [TP:CONJ] PL   POSS.REFL=female_ancestor   banana

      ndvɨmbruindani?
      ndvɨ=mbru-i-nd-a-n-i
      3SG.BEN=cut-IRR-PFV-R-NMLZ-Q.IRR

'And did you all not cut any bananas of his female forebear for him (to eat)?'

ANTON; *aŋginɨ   aŋgɨ   mundwi,   ku   nikɨga.*
        aŋginɨ   aŋgɨ   mɨ=ndwi   ku   nɨ=kɨ-ga
        banana   1DU   it=see.R   1SG.NOM   3SG=tell-R

'We did see the bananas, I told him about them.'

ROS; *na   nu   minɨgɨ   ndvɨrkɨkɨ*
      na   nu   mɨ=nɨgɨ   ndvɨ=irkɨ=kɨ
      CONJ   2SG   it=another   3SG.BEN=cut.R.PC=CNT.R

      mbãmpichi?
      mba-mp-i-ch-i
      sidetrack/deceive-IPFV-IRR-NMLZ-Q.IRR

'And (as if) you had indeed cut some of them (savory bananas) for him and now (you) are sidetracking/being misleading?!'
[Free(r) translation: 'Look at you sidetracking now as if you had actually cut some of the bananas for him!']

321

ANTON;   *aŋgɨ   mumbrumati.*
                aŋgɨ   mɨ=mbru-ma-ti
                1DU   DIST=cut-R-NEG

                '(Notwithstanding,) we two did not cut any.'

ROS;   *ooo   ŋgwambrɨ   mumbrwikɨ*
                ooo   ŋgu-ambrɨ   mɨ=mbru-i=kɨ
                agh   2DU-lazy_bastard   DIST=cut-IRR=CNT.R

                mɨtwavɨ   chia!
                mɨ=twavɨ   ch-i=a
                DIST=with   ascend-IRR=EXCL

                'Agh you two lazy bastards (or: 'loafers') really [failed to] cut any and come up (i.e., to the village) with any!'

ANTON;   *mɨmichi.*
                mɨ=mɨ-ch-i
                DIST=PART-exist-IRR
                'There are still some (bananas in the garden).'

ROS;   *ñiñi   aŋginiya,   nu   mɨnigɨ   ɨrkikɨ*
                ñiñi   aŋgini=ya   nu   mɨ=nɨgɨ   ɨr-kɨ=kɨ
                grandma   banana=TOP   2SG   dist=some   cut.PC-R=CNT.R

                mɨtwavɨ   chichi   ndini?
                mɨ=twavɨ   chi~chi   ndi-n-i
                DIST=with   ascend~NMLZ   neglect.R-NMLZ-Q.IRR

                'So the bananas from grandma's garden, you neglected to cut some and bring them with you?'

PATER;   *aŋgini?*
                aŋgini
                banana

                '(What) bananas?'

ROS;   *aŋgini,   arŋi.*
                aŋgini   arŋi
                banana garden

                'The bananas from the garden.'

(me);   *arŋi?*
                'Garden?' (confused, does not understand any of previous exchange)

ANTON;   *aŋgi--   aŋgɨ   natɨ   ndwinikaya,   ñiñi   arŋi.*
                aŋgɨ--   aŋgɨ   natɨ   ndwi-n-i=ka=ya   ñiñi   arŋi
                1DU   1DU   just_now perceive.PROX.R-NMLZ-PC=PROX.DEF=TOP grandma garden

                'We two--, what we two just saw: grandma's garden.'

(me);   *ñiñi arŋipi?*
                '("Huh?,") grandma's garden?'

ANTON;	*ñiñi*	*arŋɨ.*		
	ñiñi	arŋɨ		
	grandma	garden		

'Grandma's garden.'

ROS;	*eh!*	*ñiñi*	*arŋɨ*	*mani.*
	eh	ñiñi	arŋɨ	ma-ni-i
	DM	grandma	garden	DIST.COP-IPFV-IRR

'Um! That's grandma's garden (back there).'

(afi101116m_44:10-45:20)

3. 'Autonomy versus community' (excerpt from conversation)

The following text excerpt is from a conversation between five people and was recorded as they sat in the shade on the upriver shore of Rumtwamrɨ, an oxbow marsh situated a short distance from Akapmɨŋgɨ and Akapmay hamlets in Andamang village. In the discourse prior to this excerpt, the five of them discuss Father Daniel (Andmarɨŋɨnɨ), the parish priest in Kwanga (of Andamang origin) and his efforts to spur the community to greater collectivism rather than individualism. Dorothy steers the conversation toward the matter of moral debate, namely the issue of individual autonymy as an obstacle to cooperation. This excerpt is interesting because of the insight it gives into contemporary cultural issues in Chini society. Also notable are the ways in which bodily metaphors are used to represent social phenomena. Tok Pisin translations are included for some lines when the Tok Pisin reflects the 'gist' of the Chini better than English can.

DOROTHY;	*añi*	*mɨyi*	*vɨndɨ*	*mɨ--,*
	añi	mɨ-yi	vɨ-ndɨ	mɨ
	1PL	DIST-what	BEN-think	DIST

	añi	*ŋɨrkŋɨ*	*akikina?*
	añi	ŋɨ=irk-ŋɨ	aki~ki-n-a
	1PL	POSS.REFL=talk-PC	spear~IRR-NMLZ-Q.R

'Bilong wanem mipela sakim tok?'

'For what reason do we spear each other's talk (Eng. 'disobey, not heed')?'

(1.1-second pause)

EMMA:

twaviŋgayi	*aŋri*	*ñjirkŋɨ*	*ŋginimɨ*	*primatia!*
twaviŋgayi	aŋ-ri	ñji=irk-ŋɨ	ŋgini-mɨ	pri-ma-ti=a
child.PL	man-PL	POSS.PL=speech-PC	perceive.DIST-NMLZ	do-R-NEG=EXCL

amariyi	*ikɨ*	*makãmpmɨ*	*ñjachẽntmɨkɨ*
am-ar-iyi	ikɨ	mɨ=akam-pmɨ	ñji-achim-m-i=kɨ
woman-DIM-PL	only	DIST=speak-NMLZ	MID-meet-IPFV-COH=CNT.R

pinɨcpmiche		*aŋri*	*gwrukanɨ*	*pirki.*
pi-nɨ-cpm-i-ch-e		aŋri	gwru-kanɨ	pirk-i
sit-IPFV-IPFV-IRR-NMLZ-CTRST		man	bush-here	sit.PL-IRR

gwrukanɨ	*avariyi*	*aratmi.*
gwru-kanɨ	avar-iyi	ara-tm-i
bush-here	INCONS-PL	walk_about-IPFV-IRR

ainkɨtwaviŋgayi	*aŋri*	*ñjirkŋɨ*	*ŋginimichinda.*
ainki=twaviŋgayi	aŋ-ri	ñjirk-ŋɨ	ŋgini-m-i-ch-i-nd-a
1PL.FOC.POSS=child.PL	man-PL	PL.POSS=talk-PC	perceive.DIST-IPFV-IRR-NMLZ-IRR-PFV-R

kwaŋɨnɨ	*chinichiniŋgini.*
ku=aŋ-ɨnɨ	chi-ni~chini=ŋgi-ni
1SG.POSS=man-PC	exist-IPFV~NMLZ=CHAR-who

'Ol pikinini man i no save harim toktok bilong mipela. Ol meri tasol sa toktok na bung na sindaun, ol man sindaun nabaut long bus. Go raun nating long bus. Ol pikinini man bilong mipela no save harim toktok. Mi nogat man.'

'Alas it's not as if the young men listen to our talk. Only the women talk about this and meet with one another and sit while in contrast the men sit idly scattered in the bush. Just wander aimlessly here and there in the bush. And the young men of ours do not perceive our talk. I have no husband (lit. My husband is someone who is no longer.).'

DOROTHY;

prɨ	*amugu*	*mavarkɨ*
prɨ	amugu	mɨ=avar-kɨ
DM	carefully	DIST=INCONS-PC

apɨñi ŋgɨñiŋgɨñiarɨ	*añi*	*mundu.*
apɨñi ŋgɨñi~ŋgɨñi.arɨ	añi	mɨ=ndu
give_a_try~NMLZ	1PL	DIST=perceive.PROX.IMP

'Traim isi isi longen na bai mipela lukim.'

'(Let's) just try it nice and carefully (i.e., organizing ourselves) giving it a try, let us see (what happens).'

EMMA;

ku	*ma,*	*ma*	*pirkɨ*	*kanɨ*	*mkapambia,*
ku	ma	ma	pi-r-kɨ	kanɨ	mk-apa-ambia
1SG.NOM	DIST.DEF	DIST.DEF	bad-ADJ-PC	here	stand-R-CF

Airɨ	*kanɨ*	*mkapambia,*	*anɨ*	*miŋgiŋgini.*
Airɨ	kanɨ	mk-apa-ambia	anɨ	mɨ=ŋgi~ŋgini
Airɨ	here	stand-R-CF	3SG	DIST=perceive.DIST~NMLZ

(1.6)

324

anɨ	*kri*	*gapɨ*	*ñjiŋimapayinda.*
anɨ	kri	gapɨ	ñjiŋi-m-apa-y-i-nd-a
3SG	things.PC	DM	slack_off-IPFV-R-NMLZ-IRR-PFV-R

'Mi dispela nogut i stap olsem, Airɨ i stap olsem, em dispela kain. Em i no save slek long ol samting.'

'That I should be here in such a bad way (i.e., as a widow), had Airɨ (i.e., her deceased husband) been here, well he was that kind (of man). He was not negligent/slacking in things.'

ANTON;	*ndɨnkɨ*	*niŋañinɨmaya,*			
	ndɨnkɨ	ni=ŋi=añi-n-i=ma=ya			
	thought	INS=1SG.ACC=give.R.PC-NMLZ-PC=DIST.DEF=[TP:TOP]			

(1.3)

anɨ	*akamkɨyi*	*mɨndinkɨya,*
anɨ	akam-kɨ-yi	mɨ=ndɨnkɨ=ya
3SG	speak-R-NMLZ	DIST=thought=[TP:TOP]

(2.2)

wutini	*aveŋgra*	*apigɨ*	*agwugwugi.*
wut-i-ni	ave.ŋgra	apigɨ	agwu~gwu-gɨ-i
man-PL-some	Victoria_crowned_pigeon	tail_feathers	inside~IPFV-STAT-IRR

ku	*ñikɨga*	*mɨkani.*
ku	ñi=kɨ-ga	mɨ=ka-nɨ-i
1SG.NOM	PL=tell-R	DIST=PROX.COP-IPFV-IRR

(2.6)

ku	*mundwikɨ*		
ku	mɨ=ndwi=kɨ		
1SG.NOM	DIST=perceive.PROX.R=CNT.R		

ku	*ñjikarɨ*	*ŋkɨkɨ*	*kɨvki.*
ku	ñji-karɨ	ŋk-i=kɨ	kɨ=ivk-i
1SG.NOM	MID-'retract'.NMLZ	remain-PFV=CNT.R	PROX=be_sitting-IRR

'Tingting em givim mi longen hia, dispela tingting em i toktok longen hia, sampela man i olsem tel bilong pisin guria. Em ia mi tokim yupela. Mi lukim na daunim mi yet na sindaun i stap.'

'That idea that he (i.e., Andmarɨŋinɨ/Father Daniel) gave me, that idea he spoke of, on the inside some men are like the tail feathers of the Victoria crowned pigeon (i.e., who are withdrawn from full participation in the community and twitch at the mention of cooperation). That's what I've told you all. I see that, I retract myself, and remain seated.'

(4.0)

DOROTHY;	*kanɨ*	*ŋgigɨ*	*ŋgvuyi*	*ñi*	*pa*	*ñjiŋgriginda,*
	kanɨ	ŋgigɨ	ŋgvuyi	ñi	pa	ñji-ŋgri-gi-nd-a
	here	village	folks	PL	first	MID-'rouse'-IRR-PFV-R

325

añi *kavkuya,*
añi ki=avku-y-e=a
1PL PROX=tell-NMLZ-QUOT=EXCL

añi *Thomas* *añi* *ŋamurwa* *nimiŋgini.*
añi Thomas añi ŋɨ=amurwa nɨ=mɨ=ŋgin-i
1PL Thomas 1PL POSS.REFL=eye INS=DIST-perceive.DIST-IRR

'Here the village folks (i.e., the men) still do not rouse themselves, alas ("no matter what") we say. We Thomas and company, we should each try seeing (things) using our eyes.'[153]

EMMA; *añi* *ŋamurwa* *nimundwindaka* *añi* *kri* *ñjini.*
añi ŋɨ=amurwa nɨ=mɨ=ndwi=ndaka añi kri ñjin-i
1PL POSS.REFL=eye INS=DIST=perceive.PROX.R=SEQ.R 1PL thing.PC fix-IRR

'We having seen/understood things using our eyes, then we will fix things.'

ANTON; *nu* *migɨ* *ŋamurwa* *nimiñjini--* *miŋginina?*
nu mɨ-gɨ ŋɨ=amurwa nɨ=mɨ=ñjini-- mɨ=ŋgin-i-n-a
2SG DIST-thus POSS.REFL=eye INS=DIST=fix-- DIST=perceive.DIST-IRR-NMLZ-Q.R

'How will you figure it out/become aware using your eyes?'

(1.1)

nu *ŋamurwa* *nimiŋginiŋgini,*
nu ŋɨ=amurwa nɨ=mɨ=ŋginɨ~ŋgini
2SG POSS.REFL=eye INS=DIST=perceive.DIST~RE:NMLZ

mirkŋɨ *nakamɨndɨ.*
mɨ=irk-ŋɨ nɨ=akamɨ-ndɨ
DIST=speech-PC INS=speak-PROH

nu *ŋikwarɨ* *nimunduti,*
nu ŋɨ=kwarɨ nɨ=mɨ=ndu=tɨ
2SG POSS.REFL=ear INS=DIST=perceve.PROX.MOD=CNT.IRR

(1.4)

nu *nugunmɨ* *ŋɨpinichiŋɨ* *nipɨnichiŋɨ.*
nu nugu=nmɨ ŋɨ=pɨ-ni-chiŋɨ nɨ=pɨ-ni-chiŋɨ
2SG one=ASS.PC POSS.REFL-sit-IPFV-NMLZ INS=sit-IPFV-IRR

ku *kɨmakãmpmichi* *mɨkani.*
ku kɨ=mɨ=akam-pm-i-chi mɨ=ka-ni-i
1SG PROX=DIST=speak-IPFV-IRR-NMLZ DIST=COP.PROX-IPFV-IRR

---

[153] In the stretch of discourse starting here with Dorothy and Emma's contributions and continuing through Anton's contribution, the proximal-distal distinction expressed via the two primary verbs of perception and cognition, *ndu-* 'perceive (proximal)' and *ŋgin-* 'perceive (distal)' becomes quite important in a way that the English translation is at pains to capture. Essentially, these two lexemes in Chini do the same work that a wide range of English verbs do. The difference is comparable (though not perfect) as that between the following pairs of English verbs 'see (directly or up close)' (*proximal*) vs. 'watch; go and see/check on; descry; discern' (*distal*); 'hear' (*proximal*) vs. 'listen' (*distal*), 'grasp (i.e. understand)' (*proximal*) vs. 'catch (i.e. understand)' (*distal*); 'know' (*proximal*) vs. 'find out' (*distal*).

'You sorting it-- figuring it out with your eyes! — you should not use that language. You should figure it out using your ears (i.e. by listening) and each of you should go about life according to your own (way of) living. That's what I'm telling you now.'

(1.3)

nu	*avaŋri*	*aŋgukŋitɨ*
nu	ava-aŋ-ri	aŋgu.kŋi=tɨ
2SG	other-man-PL	ask=CNT.IRR

ankɨpinichiŋi	*nipinichiŋinda.*
ankɨ=pi-ni-chiŋɨ	ni=pi-ni-chiŋi-ndɨ=a
3SG.POSS.FOC=sit-IPFV-NMLZ	INS=sit-IPFV-NEG-PROH=EXCL

ani	*ŋitãrkɨ*	*nipinichiŋi,*	*nu*	*ŋitãrkɨ,*
ani	ŋi=tã-r-kɨ	ni=pi-ni-chiŋi	nu	ŋi=tã-r-kɨ
3SG	POSS.REFL=strong-ADJ-PC	INS=sit-IPFV-IRR	2SG	POSS.REFL=strong-ADJ-PC

añi	*kiŋgigapramkɨ*	*mɨgɨ*	*ikɨ*	*pinicpmi.*
añi	kɨ=ŋgigi-apri-amkɨ	mɨ-gɨ	ikɨ	pi-ni-cpm-i
1PL	PROX=village-all.parts-AUG.PC	DIST-thus	only	sit-IPFV-IPFV-IRR

'Noken askim ol narapela man na noken sindaun/stap long we/stap bilongen. Em bai stap long strong bilongen, yu, strong bilong yu. Mipela olgeta komyuniti save stap olsem tasol.'

'You should not go asking anyone else and living according to their way of living. You should live according to your strength, them according to their strength. The whole assembly of each and every one of us in this community goes about life in just that way.'

DOROTHY;

mɨgɨ	*ikɨ*	*pritmi.*
mɨ-gɨ	ikɨ	pri-tm-i
DIST-thus	only	sit-IPFV-IRR

'(We) live in that way only.'

EMMA;

mɨrkŋi	*ara.*
mɨ=irk-ŋi	ar-a
DIST=talk-PC	good-R

(1.0)

ku	*ñjimbayi.*
ku	ñji-mba-y-i
1SG.NOM	MID-deceive-NMLZ-Q.IRR

'Trupela tok. Mi giaman a?'

'That talk is true/good. Am I lying? (rhetorical question, i.e. 'That's no lie.').'

(1.0)

ANTON;

nu	*mundwini,*
nu	mɨ=ndwi-n-i
2SG	DIST=perceive.PROX.R-NMLZ-Q.IRR

mandmatɨ	*yãrkŋɨ*	*nu*	*mundwini?*
mɨ=andmatɨ	yãrk-ŋɨ	nu	mɨ=ndwi-n-i
DIST=tradition	likeness-PC	2SG	TOP=perceive.PROX.R-NMLZ-Q.IRR

nu	*nɨwutmɨ*	*nɨgɨ*	*kɨyimɨyikɨ*	*aka--*
nu	nɨ=wut-mɨ	nɨgɨ	kɨyimɨyikɨ	
2SG	INS=man-PC	another	do_whatsit-IRR=CNT.R	

wutmɨ	*nɨgaŋgɨ*	*ndwindaka*
wut-mɨ	nɨgɨ=aŋgɨ	ndwi=ndaka
man-PC	another=LH.PC	perceive.PROX.R=SEQ.R

ku	*mɨvari.*
ku	mɨ=var-i
1SG.NOM	DIST=garden/work-IRR

wutmɨ	*nɨgɨ*	*avarkɨ,*
wut-mɨ	nɨgɨ	avar-kɨ,
man-PC	another	INCONS-PC

nu	*ñjvimbɨni,*	*ku*	*ñjvimbɨni,*
nu	ñjvi=mbɨn-i	ku	ñjvi=mbɨn-i
2SG	PL.BEN=conflict-IRR	1SG.NOM	PL.BEN=conflict-IRR

wutmɨ	*nugunmɨ*	*ñjvimbɨni.*
wut-mɨ	nugu=nmɨ	ñjvi=mbɨn-i
man-PC	one=ASS.PC	PL.BEN=conflict-IRR

"Yu save a? We bilong dispela pasin yu save a? Yu mekim long narapela man bai yu lukim bilong narapela man na — mi bai wok. Narapela man nating, yu hethet mi hethet, yumi wanwan hethet.'

'Do you know? Do you know the way of that tradition? You doing whatever someone else's way, and seeing how someone else's is and meanwhile — as for me I'll tend to it. Someone else, inconsequential! Your will conflicting against mine, mine against yours, each of our wills against the other's will.'

(1.1)

maŋgarɨ	*ndmu*	*mɨchi.*
mɨ=aŋgarɨ	ndmu	mɨ-ch-i
DIST=leg	nail	PART-exist-IRR

'Nil bilong lek i stap (we bilong tok i stap).'

'There are some toenails to it (i.e., it is well-grounded in the way things really are).'

EMMA;   *kaŋinɨmkɨ.*   (whispering)

kɨ=aŋini-mkɨ

PROX=big-AUG.PC

'Em bikpela.'

'This is really big/important.'

328

ANTON;   *añi*   *gŋɨ*   *pirkɨkɨ*
añi   gŋɨ   pirk-ɨ=kɨ
1PL   later   sit.PL-PFV=CNT.R

ku   *makamkɨva*   *mɨŋgini.*
ku   mɨ=akam-kɨ=va   mɨ=ŋgin-i
1SG.NOM   DIST=speak-R=PRE.R   DIST=perceive.DIST-IRR

'Later once we sit down and I discuss it and you'll find out.'

nu   *mundwiva*   *ŋguprɨ*   *rɨrɨrɨ*   *ruva*
nu   mɨ=ndwi=va   ŋgu=prɨ   rɨrɨrɨ   ru=va
2SG   DIST=perceive.PROX.R=PRE.R   2SG.POSS=skin   IDEO   ?=PRE.R

nu   *kanɨŋgi*   *nugu*   *miñjiniñjini*   *vɨndɨ,*   *kanɨŋgi*   *nugu,*
nu   kanɨ=ŋgi   nugu   mɨ=ñjini~ñjini   vi-ndɨ   kanɨ=ŋgi   nugu
2SG   here=COM   one   DIST=fix~NMLZ   BEN-think   here=COM   one

'Yu harim/save na, skin bilong yu bai kirap na em bai nau yet yu laik stretim, em bai nau yet.'

'You'll hear it and your skin will perk up going rɨrɨrɨ and it will be right now you'll think to sort it out, right at this very moment.'

ku   *ñimbayinda.*   *muŋwagɨ*   *raŋgɨ.*
ku   ñi=mba-yi-nd-a   mɨ=ŋwagɨ   ri-aŋgɨ
1SG.NOM   PL=deceive-IRR-PFV-R   DIST=fight   exist.PC-LH.PC

'Mi no giamanim yupela. Igat fait longen.'

'I'm not fooling you all. It concerns (a risk of) fighting (if the boys keep not participating in village work).'

PETER;   *anunu*   *raŋgɨ.*
anu~nu   ri-aŋgɨ
die~NMLZ   exist.PC-LH.PC

'Igat dai longen.'

'Concerns (a risk of) dying (i.e. it's quite serious).'

ANTON;   *ma,*   *mara,*   *mɨpirkɨ.*
ma   mɨ=ar-a   mɨ=pi-r-kɨ
DIST.DEF   DIST=good-R   DIST=bad-ADJ-PC

'Em, em orait, em nogut.'

'That (i.e each doing things according to their own way and not someone else's), be it good, (or rather if) it's bad...'

(3.1)

DOROTHY; *mipirkayi?*   *kara.*
mi=pi-r-ki-a-y-i   ki=ar-a
DIST=bad-ADJ-PC-R-NMLZ-Q.IRR   PROX=good-R

'Em nogut a? Em gutpela.'

'(Who says) it's bad? It is good.'

(afi260814v_34:55-36:45)

References

Aeschliman, Ulys. 1988. *Nobonob grammar sketch*. ms. Ukarumpa: Summer Institute of Linguistics.

Aikhenvald, Alexandra. 2016. Imperatives and Commands in Manambu. *Oceanic Linguistics* 55:2. 634-668.

Austin, John. 1962. *How to do things with words*. Cambridge: Harvard University Press.

Austing, John & Randolph Upia. 1975. Highlights of Ömie morphology. In Tom Dutton (ed.) *Studies in languages of central and south-east Papua*. Canberra: Research School of Pacific and Asian Studies, Australian National University. 513-598.

Barlow, Russell. 2018. *A grammar of Ulwa*. PhD thesis. University of Hawai'i at Manoa.

Bashkow, Ira. 2006. *The meaning of whitemen: Race and modernity in the Orokaiva cultural world*. Chicago: University of Chicago Press.

Bauman, Richard & Charles Briggs. 2003. *Voices of modernity: Language ideologies and the politics of inequality*. Cambridge: Cambridge University Press.

Berez, Andrea. 2015. Reproducible research in descriptive linguistics: integrating archiving and citation into the postgraduate curriculum at the University of Hawai'i at Manoa. In Harris, Amanda, Nick Thieberger & Linda Barwick (eds.) *Research, Records and Responsibility: Ten Years of PARADISEC*. Sydney: Sydney University Press.

Berez-Kroeker, Andrea, Lauren Gawne, Barbara Kelly & Tyler Heston. 2017. *A survey of current reproducibility practices in linguistics journals*, 2003-2012. [https://sites.google.com/a/hawaii.edu/data-citation/survey]

Berghäll, Liisa. 2015. *A Grammar of Mauwake* (Studies in Diversity Linguistics 4). Berlin: Language Science Press.

Bickel, Balthasar. 2010. Capturing particulars and universals in clause linkage: a multivariate analysis. In Bril, Isabelle. (ed.) *Clause Linking and Clause Hierarchy: Syntax and Pragmatics*. Amsterdam: Benjamins. 51-102.

Blewett, Stephen. 1991. Irrealis in Manam discourse. *Language and Linguistics in Melanesia* 22. 1-20.

Boersma, Paul & David Weenink. 2016. Praat: doing phonetics by computer [Computer program]. Version 5.4. Retrieved from [http://www.praat.org].

Botne, Robert. 2003. Dissociation in Tense, Realis, and Location in Chindali Verbs. *Anthropological Linguistics* 45:4. 390-412.

Bradshaw, Joel. 1997. Review of: Heinrich Zahn. Mission and music: Jabêm traditional music and the development of Lutheran hymnody, trans. by Philip w. Holzknecht, ed. by Don Niles. Apwitihire: Studies of Papua New Guinea Musics, 4. Boroko: Institute of Papua New Guinea Studies. *Oceanic Linguistics* 36:2. 420-424.

Bradshaw, Joel. 2001. The elusive shape of realis/irrealis in Jabêm. In Bradshaw, Joel & Kenneth Rehg (eds.) *Issues in Austronesian Morphology: A festschrift for Byron W. Bender*. Pacific Linguistics, ANU.

Brochie, Amanda. 2009. *Tirax grammar and narrative: an Oceanic language spoken on Malakula, North Central Vanuatu*. Ph.D. thesis. The University of Melbourne.

Brooks, Joseph. 2018. *Documentation of Chini language and culture (Madang Province, Papua New Guinea)*. London: SOAS, Endangered Languages Archive. URL: [https://elar.soas.ac.uk/Collection/MPI636676]

Brown, Dunstan, Marina Chumakina, Greville Corbett & Andrew Hippisley. 2003. Surrey Suppletion Database. University of Surrey. [http://dx.doi.org/10.15126/SMG.12/1]

Bruce, Les. 1984. *The Alamblak Language of Papua New Guinea (East Sepik)*. Pacific Linguistics C-81.

Buckley, Eugene. 1988. Temporal boundaries in Alsea. *Proceedings of the Berkeley Linguistics Society* 14. 10-22.

Bugenhagen, Robert. 1994. The semantics of irrealis in Austronesian languages in Papua New Guinea. A cross-linguistic study. In Reesink, Ger (ed.) *Topics in Descriptive Austronesian Linguistics*. 1-39.

Butler, William. 1981a. *A tentative phonology of Banaro*. Madang: Pioneer Bible Translators. Unpublished. Copy given to me by William Butler.

Butler, William. 1981b. *Preliminary notes on Banaro grammar*. Madang: Pioneer Bible Translators. Unpublished. Copy given to me by William Butler.

Butler, William. 1988. *Banaro dictionary*. Madang: Pioneer Bible Translators. Unpublished.

Bybee, Joan. 1985. *Morphology*. Amsterdam: John Benjamins.

Bybee, Joan. 1998. "Irrealis" as a grammatical category. *Anthropological Linguistics* 40. 257-271.

Bybee, Joan, William Pagliuca & Revere Perkins. 1994. *The Evolution of Grammar: Tense, Aspect and Modality in the Languages of the World.* Chicago: University of Chicago Press.

Capell, Arthur. 1951. Languages of the Bogia District, New Guinea. *Oceania* 22:2. 130-207.

Capell, Arthur & Heather Hinch. 1970. *Maung grammar: texts and vocabulary*. The Hague: Mouton.

Chafe, Wallace. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In Charles Li (ed.) *Subject and Topic.* New York: Academic Press. 25-56.

Chafe, Wallace. 1995. The realis-irrealis distinction in Caddo, the Northern Iroquoian languages, and English. In: Bybee, Joan and Suzanne Fleischmann. *Modality in grammar and discourse.* John Benjamins, Amsterdam. 349-365.

Christensen, Fay. 1977. *Rao grammar from stem to clause, a preliminary study.* Unpublished manuscript. Copy given to me by Martha Wade with permission of the author.

Christensen, Fay. 1978a. *Combinations of predications in Rao.* Unpublished manuscript. Copy given to me by Martha Wade with permission of the author.

Christensen, Fay. 1978b. *Identification of participants in Rao discourse.* Unpublished manuscript. Copy given to me by Martha Wade with permission of the author.

Clark, Dawn & Stephen Clark. 1987. *Sio Grammar Essentials*. Ukarumpa: Summer Institute of Linguistics.

Cleary-Kemp, Jessica. 2014. Irrealis as verbal non-specificity in Koro (Oceanic). *Proceedings of the 40th Annual Meeting of the Berkeley Linguistics Society*. 20-41.

Comrie, Bernard. 1976. *Aspect.* Cambridge: Cambridge University Press.

Comrie, Bernard. 1985. *Tense.* Cambridge: Cambridge University Press.

Contini-Morava, Ellen. 2012. The message in the navel: (ir)realis and negation in Swahili. *Language Sciences* 34. 200-215.

Corbett, Greville. 2005. The canonical approach in typology. In Zygmunt Frajzyngier, David Rood & Adam Hodges (eds.) *Linguistic diversity and language theories.* Amsterdam: Benjamins. 25-49.

Corbett, Greville. 2007. Canonical typology, suppletion and possible words. *Language* 83. 8-42.

Cornyn, William & D. Haigh Roop. 1987. *Beginning Burmese.* Manoa: University of Hawai'i at Manoa.

Couper-Kuhlen, Elizabeth and Margret Selting (eds.). 2001. *Studies in Interactional Linguistics.* Amsterdam: John Benjamins.

Cristofaro, Sonia. 2012. Descriptive notions vs. grammatical categories: Unrealized states of affairs and 'irrealis'. *Language Sciences* 34. 131-146.

Croft, William. 2001. *Radical Construction Grammar: Syntactic Theory in Typological Perspective.* Oxford: Oxford University Press.

Cutfield, Sarah. 2012. *Demonstratives in Dalabon: a language of southwestern Arnhem Land.* Ph.D. thesis. Monash University.

Davies, John & Bernard Comrie. 1985. A linguistic survey of the Upper Yuat. *Papers in New Guinea Linguistics No. 22. Pacific Linguistics* A-63. 275-312.

Daniels, Don (compiler, recorder); Joseph Vongai (speaker). 2010. Aram request. Pacific And Regional Archive for Digital Sources in Endangered Cultures (PARADISEC). [oai:paradisec.org.au:DD1-061]

Daniels, Don (compiler, recorder). 2014. Aren request. Pacific And Regional Archive for Digital Sources in Endangered Cultures (PARADISEC). [oai:paradisec.org.au:TD1-P009]

Daniels, Don. 2015. *A Reconstruction of Proto-Sogeram.* Ph.D. dissertation. University of California, Santa Barbara.

Daniels, Don & Joseph Brooks. (Forthcoming.) The history of *=a: Contact and reconstruction in northeast New Guinea. *The Journal of Language Contact.*

Danielsen, Swintha & Lena Terhart. 2017. Realis/irrealis as a basic grammatical distinction in Southern Arawakan languages. *Revue de Sémantique et Pragmatique.*

Davies, John. 1981. *Kobon.* Lingua Descriptive Studies. Amsterdam: North-Holland Publishing Company.

de Haan, Ferdinand. 2012. Irrealis: Fact or fiction? *Language Sciences* 32. 107-130.

Dempwolff, Otto. 1939. *Grammatik der Jabêm-Sprache auf Neuguinea.* Abhandlungen aus dem Gebiet der Auslandskunde, vol. 50. Hamburg: Reimer.

Dobrin, Lise. 2008. From linguistic elicitation to eliciting the linguist: Lessons in community empowerment from Melanesia. *Language* 84(2). 300-324.

334

Dobrin, Lise. 2012. Ethnopoetic analysis as a resource for endangered-language linguistics: The social production of an Arapesh text. *Anthropological Linguistics* 54:1. 1-32.

Dobrin, Lise. 2014. Language Shift in an 'Importing Culture': The Cultural Logic of the Arapesh Roads. In Peter Austin and Julia Sallabank (eds.), *Endangered Languages: Beliefs and Ideologies in Language Documentation and Revitalization,* Proceedings of the British Academy 199. London: Oxford University Press. 125-148.

Dobrin, Lise & Saul Schwartz. 2016. Collaboration or participant observation? Rethinking models of 'linguistic social work'. *Language Documentation & Conservation* 10. 253-277.

Donohue, Mark. 1999. *A Grammar of Tukang Besi.* Berlin, New York: Mouton de Gruyter.

Dryer, Matthew & Haspelmath, Martin (eds.) 2013. The World Atlas of Language Structures Online. Leipzig: Max Planck Institute for Evolutionary Anthropology. Available online at [http://wals.info].

Ekdahl, Muriel & Joseph Grimes. 1964. Terêna verb inflection. *International Journal of American Linguistics* 30. 261-268.

Elliott, Jennifer. 2000. Realis and irrealis: forms and concepts of the grammaticalisation of reality. *Linguistic Typology* 4. 55-90.

Exter, Mats. 2012. 'Realis' and 'irrealis' in Wogeo: A valid category? In Evans, Nicholas & Marian Klamer (eds.) *Language Documentation & Conservation Special Publication No. 5. Melanesian Languages on the Edge of Asia: Challenges for the 21st Century.* 174-190.

Feldman, Harry. 1986. *A Grammar of Awtuw*. Pacific Linguistics B-94. Canberra: Australian National University.

Flynn, Darin & Sean Fulop. 2012. Dentals are grave. Presentation at CAA: Acoustics week in Canada. Banff, Alberta. October 10-12.

Foley, William. 1986. *The Papuan languages of New Guinea*. Cambridge: Cambridge University Press.

Foley, William. 1991. *The Yimas Language of New Guinea.* Stanford: Stanford University Press.

Foley, William. 2000. The Languages of New Guinea. *Annual Review of Anthropology* Vol. 29. 357-404.

Foley, William. 2005. Linguistic prehistory in the Sepik-Ramu basin. In Andrew Pawley, Robert Attenborough, Robin Hide (eds.) *Papuan pasts: linguistic and biological histories of Papuan-speaking peoples.* Canberra: Pacific Linguistics. 109-144.

Foley, William. 2017. The languages of the Sepik-Ramu Basin and Environs. In Palmer, Bill (ed.) *The Languages and Linguistics of the New Guinea Area: A Comprehensive Guide*. Berlin, Boston: De Gruyter Mouton. 197-432.

Foley, William and Robert Van Valin. 1984. *Functional syntax and universal grammar.* Cambridge: Cambridge University Press.

Frachtenberg, Leo Joachim. 1918. *Alsea Grammar*. Washington, D.C.: Smithsonian Institution. (ms). Copy given to me by Harald Hammarström.

François, Alexandre. 2017. Méthode comparative et chaînages linguistiques pour un modèle diffusionniste en généalogie des langues. *In Diffusion: implantation, affinités, convergence*. Peeters. 43-82.

Gardani, Francesco, Peter Arkadiev & Nino Amiridze (eds). 2015. *Borrowed Morphology.* Berlin: De Gruyter Mouton.

Gawne, Lauren, Barbara Kelly, Andrea Berez-Kroeker & Tyler Heston. 2017. Putting practice into words: the state of data and methods transparency in grammatical descriptions. *Journal of Language Documentation and Conservation* 11. 157-189.

van Gijn, Rik. 2006. *A grammar of Yurakaré.* Ph.D. dissertation. Radboud University Nijmegen.

van Gijn, Rik & Sonja Gipper. 2009. Irrealis in Yurakaré and other languages: on the cross-linguistic consistency of an elusive category. In Lotte Hogeweg, Helen de Hoop, Andrej Malchukov (eds.) *Cross-linguistic Semantics of Tense, Aspect, and Modality.* Amsterdam, Philadelphia: John Benjamins.

Givón, Talmy. 1994. Irrealis and the subjunctive. *Studies in Language* 18:2.

Goldman, Laurence. 1986. The presentational style of women in Huli disputes. Canberra: *Pacific Linguistics* 24. 213-89.

Good, Jeff. 2012. Deconstructing descriptive grammars. In Sebastian Nordoff (ed.) *Electronic Grammaticography*. Honolulu: University of Hawaii Press. 2-32. [http://hdl.handle.net/10125/4528]

Gordon, Matthew. ms. Syllables. In: (ed) *Phonological typology*. Oxford: Oxford University Press.

Haiman, John. 1978. Conditionals are topics. *Language* 54:3. 564-589.

Haiman, John. 1980. *Hua: A Papuan language of the Eastern Highlands of New Guinea*. Amsterdam: John Benjamins.

Haiman, John. 1988. Inconsequential clauses in Hua and the typology of clauses. In: Haiman, John and Thompson, Sandra, (eds)*. Clause combining in grammar and discourse*. Amsterdam/Philadelphia: John Benjamins. 49-69.

Haiman, John and Pamela Munro (eds). 1983. *Switch Reference and Universal Grammar: Proceedings of a Symposium on Switch Reference and Universal Grammar,* John Benjamins, Amsterdam/Philadelphia. 49-69.

Hale, Kenneth. 1968. Some questions about Anthropological Linguistics: The role of native knowledge. In Hymes, Dell (ed.), Reinventing Anthropology. Ann Arbor: The University of Michigan Press. 382-397.

Hartzler, Margaret. 1983. Mode, aspect, and foregrounding in Sentani. *Language and Linguistics in Melanesia* 14. 173-192.

Haspelmath, Martin. 2008. Ditransitive constructions: Towards a new Role and Reference Grammar account? In Van Valin, Robert (ed.) *Investigations of the Syntax-Pragmatics Interface*. [Studies in Language Companion Series 105]. 75-100.

Haspelmath, Martin. 2010a. Framework-free grammatical theory. *The Oxford Handbook of Linguistic Analysis*. Bernd Heine and Heiko Narrog, eds. 342-365. Oxford, UK: Oxford University Press.

Haspelmath, Martin. 2010b. Comparative concepts and descriptive categories in crosslinguistic studies. *Language* 86:3. 663-687.

Heine, Bernd & Tania Kuteva. 2005. *Language contact and grammatical change.* Cambridge, New York: Cambridge University Press.

Hepner, Mark. 1995. Tense, Aspect and Modality in Bargam. *Language and Linguistics in Melanesia* 26. 1-31.

Hepner, Mark. 2006. Bargam Grammar Sketch. Ukarumpa, Papua New Guinea: Unpublished Typescript, The Summer Institute of Linguistics.

Himmelmann, Nikolaus. 1998. Documentary and descriptive linguistics. *Linguistics* 36. 161-195.

Hintz, Daniel & Diane Hintz. 2017. The evidential category of mutual knowledge in Quechua. *Lingua* 186-187. 88-109.

Hooley, Bruce. 1970. Mapos Buang, Territory of New Guinea. PhD dissertation, University of Pennsylvania.

Huisman, Ronald. 1973. Angaataha verb morphology. *Linguistics* 110. 43-54.

Ingram, Andrew. 2001. *Anamuxra: A Language of Madang Province, Papua New Guinea.* University of Sydney PhD dissertation.

Jacobsen, William. 1967. Switch-reference in Hokan-Coahuiltecan. In Hymes, Dell & Bittle, W. (eds.) *Studies in Southwestern Ethnolinguistics: Meaning and History in the Languages of the American Southwest*. The Hague: Mouton. 238-63.

Jakobson, Roman. 1938. Přednášky v Pražském linguistickém kroužku od prosince 1937 do března 1938. *Slovo a slovesnost* 4(3): 191-192. [accessed via partial translation into English in: Flynn, Darin & Sean Fulop. 2012. Dentals are grave. Presentation at CAA: Acoustics week in Canada. Banff, Alberta. October 10-12.]

Jakobson, Roman. 1939. Observations sur le classement phonologique des consonnes. In Edgard Blancquaert and Willem Pée (eds.), *Proceedings of the Third International Congress of Phonetic Sciences*: Held at the University of Ghent, 18-22 July, 1938, 34-41. Ghent, Belgium: Laboratory of Phonetics.

Joseph, John. 2004. *Language and identity: National, ethnic, religious.* Houndsmills, Basingstoke, Hampshire: Palgrave Macmillian.

Kaspruś, Aloys. 1973. *The tribes of the Middle Ramu and the Upper Keram Rivers.* [Studia Instituti Anthropos 17.] St. Augustin bei Bonn: Verlag des Anthropos Instituts.

Kemmer, Suzanne. 1994. Middle voice, transitivity, and the elaboration of events. In Fox, Barbara & Paul Hopper (eds.) *Voice: form and function.* Amsterdam: John Benjamins. 179-229.

Klamer, Marian. 2012. Reality status in Teiwa (Papuan). *Language Sciences* 34. 216-228.

Kulick, Don. 1992. *Language shift and cultural reproduction: Socialization, self, and syncretism in a Papua New Guinean village.* Cambridge, New York: Cambridge University Press.

Ladefoged, Peter & Maddieson, Ian. 1996. *The sounds of the world's languages*. Oxford: Blackwell Publishers Ltd.

Lauck, Linda. 1980. *Patep grammar sketch.* S.I.L., Ukarumpa, Papua New Guinea.

Laycock, Donald & John Z'graggen. 1975. The Sepik-Ramu phylym. In Wurm, S. (ed.) New Guinea area languages and language study, v.1: Papuan languages. *Pacific Linguistics* C-38. Canberra: The Australian National University. 731-766.

338

Lazard, Gilbert. 1998. L'expression de l'irréel: essai de typologie. In Kulikov, L. & Heinz Vater (eds.) *Typology of verbal categories: papers presented to Vladimir Nedjalkov on the occasion of his 70th birthday,* Linguistische Arbeiten, 382. 237-247.

Levy, Catherine. 2002. *A Tentative Phonology and Morphology of the Awar Language, Lower Ramu Family, Madang Province, Papua New Guinea*. PhD dissertation. Brussels: L'Université libre de Bruxelles.

Lichtenberk, Frantisek. 1983. A Grammar of Manam. *Oceanic Linguistics Special Publications* No. 18. 1-647.

Longacre, Robert. 1972. *Hierarchy and universality of discourse constituents in New Guinea languages,* Vol 1: Discussion. Washington: Georgetown University Press.

Lotterman, Johan. 2005. Unexpected insertion or omission of an absolutive marker as an icon of a surprising turn of events in discourse. In de Groot, Casper & Kees Hengeveld (eds.) *Morphosyntactic Expression in Functional Grammar.* Berlin, New York: Mouton de Gruyter. 483-501.

Maddieson, Ian & Kristin Precoda. 1990. Updating UPSID. *UCLA Working Papers in Phonetics* 74. 104-11.

Maddieson, Ian. 2007. Issues of phonological complexity: statistical analysis of the relationship between syllable structures, segment inventories, and tone contrasts. In: Maria-Josep Solé, Patrice Speeter Beddor & Manjari Ohala (eds.), *Experimental approaches to phonology*. Oxford. 93-103.

Maddieson, Ian. 2013. Syllable Structure. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) The World Atlas of Language Structures Online. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at http://wals.info/chapter/1). Accessed on 2016-02-01.

Maddieson, Ian, Kristin Pecoda & Henning Reetz. 2016. UCLA Phonological Segment Inventory Database(UPSID). [http://web.phonetik.uni-frankfurt.de/upsid_info.html]. Accessed on 15 January 2016.

Mauri, Caterina & Andrea Sansò. 2012. What do languages encode when they encode reality status? *Language Sciences* 34. 99-106.

McGregor, William & Tamsin Wagner. 2006. The semantics and pragmatics of irrealis mood in Nyulnyulan languages. *Oceanic Linguistics* 45:2. 339-379.

Meakins, Felicity & Rachel Nordlinger. 2014. *A Grammar of Bilinarra: An Australian Aboriginal Language of the Northern Territory.* Boston/Berlin: De Gruyter Mouton.

Merlan, Francesca. 1994. *A Grammar of Wardaman: A Language of the Northern Territory of Australia.* Berlin, New York: Mouton de Gruyter.

Michael, Lev. 2014. The Nanti reality status system: Implications for the typological validity of the realis/irrealis contrast. *Linguistic Typology* 18:2. 251-288.

Mihas, Elena. 2015. *A Grammar of Alto Perené (Arawak).* De Gruyter Mouton.

Miller, Amy. 1990. *A Grammar of Jamul Diegueño*. Ph.D. dissertation, University of California, San Diego.

Miner, Kenneth. 1979. Through the years with a very small language: More trouble with data in linguistic theory. *International Journal of American Linguistics* 45. 75-78.

Mithun, Marianne. 1995. On the relativity of irreality. In: Bybee, Joan and Suzanne Fleischmann. *Modality in grammar and discourse*. John Benjamins, Amsterdam. 367-388.

Mithun, Marianne. 2001. Who shapes the record: the speaker and the linguist. In Newman, Paul & Martha Ratliff (eds.) *Linguistic fieldwork*. Cambridge: Cambridge University Press. 34-54.

Mithun, Marianne. 2014. The data and the examples: comprehensiveness, accuracy, and sensitivity. In Toshihide Nakayama & Keren Rice (eds.) *The Art and Practice of Grammar Writing. Journal of Language Documentation & Conservation Special Publication* No. 8.

Mithun, Marianne. 2015. Discourse and grammar. In Deborah Tannen, Heidi E. Hamilton & Deborah Schiffrin (eds.) *The Handbook of Discourse Analysis*, Second Edition. Hoboken: John Wiley & Sons.

Mixco, Mauricio. 1997. Mandan Switch Reference: A Preliminary View. *Anthropological Linguistics* 39:2. 220-298.

Morey, Stephen. 2005. *The Tai languages of Assam - a grammar and texts.* Canberra: Pacific Linguistics.

Morey, Stephen. 2010. *Turung - a variety of Singpho language spoken in Assam.* Canberra: Pacific Linguistics.

Mosel, Ulrike. 2012. Morphosyntactic analysis in the field - a guide to the guides. In Nick Thieberger (ed.) *The Oxford handbook of linguistic fieldwork*. Oxford: Oxford University Press. 72-89.

Muzzey, Margarite. 1979. *Hote grammar essentials.* S.I.L., Ukarumpa, Papua New Guinea.

Nikolaeva, Irina and Dejan Matić. 2014. Realis mood, focus, and existential closure in Tundra Yukaghir. *Lingua* 150. 202-231.

Ochs, Elinor & Lisa Capps. 2001. *Living narrative: Creating lives in everyday storytelling.* Cambridge: Harvard University Press.

Okell, John. 1969. *A reference grammar of colloquial Burmese*. 2 volumes. London: Oxford University Press.

Olsson, Bruno. 2017. *The Coastal Marind language.* Ph.D. thesis. Singapore: Nanyang Technological University.

O'Rear, P. 1992. SIL survey wordlist of several Inapang dialects. Provided by the SIL librarians in Ukarumpa.

Palmer, Bill. 2017. Language families of the New Guinea area. In Bill Palmer (ed.) *The Languages and Linguistics of the New Guinea Area: A Comprehensive Guide*. Berlin, Boston: De Gruyter Mouton. 1-20.

Palmer, Frank. 2001. *Mood and modality*. Cambridge: Cambridge University Press.

Parrish, David. 1989. *The Bore Grammar Essentials: Calibration of the Bore Language*. Pioneer Bible Translators. Madang: Papua New Guinea.

Pawley, Andrew. 1966. *The Structure of Kalam: A Grammar of a New Guinea Highlands Language.* University of Auckland Ph.D. Dissertation.

Pawley, Andrew. 1993. A language which defies description by ordinary means. In William Foley (ed.) *The role of theory in language description.* Berlin: Mouton de Gruyter. 87-129.

Pawley, Andrew, Robert Attenborough, Jack Golson & Robin Hide. 2005. *Papuan pasts: cultural, linguistic and biological histories of Papuan-speaking peoples.* Pacific Linguistics: The Australian National University.

Pennington, Ryan. 2016. *A grammar of Ma Manda, A Papuan language of Morobe Province, Papua New Guinea.* Ph.D. dissertation, James Cook University.

Phillips, Donald. 1976. Wahgi Phonology and Morphology. *Pacific Linguistics* Series B, 36. Canberra: Research School of Pacific and Asian Studies, Australian National University.

Pike, Kenneth. 1967. *Language in relation to a unified theory of the structure of human behavior.* The Hague: Mouton.

341

Pike, Kenneth. 1982. *Linguistic concepts, an introduction to tagmemics*. Lincoln: University of Nebraska Press.

Pilhofer, Georg. 1933. *Grammatik der Kâte-Sprache in Neuguinea*. Berlin: Reimer.

Plungian, Vladimir. 2005. Irrealis and modality in Russian and in typological perspective. In Hansen B. & Karlik, P. (eds.) *Modality in Slavonic Languages. New Perspectives*. Munich: Sagner.

Pryor, David & John Clifton. 1987. Nasalization in Kire. *Data Papers in Papua New Guinea Languages* 33: 31-44.

Rarrick, Samantha. 2018. *Sinsasina Sign Language: Implications for typology & genetic relationships of sign languages in Papua New Guinea.* Presentation at the University of North Texas, United States. 26 March.

Reesink, Ger. 1983. Switch reference and topicality hierarchies. *Studies in Language* 7. 215-46.

Reesink, Ger. 1987. *Structures and their Functions in Usan* [Studies in Language Companion Series 13]. Amsterdam: John Benjamins.

Reesink, Ger. 2008. Lexicon and syntax from an emic viewpoint. *Studies in Language* 32:4. 866-893.

Reesink, Ger. 2014. Topic management and clause combination in the Papuan language Usan. In van Gijn, Rik, Jeremy Hammond and Dejan Matic, Saskia van Putten & Ana Vilacy Galucio (eds.) *Information structure and reference tracking in complex sentences.* Amsterdam: John Benjamins. 232-261.

Rice, Keren. 2011. Documentary linguistics and community relations. *Language Documentation & Conservation* 5. 187-207. [http://hdl.handle.net/10125/4498]

Robbeets, Martine. 2015. Common denominal verbalizers in the Transeurasian languages: borrowed or inherited? In Gardani, Francesco, Peter Arkadiev & Nino Amiridze (eds.) *Borrowed Morphology.* Berlin: De Gruyter Mouton. 137-154.

Robbins, Joel & Alan Rumsey. 2008. Introduction: cultural and linguistic anthropology and the opacity of other minds. *Anthropological Quarterly* 81. 407-420.

Roberts, John. 1987. *Amele*. London: Croom Helm.

Roberts, John. 1990. Modality in Amele and other Papuan languages. *Journal of Linguistics* 26. 363-401.

Roberts, John. 1994. The category 'Irrealis' in Papuan medial verbs. *Notes on Linguistics* 67. Dallas: Summer Institute of Linguistics. 5-41.

Roberts, John. 1997. Switch-reference in Papua New Guinea: A preliminary survey. *Papers in Papuan Linguistics* 3:101-241. Pacific Linguistics A-87.

Rosaldo, Michelle. 1982. The things we do with words: Ilongot speech acts and speech act theory in philosophy. *Language in Society* 11. 203-37.

Ross, Malcolm. 1978. A Waskia grammar sketch and vocabulary. *Pacific Linguistics* B-56.

Ross, Malcolm. 1987. A contact-induced morphosyntactic change in the Bel languages of Papua New Guinea. In: Laycock, Donald & W. Winter (eds.) *A World of Language: Papers presented to Professor S. A. Wurm on his 65th birthday. Pacific Linguistics* C-100. 583-601.

Ross, Malcolm. 2002. Takia. In John Lynch and Malcolm Ross and Terry Crowley (eds.) *The Oceanic Languages*. Richmond: Curzon. 216-248.

Rucker, Robert. 1992. *Cohesive devices in Anjam discourse*. ms.

Sacks, Harvey (author) and Gail Jefferson (ed.) 1992. *Lectures on Conversation*, Volumes I and II. Oxford: Blackwell.

Sapir, Edward. 1930 [1917]. Southern Paiute, a Shoshonean Language. *Proceedings of the American Academy of Arts and Sciences* 65:1. 1-296.

Sarvasy, Hannah. 2015. Breaking the clause chains: Non-canonical medial clauses in Nungon. *Studies in Language* 39:3. 664-696.

Sasse, Hans-Jürgen. 1991. *Aspektsysteme*. Arbeitspapier Nr. 14, Institut für Sprachwissenschaft, Universität zu Köln.

Schegloff, Emanuel. 1992. Introduction/Memoir. In Sacks, Harvey (author) and Gail Jefferson (ed.) *Lectures on Conversation*, Volumes I and II. Oxford: Blackwell.

Schmidt, Johannes. 1872. *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen.* Weimar: Hermann Böhlau.

Scott, Graham. 1978. The Fore Language of Papua New Guinea. *Pacific Linguistics* Series B, 47. Canberra: Research School of Pacific and Asian Studies, Australian National University.

Searle, John. 1969. *Speech acts: An essay in the philosophy of language.* Cambridge: Cambridge University Press.

Slotta, James. 2015. The perlocutionary is political: Listening as self-determination in a Papua New Guinean polity. *Language in Society* 44. 525-552.

Stanhope, John. 1970. Clan and totem in Rao society. *Oceania* 41:2. 114-135.

Stanhope, John. 1972. The language of the Kire people, Bogia, Madang District, New Guinea. *Anthropos* 67.

Stanhope, John. 1980. The language of the Rao people, Grengabu, Madang Province, Papua New Guinea. *Pacific Linguistics:* Series D-18. Canberra: The Australian National University.

Stanley, Evan. 1922. Report on the salient geological features and natural resources of the New Guinea Territory including notes on dialects and ethnology.

Staples, Shelley, Jesse Egbert, Douglas Biber & Susan Conrad. 2015. Register Variation: A Corpus Approach. In Deborah Tannen, Heidi Hamilton & Deborah Schiffrin (eds.) *The Handbook of Discourse Analysis*, Second Edition. Hoboken: John Wiley & Sons.

Sun, Jackson. 2007. The irrealis category in rGyalrong. *Language and Linguistics* 8.3. 797-819.

Sweeney, Michael. N.d. *Mum grammar*. Unpublished ms, Pioneer Bible Translators. Accessed indirectly via Daniels' 2015 PhD dissertation.

Taylor, G. P. 1951-1952. *Patrol Report - Guam River Area of the Middle Ramu Sub-District District of Madang.* The National Archives of Australia: A7034, 9. Accessed in Special Collections at the University of California, San Diego.

Thieberger, Nicholas. 2006. *A Grammar of South Efate: An Oceanic Language of Vanuatu.* University of Hawai'i Press.

Thieberger, Nicholas. 2009. Steps toward a grammar embedded in data. In Epps, Patricia & Alexandre Arkhipov (eds.) *New challenges in typology: transcending the borders and redefining the distinctions*. Berlin & New York: Mouton de Gruyter. 389-408.

Thieberger, Nicholas. 2014. Digital humanities and language documentation. In Gawne, Lauren & Jill Vaughan (eds.), *Proceedings of the 44th Australian Linguistic Society Conference*, 144-159. Melbourne: The University of Melbourne.

Thomason, Sarah. 1994. The Editor's Department. *Language* 70:2. 409-413.

Thomason, Sarah. 2008. Social and linguistic factors as predictors of contact-induced change. *Journal of Language Contact*. 42-56.

Thomason, Sarah and Terrence Kaufman 1988. *Language contact, creolization, and genetic linguistics*. Berkeley: University of California.

Thompson, Sandra, Barbara Fox & Elizabeth Couper-Kuhlen. 2015. *Grammar in Everyday Talk*. Cambridge: Cambridge University Press.

Timberlake, Alan. 2007. Aspect, tense, mood. In Timothy Shopen (ed.) *Language Typology and Syntactic Description.* Cambridge University Press. 280-333.

Van Driem, George. 1987. *A Grammar of Limbu*. Berlin: Mouton de Gruyter.

Verstraete, Jean-Christophe. 2005. The semantics and pragmatics of composite mood marking: The non-Pama-Nyungan languages of northern Australia. *Linguistic Typology* 9. 223-268.

de Vries, Lourens. 2005. Towards a typology of tail-head linkage in Papuan languages. *Studies in Language* 29:2. 363-84.

de Vries, Lourens. 2010. From clause conjoining to clause chaining in Dumut languages of New Guinea. *Studies in Language* 34:2. 327-349.

Wade, Martha. 1997. Switch reference and control in Apaɬ. *Language and Linguistics in Melanesia* 23. 1-16.

Watahomigie, Lucille, Jorigine Bender, Philbert Watahomigie Sr., Akira Yamamoto. 2001. *Hualapai Reference Grammar.*

Wegener, Claudia. 2012. *A Grammar of Savosavo.* Berlin, Boston: De Gruyter Mouton.

West, Dorothy. 1973. Wojokeso: sentence, paragraph, and discourse analysis. *Pacific Linguistics* B-28.

Winford, Donald. 2000. Irrealis in Sranan: mood and modality in a radical creole. *Journal of Pidgin and Creole Languages* 15:1. 63-125.

Woodbury, Tony. 2011. Language documentation. In Peter Austin & Julia Sallabank (eds.), *The handbook of endangered languages.* Cambridge: Cambridge University Press.

Z'graggen, John. 1971. Classificatory and typological studies in languages of the Madang district. Canberra: *Pacific Linguistics* C:19.

Z'graggen, John. 1974. Ramu comparative wordlist. Unpublished. Copy acquired from the Anthropos Institut by Terence Hays and given to me.