University of California
Santa Barbara

Symmetrical Voice Constructions in Besemah: A Usage-based Approach

A dissertation submitted in partial satisfaction
of the requirements for the degree

Doctor of Philosophy
in
Linguistics

by

Bradley James McDonnell

Committee in charge:

Professor Marianne Mithun, Chair
Professor Bernard Comrie
Professor Stefan Gries
Professor Sandra Thompson
Professor Michael Ewing, University of Melbourne

June 2016

The Dissertation of Bradley James McDonnell is approved.

Professor Bernard Comrie

Professor Stefan Gries

Professor Sandra Thompson

Professor Michael Ewing

Professor Marianne Mithun, Committee Chair

June 2016

Symmetrical Voice Constructions in Besemah:
A Usage-based Approach

by

Bradley James McDonnell

For Anna Ruth

Acknowledgements

This dissertation would not have been possible without help from many different people. First, I am grateful to my dissertation committee: Marianne Mithun, Bernard Comrie, Sandy Thompson, Stefan Gries, and Mike Ewing. I could not have asked for a better committee. I am so thankful for the unique perspective that each member gave me while I was writing this dissertation. Many of the ideas in this dissertation were developed during five fruitful months at the Max Planck Institute for Evolutionary Anthropology in 2013. I am thankful to Bernard Comrie for the invitation and providing support while I was in Leipzig. During my time at UCSB, I was fortunate enough to work with many of the faculty, including Matthew Gordon, Carol Genetti, Mary Bucholtz, and Jack Du Bois, all of whom shaped the way that I think about language. Finally, I am grateful for all of my classmates and friends for enriching my graduate school experience.

The fieldwork on Besemah that formed the basis for the dissertation was supported by numerous people and organizations. First and foremost, I would like to acknowledge the people of Karang Tanding who welcomed me and my family into their village. They treated us as their own. While I owe a deep debt of gratitude to the entire village, I would like thank my three Besemah language teachers Sarkani, Hendi, and Sutarso in particular. They were so patient with me and provided a real window into Besemah language and culture. Furthermore, I am thankful to my Besemah friends who participated in the recordings that constitute the corpus of Besemah, which is now archived at the Pacific and Regional Archive for Digital Sources in Endangered Cultures (PARADISEC). Finally, I would not have been able to conduct fieldwork in Karang Tanding at all without Asfan Fikri Sanaf and Kencana Dewi kindly allowing my family to stay at their home. I am so thankful for their kindness.

I would also like to thank those who supported me during my stays in Jakarta and Palembang. The Center for Languages and Cultures at Atma Jaya University in Jakarta not only acted as a sponsor on two different occasions, but also supported my research on Besemah more generally. I am indebted to Bamabang Kaswanti Purwo, Yassir Tjung, Katharina Endriati Sukamto, and Yanti. The Language Institute at Sriwijaya University in Palembang supported my research while in Palembang, and Sofendi, Rita Hayati, Diemroh Ihsan, and Chuzaimah Diem, in particular, provided logistical support and encouragement during my time in Palembang. The Jakarta and Padang Field Stations of the Max Planck Institute for Evolutionary Anthropology provided me with an enormous amount of support throughout my time in Indonesia. I would like to thank David Gil and Uri Tadmor, in particular, for their expertise and encouragement. I would also like to thank Hengky Firmasyah and his family for introducing me to the Besemah language and for his assistance throughout my fieldwork. Finally, many others supported me during my time in Indonesia, including Andri, Hesti, John Bowden, Karl Anderbeck, Matt Connor, Tom Conners, Tim McKinnon, Hanum Tyagita, and Tessa Yuditha.

The research in Indonesia was funded by a Fulbright scholarship, Blakemore Freeman Fellowship Language Grant, and Fulbright-Hays Doctoral Dissertation Research Abroad scholarship. I would like to thank Cathy Scheibner and Griffith Way at the Blakemore Foundation and Nelly Paliama at American Indonesian Exchange Foundation for all of their help in making my fieldwork run as smoothly as possible. I am also grateful to the Ministry of Research and Technology in Indonesia for allowing me to conduct this research on Besemah.

I would like to thank my friends and family whose love and support got me through the challenges of fieldwork and graduate school. I am so thankful that Anna and I had a special group of friends in Arizona, Jack DeBartolo, Tricia DeBartolo, Chad Littell, Cassie Littell, Dave Traina, Kiersten Traina, Justin Roth, and Keri Roth, and in Santa Barbara, Nick Pope, Kristen Pope, Than Matanick, Christi Matanick, Garret Meade, Kim Meade, Saul Moreno, and Megan Moreno. I am so thankful for how they cared for my family during our time in Indonesia.

I am so grateful to family for their support. My in-laws, Mark Rentz, Barbara Rentz, Isaac Rentz, and Kate Rentz, for their love and support throughout the years. My brother, Phillip McDonnell, and my sister, Brooke McDonnell, for their love for me. My mom, Kris McDonnell, for telling me every chance she had that 'it takes so little to be above average'. She always believed in me, prayed for me, and encouraged me to think big. My dad, Bob McDonnell, for his willingness to sacrifice whatever he had to support me in my academic endeavors.

Finally, I am so thankful for the love of my life, Anna, who has been with me through this entire experience. She has been right by my side for the successes and failures, for the good times and difficult times. We have been so blessed with our precious daughter Mabel who has been an inspiration to me over the past five years. Most of all, I thank God for His unending love for me.

Vita of Bradley James McDonnell

June 2016

Education

2016	PhD in Linguistics, University of California, Santa Barbara. Dissertation: *Symmetrical voice constructions in Besemah: A usage-based approach* Chair: Marianne Mithun
2014	C.Phil in Linguistics, University of California, Santa Barbara.
2013	MA in Linguistics, University of California, Santa Barbara.
2010	MA in Linguistics, Arizona State University.
2003	MA in Teaching English as a Second Language, Arizona State University.
2002	BA in History (Magna Cum Laude), Arizona State University.

Professional appointments

2012/2016	Teaching Associate, Department of Linguistics, University of California, Santa Barbara. *Introduction to Language & Linguistics*, *Historical Linguistics*
2010-13	Teaching Assistant, Department of Linguistics, University of California, Santa Barbara. *Phonetics, Phonology, Morphology, Historical Linguistics, Language in Society, English Grammar for Teachers, Second Language Acquisition*
2005-07	Graduate Teaching Associate, Department of English, Arizona State University. *English Grammar & Usage, First Year Composition for ESL Students, First Year Composition I, First Year Composition II.*

Publications

2016	McDonnell, Bradley (to appear) Acoustic correlates of stress in Besemah. *NUSA: Linguistic studies in and around Indonesia*.
2013	McDonnell, Bradley (in press) Roadblocks in the grammaticalization highway: When phonology gets in the way. In *Proceedings of the 39th Annual Meeting of the Berkeley Linguistics Society.* Berkeley Linguistics Society.

2013 McDonnell, Bradley (2013) Distributed reduplication in Kankanaey. In *Proceedings of the 33rd Annual Meeting of the Berkeley Linguistics Society.* Berkeley Linguistics Society.

2013 Sato, Yosuke & Bradley McDonnell (2013) Indonesian reduplication and the lexicalist hypothesis. In *Proceedings of the 33rd Annual Meeting of the Berkeley Linguistics Society.* Berkeley Linguistics Society.

2012 Gordon, Matthew, Edita Ghushchyan, Bradley McDonnell, Daisy Rosenblum, & Patricia Shaw (2012) Sonority and central vowels: A cross-linguistic phonetic study. In Steve Parker (ed.) *The Sonority Controversy*. Berlin & New York: Mouton de Gruyter, 219–256.

2009 McDonnell, Bradley (2009) A preliminary description of Ende phonology. *Journal of the Southeast Asian Linguistics Society* 2: 197–228.

2008 McDonnell, Bradley (2008) A conservative vowel phoneme inventory: The case of Besemah. *Oceanic Linguistics* 47(2): 409–432.

2008 McDonnell, Bradley (2008) Possessive structures in Ende: A language of eastern Indonesia. In Lou Hohulin (ed.) *Studies in Philippine Languages and Cultures: Austronesian Language Papers* 18: 108–118.

Scholarships & grants

2014-15 Fulbright-Hays Doctoral Dissertation Research Abroad Scholarship, "Symmetrical Voice Constructions in Besemah: A usage-based approach".

2013 Invited visiting PhD candidate, Max Planck Institute for Evolutionary Anthropology, Leipzig.

2013-14 Dean's Fellowship, University of California, Santa Barbara.

2011-12 Dean's Fellowship, University of California, Santa Barbara.

2009-10 Blakemore Freeman Fellowship for Advanced Asian Language Study, "Besemah & Indonesian language study."

2007-08 Fulbright Research Scholarship, "Fieldwork on Besemah" & "A corpus of Indonesian."

2007 Foreign Language Association Scholarship, Advanced Indonesian language study, Southeast Asian Studies Summer Institute.

2005-06 Graduate Professional & Student Association Research Grant, "A grammatical description of Ende: A language of eastern Indonesia," Arizona State University.

Invited Presentations

2016 McDonnell, Bradley (2016) Transitivity and voice selection in an Indonesian-type symmetrical voice language, Department of Linguistics Colloquium, University of California, Santa Barbara, April 21.

2016 McDonnell, Bradley (2016) Symmetrical Voice Constructions in Besemah, Department of Linguistics, University of Hawai'i Mānoa, March 31.

2016 McDonnell, Bradley (2016) Floating Quantifiers in Besemah, Department of Linguistics Colloquium, University of California, Santa Barbara, January 14.

2015 McDonnell, Bradley (2015) Do Besemah quantifiers float?, The Center for Languages & Cultures, Atma Jaya University, March 26.

2014 McDonnell, Bradley (2014) Recent Advances in Language Documentation Research Methodology, Department of Linguistics, University of Bengkulu, November 7.

2013 McDonnell, Bradley (2013) A discourse explanation for causative/applicative syncretism in Besemah, Department of Linguistics, University of Leipzig, December 11.

2013 McDonnell, Bradley (2013) Toward an integrated typology of causative/applicative syncretism, Department of Linguistics, Max Planck Institute for Evolutionary Anthropology, October 9.

2010 McDonnell, Bradley (2010) A look at linguistic variation in South Sumatra and its implications, Sriwijaya University, May 15.

2008 McDonnell, Bradley (2008) Words and sounds in Besemah: Notes from recent fieldwork in the highlands of South Sumatra, Center for Language and Culture, Atma Jaya University, September 18.

Other presentations

2016 McDonnell, Bradley (2016) An Information Structure Approach to Floating Quantifiers in Besemah. 90th Annual Meeting of the Linguistic Society of America, Washington DC, January 8.

2015 McDonnell, Bradley (2015) Divorcing documentation from analysis is a mistake: Utilizing interactional linguistic analysis in the documentation of Besemah. The 114th American Anthropological Association Annual Meeting, Denver, November 20.

2015 McDonnell, Bradley (2015) Divorcing documentation from analysis is a mistake: Utilizing interactional linguistic analysis in the documentation of Besemah. The 114th American Anthropological Association Annual Meeting, Denver, November 20.

2015 Berez, Andrea, Gary Holton, Bradley McDonnell & Ruth Rouvier (2015) Utilization of language archives in endangered language research, revitalization, and documentation. 89th Annual Meeting of the Linguistic Society of America, Portland, January 10.

2013 McDonnell, Bradley (2013) Noun-modifying clause constructions in Besemah, Association for Linguistic Typology 10th Biennal Conference, University of Leipzig, August 17.

2013 McDonnell, Bradley (2013) Why different languages necessitate different data, The 3rd International Conference on Language Documentation & Conservation, University of Hawaii, February 28.

2013 McDonnell, Bradley (2013) Roadblocks in the grammaticalization highway: When phonology gets in the way, The 39th Annual Berkeley Linguistics Society Meeting, University of California Berkeley, February 17.

2013 McDonnell, Bradley (2013) Causative/applicative syncretism: Besemah Malay *-kah*, 87th Annual Meeting of the Linguistic Society of America, Boston, Massachusetts, January 5.

2012 McDonnell, Bradley (2012) External, Internal, or Headless: 'Relative' Clauses in Besemah, The 12th International Conference on Austronesian Linguistics, Bali, Indonesia, July 5.

2012 McDonnell, Bradley (2012) Why Malayic languages aren't ergative: Evidence from Besemah, The 86th Annual Meeting of the Linguistic Society of America, Portland, January 6. (Poster presentation)

2011 McDonnell, Bradley (2011) Towards a theory of stress and intonation in Besemah: An acoustic study, The 18th Meeting of the Austronesian Formal Linguistics Association, Harvard University, March, 4.

2009 McDonnell, Bradley (2009) From 'yesterday's morphology' to 'today's syntax': Two cases from Besemah, The 13th International Symposium on Malay/Indonesian Linguistics, Lombok, June 6.

2009 McDonnell, Bradley (2009) Cases of degrammaticalization in Besemah, UCLA-UC Berkeley Conference on Languages of Southeast Asia, UCLA, January 31.

2007 McDonnell, Bradley (2007) Word classes in Ende, 13th Annual TESL Linguistics Symposium, Arizona State University, April 13.

2007 McDonnell, Bradley (2007) Distributed reduplication: A case study in Kankanaey reduplication, The 33rd Annual Berkeley Linguistics Society Meeting, University of California Berkeley, February 10.

2007 Sato, Yosuke & Bradley McDonnell (2007) Indonesian reduplication and the lexicalist hypothesis, The 33rd Annual Berkeley Linguistics Society Meeting, University of California Berkeley, February 9.

2006 McDonnell, Bradley (2006) A description of the Ende noun phrase, The 12th Annual TESL/Linguistics Symposium, Arizona State University, April 7.

2006 McDonnell, Bradley (2006) Possessive structures in Ende: A language of eastern Indonesia, The 10th International Conference of Austronesian Linguistics, January 19.

Workshops & invited guest lectures

2012 Introduction to Linguistic Transcription in ELAN, Collaborative Language Research Institute (CoLang), University of Kansas, June 18-29.

2012 ELAN Software for Documentary Linguistics, University of California, Santa Barbara (LING594), October 24.

2012 ELAN Software for Discourse Transcription, University of California, Santa Barbara (LING212), October 9.

2012	ELAN Software for Discourse Analysis, California State University, Fresno, February 20.
2009	Pursuing Graduate School in the United States, Universitas Sriwijaya, Palembang, Indonesia, May 13.
2009	Methods of Teaching English as a Foreign Language, Sriwijaya University, Palembang, May 12.
2007	Writing Your College Admissions Essay, Education Week Workshop Series, American Indonesian Exchange Foundation (Fulbright), Jakarta, November 15.
2007	Cultural Adjustments, Education Week Workshop Series, American Indonesian Exchange Foundation (Fulbright), Jakarta, November 14.

Fields of Study

Austronesian linguistics with Michael Ewing and Marianne Mithun
Syntax with Marianne Mithun, Bernard Comrie, and Sandra Thompson
Interactional linguistics with Sandra Thompson and Michael Ewing
Corpus linguistics with Stefan Gries

Certificates

2010	Graduate Certificate in Asian Studies, Arizona State University.
2008	Advanced Indonesian Certificate, Atma Jaya University, Jakarta.
2007	Advanced Indonesian Courses, Southeast Asian Summer Studies Institute-University of Wisconsin-Madison

Service to the profession

2016	External Grant Reviewer, Endangered Language Documentation Programme.
2015-16	Member, Faculty Search Committee, University of California Santa Barbara.
2014–16	Reviewer, International Journal of the International Phonetics Association.
2012–15	Member, Advisory Circle, Institute on Collaborative Language Research (CoLang).
2012-13	Member, Faculty Search Committee, University of California Santa Barbara.
2012	Organizing Committee, Workshop on East Asian Languages (WEAL), University of California, Santa Barbara, 2012.
2011-12	Organizing Committee, Workshop on American Indigenous Languages (WAIL), University of California, Santa Barbara, 2011-2012.
2008	Member, Interview and Selection Panel, Indonesian Fulbright Presidential and Master's Degree Scholarship Program, Jakarta, Indonesia, August 11-12.

Languages & linguistic fieldwork

	English (Native), Indonesian (Advanced), Besemah (Advanced), German (Beginner).
2007–	Besemah (Austronesian), South Sumatra, Indonesia (20 months total).
2011-12	Shona (Bantu), Santa Barbara, California (9-month field methods course).
2005-07	Ende (Austronesian), Tempe, Arizona & Jakarta, Indonesia (intermittently)

Abstract

Symmetrical Voice Constructions in Besemah:

A Usage-based Approach

by

Bradley James McDonnell

This dissertation presents a comprehensive account of the symmetrical voice system in Besemah, an under-documented Malayic language spoken in the highlands of southwest Sumatra, Indonesia. Utilizing a corpus primarily consisting of conversational data, but also including narrative data, this study treats both the syntactic structure and discourse properties of symmetrical voice constructions in Besemah.

Previous research on voice in the languages of western Indonesia has sought to understand these languages in terms of well-established systems of voice and grammatical relations, whether that be active-passive or ergative-absolutive. Since the notion of *symmetrical voice*—a voice system with multiple transitive voice constructions, none of which is clearly the 'basic' voice form—was introduced by Foley (1998) just under two decades ago, it has provided valuable insights into the voice systems of the languages of western Indonesia (Riesberg 2014). Drawing on these insights, this dissertation presents a thorough treatment of symmetrical voice in Besemah, which has not been the subject of any in-depth grammatical analysis.

The dissertation has two primary objectives. The first objective is to describe the syntactic nature of symmetrical voice by identifying grammatical relations in Besemah. Based on several 'diagnostic' constructions that have been used to provide evidence for grammatical relations in related languages of western Indonesia, this study identifies two grammatical relations in Besemah, *primary argument*

and *secondary argument*, by utilizing data from the corpus of Besemah. While two of these 'diagnostic' constructions, word order and quantifiability, provide evidence for grammatical relations in Besemah, this study demonstrates that many of these 'diagnostic' constructions cannot be used for determining grammatical relations in Besemah.

The second objective seeks to answer the following question concerning voice selection in Besemah: *at any given point in a conversation, what factors lead a speaker to choose one symmetrical voice construction over the other?* In order to answer this question, this study uses advanced statistics to investigate the role of information flow (Chafe 1994), syntactic priming (Gries 2005), and collostructional analysis (Stefanowitsch & Gries 2003) in voice selection. The findings reveal that each of these factors play an important role in voice selection in Besemah conversation.

Contents

List of Figures

List of Tables

Abbreviations

1	First person
2	Second person
3	Third person
A	Agent macro-role
AGT	Agentive
ALL	Allative
APPL	Applicative
AV	Agentive voice
AVR	Adversative
CAUS	Causative
CLS	Classifier
CMPL	Completive
CMPR	Comparative
DEM	Demonstrative
DET	Determiner
EX	Exclamative
EXCL	Exclusive
FOC	Focus
FP	(Intonation unit) final particle
FUT	Future
GEN	Genative
HES	Hesitation
IMP	Imperative
INCL	Inclusive
INFR	Inferential
IPFV	Imperfective
INS	Instrumental
LI	Light
LOC	Locative
MID	Middle voice
N	Noun
NEG	Negative
NMLZ	Nominalizer
NOM	Nominative
NPERS	Negative persistive
NVOL	Non-volitional
ONOM	Onomatopoeia
P	Patient macro-role
PST	Past
PFV	Perfective
PL	Plural
PERS	Persistive
POSS	Possessive
PROC	Process
PROX	Proximal
QUOT	Quotative
R	Recipient
RDP	Reduplication
REC	Recent
RECP	Reciprocal
REFL	Reflexive
S	Single argument macro-role
SG	Singular
TOP	Topic

Transcription conventions

@	Pulse of laughter
—	Truncated intonation unit
-	Truncated word
.	Final transitional continuity
,	Continuing transitional continuity
?	Appeal transitional continuity
[ ]	Overlapping speech
:	Lengthening
(line break)	each intonation unit on a separate line

Chapter 1

Introduction

The voice systems of western Austronesian languages have drawn considerable interest from linguists over the past four decades, challenging foundational understanding of various areas of syntactic analysis (e.g., discrete notions of transitivity or the grammatical status of subject and object). From an Austronesian perspective, the languages of western Indonesia represent an interesting 'transitional' area between the Formosan and Philippine languages that have complex voice systems with four or more different transitive voice distinctions (e.g., locative voice, instrumental voice, patient voice, etc.) and the Oceanic languages that in many cases lack voice altogether (Wouk & Ross 2002, Austin 2008). These languages of western Indonesia evince a less complex voice system that can have a single opposition between agentive voice and patientive voice. However, these voice systems are no less controversial (cf. Adelaar 2013). Many previous studies have tried to 'fit' these languages into a well-established system, whether that be active-passive or ergative-absolutive (see Section 1.1.2). In the past two decades, the emergence of the notion of *symmetrical voice*—a voice system with multiple transitive voice constructions, none of which is the clear-cut 'basic' form—has proven fruitful in understanding these languages in their own right (cf. Riesberg 2014). This dissertation provides a thorough treatment of one such symmetrical voice system in Besemah, a little-described Malayic language of southwest Sumatra. The dissertation not only takes an in-depth

look at the syntactic nature of symmetrical voice and grammatical relations, but also looks at how speakers employ symmetrical voice constructions in conversation.

After a brief summary of the previous research on symmetrical voice in the Austronesian languages of western Indonesia (Section 1.1), this introductory chapter introduces the reader to the Besemah language (Section 1.2), lays out the Besemah data used in the dissertation (Section 1.3), and provides an overview of the structure of the dissertation (Section 1.4).

1.1 Previous research on symmetrical voice

The voice systems and by extension grammatical relations of western Austronesian languages have been the center of controversy for over a century (cf. Himmelmann 2005, Foley 2008). Even though this controversy has focused primarily on Tagalog and other Philippine languages (Schachter 1976, Schachter 1977, De Guzman 1992, Kroeger 1993, Naylor 1995, Schachter 1996, Foley 1998), the debate in a number of western Indonesian languages has generated much controversy (Cartier 1976, Tchekhoff 1978, Cartier 1979, Hopper 1979a,b, Tchekhoff 1980, Cumming 1987), especially in more recent years (Clynes 1995, Wechsler & Arka 1998, Gil 2002, Himmelmann 2002a, b, Austin 2001, Arka 2003, Wouk 2004, Arka 2005, Arka 2008). The controversies center around three interrelated themes: (i) grammatical relations, (ii) syntactic alignment, and (iii) patient prominence in discourse.

Grammatical relations and syntactic alignment center around two sides of the same issue, because the decision as to which argument (if any) is the grammatical subject and which voice construction (if any) is the 'basic' construction in large part inform the classification of the alignment system. For example, Kroeger (1993) uses several syntactic tests to argue that the noun phrase that is case-marked with *ang* in Tagalog is the subject. Kroeger also implicitly takes the position that there is not a 'basic' transitive voice in Tagalog. Based on this analysis, Kroeger supports a position that Tagalog neither readily fits into nominative-accusative nor ergative-absolutive alignment systems. On the other hand, a number of other scholars do not analyze the *ang* phrase in Tagalog to

be the subject, but the absolutive argument (Cena 1979, Payne 1982, Blake 1988, 1993, Liao 2004, Reid & Liao 2004). Instead, these scholars typically follow the pronominal paradigm and analyze certain affixes as applicatives—not voice markers—to show that Tagalog has an ergative-absolutive alignment system. Furthermore, this analysis of Tagalog identifies the agentive (or actor) voice as an antipassive marker, which means that it is not the 'basic' voice construction (cf. Foley 2008). For a more detailed discussion of these issues, see Ross (2002), Reid & Liao (2004), and Foley (2008).

The nature of voice in western Austronesian languages has also been investigated at the level of discourse with several studies that have sought to understand how western Austronesian voice systems are organized at higher levels of discourse (McCune 1979, Cooreman et. al. 1984, Cooreman 1988, Wouk 1989). The majority of these studies focused on patient prominence (or the frequent use of what have been called passive-like, ergative, or patientive voice constructions) mostly in narrative data of various western Austronesian languages. Drawing on discourse notions of topicality (Givón 1983) and discourse transitivity (Hopper & Thompson 1980), these studies asked similar questions to those in the paragraph above about ergativity, but used instead evidence from discourse. For example, Cooreman et al. (1984) propose a notion of 'discourse ergativity' based on the correlations between voice and the relative topicality of agents and patients in Chamorro and Tagalog (see Section 1.1.2 for further discussion of 'discourse ergativity').

While there has been a modest increase in the number of studies that focus on the nature of voice in discourse (e.g., Brainard (1994) on Karao, Payne (1994) on Cebuano, Wouk (1996) on spoken Jakarta Indonesian, Wouk (1999) on Sasak, Pastika (1999) on Balinese, Huang (2002), and Huang & Tanangkingsing (2011) on Tsou and Seediq), these studies have almost exclusively focused on narrative discourse; the notable exception is Wouk (1989, 1996) on Jakarta Indonesian and Wouk (1999) on Sasak. Finally, a number of studies that have focused on the syntactic properties of voice have taken into account these discourse factors as either the foundation of their syntactic analysis (Hopper 1979a, b, 1983, 1988, Rafferty 1982, Verhaar 1983, 1984, 1988) or supporting evidence for the syntactic analysis (Wechsler & Arka 1998, Arka 2003, Arka 2008). Compared to the number of studies

on voice in western Austronesian languages that focus on syntax, there are far fewer studies on voice in western Austronesia that focus on how voice is used in discourse. The next section lays the foundation of symmetrical voice.

1.1.1 Symmetrical voice in Austronesian languages

Himmelmann (2005) states that '[t]he defining characteristic of these [symmetrical voice] languages is the presence of at least two voice alternations marked on the verb, neither of which is clearly the basic form' (112). The examples from Standard Indonesian in (1) below demonstrate this property of symmetrical voice.[1]

(1) Symmetrical voice in Standard Indonesian

a. *Anak saya me-lihat orang itu.*
child 1SG AV-see person that
'My child saw that person.'

b. *Orang itu di-lihat anak saya.*
person that PV-see child 1SG
'My child saw that person.' (Himmelmann 2005)

It is generally thought that the different prefixes, *meN-* AV in (1a) and *di-* PV in (1b), mark either the agent, as in the in (1a), and the patient, as in (1b), as the privileged syntactic argument (i.e., subject or pivot).[2] While it is quite common in a number of the world's languages to be able to treat either the agent or the patient argument as the privileged syntactic argument, there are two other characteristics of the constructions in (1) that make them quite unique. First, each of these constructions appears to be grammatically transitive. That is, both arguments of the agentive and patientive voice constructions appear—at least on the surface—to be core arguments. There is no

[1]While Himmelmann (2005) cites the example in (1) as Standard Malay, the example is exactly the same in Standard Indonesian. Thus, I cite it as Standard Indonesian here, since I primarily use Standard Indonesian examples throughout the dissertation.

[2]The capital letter *N* in the prefix *meN-* represents an underspecified nasal that is homorganic to the first consonant of the root. Generally, if the root begins with a voiceless consonant, it is replaced by the homorganic nasal. If the root begins with a voiced consonant, the nasal is homorganic, but does not replace it. See Blust (2004) for further discussion.

additional marking that suggests that the patient of the agentive voice (i.e., *orang itu* 'that person') or the agent of the patientive voice (i.e., *anak saya* 'my child') are oblique arguments. Second, neither construction is identifiably the 'basic' or 'underlying' construction. In both constructions, the verb is marked by a prefix, so it is difficult to posit one construction being derived from the other, as in the active-passive voice opposition in English.

It is noteworthy that Himmelmann's defining characteristics of symmetrical voice above—and the definition that I follow in the dissertation—differ significantly from Foley's original definition of symmetrical voice (Foley 1998). Foley (1998) and Himmelmann (2002a, b, 2005) do agree that the 'lack of an unmarked verbal form, all forms being equally morphologically derived' and 'the CORE status of actor and undergoer arguments regardless of the voice type chosen' are defining characteristics of symmetrical voice (Foley 1998: 73). Foley differs in two regards. First, he states that symmetrical voice has 'the ability of non-subcategorized participants like locatives or instrumentals to freely assume pivot or subject status via their unique voice marking affixes' (Foley 1998: 73). Second, he proposes that there is a dependent relationship between symmetrical voice and precategorical roots in the language. That is, in order to be a symmetrical voice language, a language must have precategorical roots, but the reverse is not necessarily the case. Section 1.1.2 shows that the first of Foley's latter two defining characteristics (i.e., the ability of non-subcategorized participants to be subjects) unnecessarily excludes many languages of western Indonesia, and the second, while interesting, depends on the controversial and often disagreed upon proposals of precategoricality (Himmelmann 1991, 2008, Gil 1994, Evans & Osada 2005).

The importance of symmetrical voice in western Austronesia is highlighted in Himmelmann's (2005) internal typology of western Austronesian languages (i.e., the non-Oceanic Austronesian languages). In constructing his typology, Himmelmann posits two major typological categories: (i) preposed adnominal possession and (ii) symmetrical voice.[3] According to Himmelmann, symmet-

[3]Preposed possessor languages, where the possessor precedes the possessed within an NP, include non-Oceanic Austronesian languages of Timor, the Moluccas and West Papua as well as the Pidgin-Derived Malay varieties. In this group of languages, there are some that are both a preposed possessor language and a symmetrical voice language and others

rical voice languages are robust in western Austronesia and include 'the Austronesian languages of Taiwan, the Philippines, Malaysia, Madagascar, western Indonesia ... and the northern half of Sulawesi...' (Himmelmann 2005: 113).[4] Wolff (1996) and Himmelmann (2002a, b), in earlier typologies of western Austronesian languages, classify the symmetrical voice languages into 'Philippine-type' languages and 'Indonesian-type' languages. Philippine-type languages include not only the languages of the Philippines, but extend to the Formosan languages of Taiwan and the languages of northern Sulawesi and northern Borneo in Indonesia. The Philippine-type languages usually display a rich variety of voice alternations (i.e., agentive (or actor) voice, patientive (or undergoer) voice, locative voice, and circumstantial voice) as well as case marking on noun phrase arguments. Himmelmann (2005) provides an even stricter definition of Philippine-type languages, which states that Philippine-type languages have (i) 'at least two formally and semantically different *undergoer* voices...', (ii) 'at least one non-local phrase marking clitic for nominal expression...', and (iii) 'pronominal second position clitics' (Himmelmann 2005: 113).[5]

Indonesian-type languages, on the other hand, usually have a single opposition between agentive (or actor) voice and patientive (or undergoer) voice. According to Arka (2003), aside from having a symmetrical voice construction, Indonesian-type languages have (i) a true passive construction, (ii) an applicative affix that differs from the voice affix that marks voice selection, and (iii) 'voice morphology ...[that] signals linking of generalised roles of A[ctor] or U[ndergoer] to P[ivot]'. While (i), to a lesser extent, and (iii) are still somewhat controversial, these properties have been generally accepted as defining Indonesian-type languages. However, Himmelmann (2002a,b, 2005) warns that the Philippine-type and Indonesian-type categories are still in need of further scrutiny. In

that are neither a preposed possessor language nor a symmetrical voice language.

[4]In western Indonesia, there are languages that are not considered symmetrical voice languages, including Acehnese in northern Sumatra and the Barrier Island languages spoken on the islands off the west coast of Sumatra. The symmetrical voice languages of northern Sulawesi include: 'Saluan (but not Banggai), Kaili-Pamona, Tomini-Tolitoli, Gorontalo-Mongondow, Minahasan and Sangiric' (Himmelmann 2005: 113).

[5]Himmelmann's (2005) definition 'excludes Malagasy, Chamorro, Palauan and the Austronesian languages of Brunei and Sarawak as well as Tomini-Tolitoli, Gorontalo-Mongondic, Sama-Bajau, and South Mindanao languages, all of which have occasionally been referred to as Philippine-type languages' (113). He also provides a number of other stipulations that are not important for the present discussion.

fact, Himmelmann (2005) abandons the term Indonesian-type altogether without any explanation. While the distinction between Philippine-type and Indonesian-type is certainly useful, I primarily refer to Indonesian-type languages throughout the dissertation simply as the 'languages of western Indonesia'.[6] The next section looks at the issue of symmetrical voice in the languages of western Indonesia more closely.

1.1.2 Symmetrical voice in western Indonesia

The various analyses of voice in the languages of western Indonesia have been wide-ranging. The majority of these studies have focused on Standard Malay, Standard Indonesian, or Balinese. There have been a limited number of studies in other languages of western Indonesia, such as Sasak (Austin 2013), Pendau (Quick 1999), and Toba Batak (Schachter 1984) to name a few. In what follows, I focus on controversial issues in Standard Malay and Standard Indonesian, essentially whether the transitive clauses show an active-passive or ergative-absolutive pattern.

Descriptive and/or pedagogical grammars (e.g., MacDonald 1967, Dardjowidjojo 1978, Sneddon 1996) and accounts in an older generative grammar framework (i.e., Transformational Grammar) of Standard Indonesian (Chung 1976a,b), for example, have treated the language as if its voice system were similar to English. In these systems, the example in (1a) is the basic active voice, and the example in (1b) is the derived passive voice. In fact, there is an additional patientive voice (only possible for first and second person agents) in (2) that has been referred to by these scholars as the 'passive II' or in Indonesian as the *pasif semu* 'pseudo passive'.

(2) 'Passive II' in Standard Indonesian
Orang itu ku=lihat.
person that 1SG=see
'I saw that person.' Based on Himmelmann (2005)

[6] The term 'languages of western Indonesia' is defined here as a combination of a geographical set and structural type. For the purposes of this dissertation, this group of languages refers (i) languages that are found in western Indonesia and (ii) languages that more prototypically fit Arka's (2003) definition of Indonesian-type (e.g., Standard Indonesian, Balinese).

In this example, the patient noun phrase *orang itu* 'that person' is considered the grammatical subject of the clause (see Chung (1976a,b) for evidence). However, these studies fail to address two foundational issues. First, the status of purported non-subject core arguments is often ignored in this literature (i.e., the agent pronoun *ku=* 1SG in (2) and the agent noun phrase *anak saya* 'my child' in (1b) above). Essentially, these studies have assumed these constructions to be passive without any reference to the demotion of the agent to oblique or the omission of the agent altogether. While it is not possible to demote or omit the agent pronoun in the example in (2), it is possible to demote or omit the agent noun phrase in the example in (1b), in which case the agent noun phrase occurs in a prepositional phrase headed by *oleh* 'by' (e.g., the agent noun phrase *anak saya* 'my child' in (1b) appears as *oleh anak saya* 'by my child' in a passive construction). Second, all of these studies assume that the agentive voice is 'basic' and the patientive voice is 'derived'. In order to show that the voice system in Standard Indonesian does in fact show an active-passive alternation, one needs to explain why the agentive voice construction is 'basic', the patientive voice is 'derived', and the non-subject argument in the patientive voice construction is demoted. A number of other studies have proposed that varieties of Malay and Indonesian are ergative-absolutive or have an ergative construction. These studies fall into several categories. First, there are some scholars who have proposed that the bare patientive voice construction exemplified in (2) is ergative (Cartier 1976, 1979, Tchekhoff 1978, 1980) and others who proposed that both forms of the patientive voice are ergative (Hopper 1979a, b, 1983, 1988, Rafferty 1982, Verhaar 1983, 1984, 1988, Arka 2008). Second, several of these same studies base the analysis of ergativity on syntactic grounds (Cartier 1976, 1979, Tchekhoff 1978, 1980, Arka 2008), while others base their analyses on discourse factors (Hopper 1979a, b, 1983, 1988, Rafferty 1982, Verhaar 1983, 1984, 1988). A fuller discussion and criticism of the ergative analyses is presented in Cumming & Wouk (1987). For studies prior to 1988, I will repeat many of the important points that are made by Cumming & Wouk (1987).

Examples of a purely syntactic analysis that considers the bare patientive voice construction ergative are found in Cartier (1976, 1979) and Tchekhoff (1978, 1980). They both claim that the bare

patientive voice in Standard Indonesian is ergative based on a non-standard definition of ergativity originally put forth by Tchekhoff (1978) (see below for the standard definition of ergativity) . Tchekhoff's definition of ergativity essentially claims that ergativity is identified by an unmarked modifier (or patient) and unmarked predicate in conjunction with a marked agent. Tchekhoff and Cartier, in turn, take the position that the bare patientive voice predicate and patient subject are unmarked, while the clitic agent is marked.[7] Consequently, this meets Tchekhoff's definition of ergativity. Very similar arguments for ergativity have been proposed for Standard Indonesian (Arka 2008) and Balinese (Wechsler & Arka 1998), usually based on non-standard definitions of ergativity.

Hopper (1983, 1988) considers both forms of the patientive voice ergative, basing his definitions of ergativity primarily on discourse factors. Based on Cartier (1979), Hopper makes a somewhat different claim about ergativity in Classical Malay, utilizing discourse notions of transitivity. He proposes that the patientive voice construction with the *di-* PV prefix in Classical Malay represents both a passive construction and an ergative construction. Simplifying a bit, the prefixal patientive construction is passive when the patient precedes the predicate with the option of omitting the agent. However, this same patientive voice construction is ergative when the patient follows the predicate and the agent is present. Crucial to Hopper's analysis is that the ergative construction serves a foregrounding function, while the passive construction serves a backgrounding function in narrative discourse. In fact, the functional behavior of foregrounding/backgrounding is a more important factor to Hopper than the formal properties of the patientive voice construction.

In response to these ergative analyses of varieties of Malay and Indonesian, Cumming & Wouk (1987) point out that, in each case, ergativity is *not* defined in reference to both transitive and intransitive clauses (Comrie 1989, Dixon 1994). None of the studies above showed that the single argument of the intransitive clause patterned with patient-like (P) argument of transitive clauses, leaving the agent-like argument (A) in transitive clauses to pattern differently. Even recent studies rely on non-

[7] According to Cumming & Wouk (1987), she only shows that the clitic agent is marked for first and second singular person forms, but not for third person and not for any plural pronouns (282).

standard definitions of ergativity (Arka & Manning 2008). In reference to the discourse-based studies (Hopper 1979a, b, 1983, 1988, Rafferty 1982, Verhaar 1983, 1984, 1988), Cumming & Wouk (1987) also point out that one cannot always determine whether the clause is ergative or passive, antipassive or active. The status of the clause is rather determined by the discourse status of the clause, the semantics of the clause, or the referential status of the arguments. The distinction between ergative and passive can be quite confusing (see Cumming & Wouk (1987: 283)). The issue here, as Cumming & Wouk point out, is simply that these studies are conflating different levels of linguistic analysis and lack clear morphosyntactic evidence for an ergative analysis.

There have been far fewer studies that investigate the discourse functions of symmetrical voice in the languages of western Indonesia. While there is little consensus on why speakers select one voice over the other at any given point in a conversation or narrative, most studies have found that (i) patientive voice is somehow more transitive than agentive voice (McCune 1979, Cumming 1991) and (ii) when the patient argument is topical, the patientive voice is employed (Pastika 1999). These results are much more clearly demonstrated in narrative discourse than in conversation. Cumming (1991), for example, proposes that patientive voice correlates with 'eventiveness', which she considers to be a component of high discourse transitivity.

In conversational data, this correlation is much fuzzier. For example, Wouk (1989) in a study of spoken (or colloquial) Jakarta Indonesian conversation, finds that agentive voice correlates with lower discourse transitivity and that patientive voice correlates with higher discourse transitivity. She specifically finds that the most relevant factors for discourse transitivity are eventiveness (mood, aspect, foregrounding) and patient status (referentiality, individuation, animacy). Wouk (1989) also finds that notions of topicality and thematicity correlate with voice selection.[8] That is, thematic patient arguments commonly trigger patientive voice and thematic agent arguments trigger agentive voice; if both arguments are thematic, then the referent that is more topical triggers the voice.[9]

[8]Wouk (1989) defines topicality as 'what the section of text is about' and thematicity as 'a referent with a continuous and important role in a section of text' (240).

[9]Wouk (1999: 104), apparently, does not find these correlations in spoken Jakarta Indonesian to be very satisfying

Wouk (1999), looking at both topicality and discourse transitivity, finds that Sasak does not show the same patient prominence that is found in other western Austronesian languages (Cooreman et. al. 1984, Cooreman 1988, Payne 1994, Brainard 1994).

In summary, much of the previous research on symmetrical voice in the languages of western Indonesia tends to focus on the syntactic properties of voice and rarely makes mention of the discourse properties of voice. These syntactic studies usually rely on constructed examples, running several traditional diagnostics for subjecthood that usually hold for European languages. However, they rarely consider examples from naturally occurring discourse. Other studies have integrated discourse and syntax, but they tend to blur the lines between form and function in such a way that it is often difficult to see whether the language is truly evincing the proposed grammatical pattern (e.g., an ergative-absolutive pattern). Furthermore, these studies do not typically rely on traditional definitions of ergative or active-passive systems. Relying primarily on naturally-occurring data from conversation or narrative, this dissertation integrates both the syntactic and discourse properties of symmetrical voice, but does so in such a way that it clearly distinguishes these different levels of analysis. The next section provides an overview of the Besemah language.

1.2 Besemah

Besemah (alternatively, Pasemah) is a little-known Malayic language spoken in the remote highlands of South Sumatra in western Indonesia (see Figure 1.1 below) by approximately 400,000 people (Gordon 2005).

Besemah appears to form a subgroup with the Malay isolects of the highlands and lowlands of southwest Sumatra (McDowell & Anderbeck 2008). This group of isolects—a term used in research on Malayic since Hudson (1967), which means 'a speech form without respect to its status as a language or a dialect' (Adelaar 1992: 1)—was traditionally referred to by the Dutch as *Midden-Maleisch*

for explaining voice selection. Citing Wouk (1989), she states that neither discourse transitivity nor topicality provide striking correlations with different voice constructions, hinting at the fact that she has changed her mind.

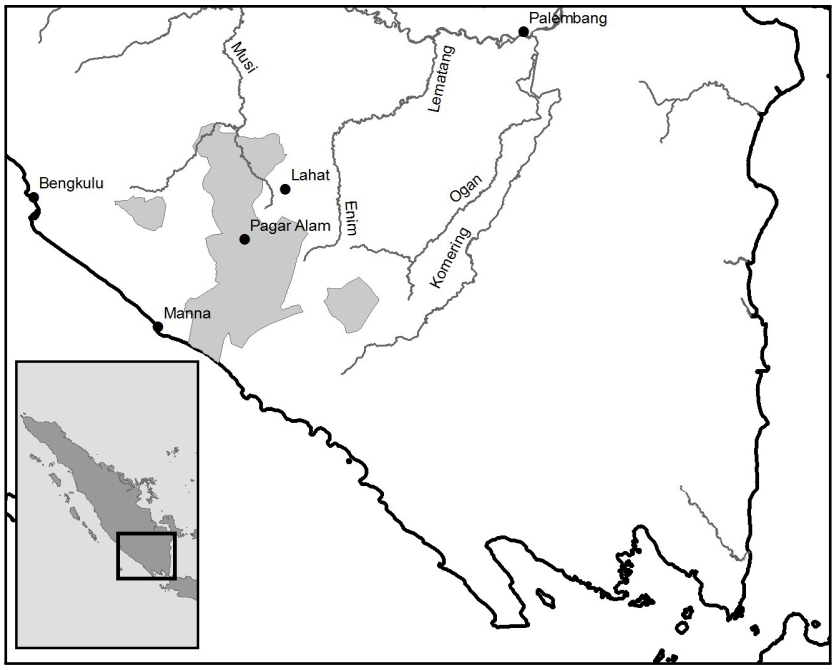


Figure 1.1: The Besemah Language Map

(Brandes 1884), and subsequently has been translated as 'Middle Malay' (Voorhoeve 1955) and later as 'Central Malay' (Adelaar 1992). However, both translations of the Dutch term *Midden-Maleisch* are confusing. 'Middle Malay' suggests an intermediary historical variety of Malay between Old Malay and Modern Malay. 'Central Malay' suggests a geographical region that is somehow centrally located, but there is no sense in which this group of isolects is centrally located. I, therefore, refer to this group of isolects as 'South Barisan Malay'. The name South Barisan Malay draws on the most geographically salient landmark for the language cluster in question, the Barisan Mountains, which run the entire length of the western side of Sumatra. It is my contention that this is the most accurate geographical description, as these languages are the southernmost Malayic languages in Sumatra, presently spoken in the heart of the Barisan Mountains, spilling over into the west coast of Bengkulu province and eastern highlands of South Sumatra province.[10]

[10]Voorhoeve (1955) discusses earlier research on South Barisan Malay. Mintani (1980) provides an initial survey of South Barisan Malay (and other Malay isolects of South Sumatra) and McDowell & Anderbeck (2008) provides a more recent and complete survey of the Malay isolects of Southern Sumatra, including South Barisan Malay.

According to Adelaar & Prentice (1996) and Adelaar (2005), Besemah can be additionally classified along sociolinguistic lines as a vernacular Malay, as it is spoken by a traditionally Malay speech community. This distinguishes Besemah from literary historic varieties, such as Old Malay and Classical Malay, and Pidgin-Derived Malay varieties, such as Ambon Malay and Sri Lankan Malay. Furthermore, Besemah is spoken by a rather homogenous community, which makes it somewhat different from Malay-Indonesian varieties such as Palembang Malay, Riau Indonesian (Gil 1994), and Jakarta Indonesian (Wouk 1989, 1999). However, like these Malay-Indonesian varieties, Besemah is diglossic or even what might be called polyglossic with Standard Indonesian and Palembang Malay, the language of wider communication in South Sumatra. Standard Indonesian is used in all formal situations, including speeches at weddings, funerals, and other cultural events, such as Friday sermons at the mosque. Palembang Malay is a koine that came out of the Malay spoken in Palembang, the capital of South Sumatra. Palembang Malay is used in the city of Palembang and its subsidiary towns and cities throughout South Sumatra where ethnically Malay, Javanese, Minangkabau, Batak, and Chinese Indonesians live. Palembang Indonesian is therefore the medium that Besemah speakers use in interethnic communication. Finally, Besemah is used among Besemah speakers in the home and in everyday village life.

1.2.1 Level of endangerment

Besemah does not clearly fit into any of the current classifications of language endangerment. Besemah might be considered to be a vital language because (i) children are still actively learning the language and (ii) there is still a relatively large number of speakers using the language. These are both very good signs for the vitality of Besemah, but there are a number of other factors that show that Besemah may not be as stable as one might hope. These include such factors as: contact languages and multilingualism, language attitudes, and a lack of formal education and standard orthography. Besemah speakers are inundated with other varieties of Malay-Indonesian. As discussed in the pre-

vious section, Besemah speakers use Palembang Malay and Standard Indonesian, but also hear other varieties on a daily basis, such as Jakarta Indonesian from the media and closely related Malayic varieties in neighboring communities (e.g., Lintang). Additionally, Besemah has low prestige and is commonly seen as an uneducated and parochial variety of Malay. This is in direct opposition to educated languages like Standard Indonesian or even English and cosmopolitan varieties like Palembang Malay or Jakarta Indonesian. Although Besemah speakers see some ancestral value in their language, there is no modern value in the language for moving ahead in a globalizing world. Finally, formal education from preschool to high school is conducted entirely in Standard Indonesian, even though it is common to hear teachers and students using Besemah in and out of the classroom.

The effects of these factors are not equally distributed among Besemah speakers. While speakers over sixty years of age are for the most part monolingual, younger speakers under the age of thirty show a high level of bilingualism in Standard Indonesian. This bilingualism and exposure to other Malayic varieties has had various effects on the language. One clear example from McDonnell (2008) is the difference in the vowel system of Besemah speakers of different ages. That is, younger speakers are able to distinguish six vowels that are present in other varieties of Malay-Indonesian, while older speakers can only distinguish the four vowels of Besemah. From my own observations and a cursory look at recorded conversations, there also appear to be other differences in the lexicon and grammar of older and younger speakers.

There is no doubt that these differences grow out of the fact that the Besemah highlands have drastically changed over the last forty years. Elizabeth Fuller Collins accompanied her husband, anthropologist William Collins, from 1971 to 1973 to the Besemah highlands. In Collins (2007: 7), she describes the Besemah speaking region as follows.

> We settled on the Pasemah Plateau, a fertile plain below the majestic volcano Gunung Dempo in South Sumatra. At that time there was no electricity or running water, no newspapers, and only one telephone at the post office in the market town of Pagaralam.

> On our first trip to the highlands cars and trucks had to travel in convoys so one vehicle could be used to help haul another through places where the road had deteriorated to a muddy swamp.

When my own fieldwork began in January 2008, I found a much different situation. Most homes have electricity (albeit somewhat inconsistent), television, gas stoves, and at least one cell phone per house and sometimes more. Cars and trucks travel quickly from Palembang to Bengkulu on the paved single lane roads. Although the Besemah region is still considered somewhat remote, access to outsiders and access to major cities has increased. With these changes in mind, the level of endangerment for Besemah is unclear, but it would be safe to say that it is at least a threatened language.

1.2.2 Previous research

Besemah, like many of the Malayic varieties of western Indonesia, has received very little attention from linguists; there are virtually no recent publications on Besemah grammar, and my own research represents the only recent study on Besemah, including McDonnell (2008) on the vowel system, McDonnell (in prep) on the grammaticalization of the third person pronoun, and McDonnell (to appear) on word-level stress. The most comprehensive work on Besemah is the dictionary, short grammar sketch, and texts by the late Dutch government linguist O.L. Helfrich (Helrich 1893, 1895a,b, 1904, 1915, 1921, 1927, 1933).[11]

1.3 The corpus

The archive of Besemah materials includes approximately 25 hours of audio and video recordings of narratives, songs, and conversations. The vast majority (approximately 90% of the archived recordings) is informal, face-to-face conversation. All speech events were recorded in Jarai, South Sumatra,

[11] Other anthropological work on Besemah has been conducted by Collins (1979, 1998)

Indonesia between native speakers of Besemah, during two fieldwork stints.[12] I took several two to three month trips to the Besemah highlands during 2008–2010, during the first fieldwork stint. I subsequently took several more two to three month fieldwork trips to the Besemah highlands during 2014–2015 during the second fieldwork stint. All of these recordings and associated transcripts are archived with the Pacific and Regional Archive for Digital Sources in Endangered Cultures (PARADISEC) at the University of Sydney (http://catalog.paradisec.org.au/collections/BJM01).

The Besemah corpus in this dissertation only consists of audio recordings from the first fieldwork period. I limited the corpus to these recordings because they were already fully transcribed, translated and glossed. The transcription system used in the corpus is based on Du Bois et al. (1992, 1993). The conventions for this transcription are found in the beginning of the dissertation under Abbreviations. One noteworthy aspect of this transcription system is that each line represents an intonation unit, 'a stretch of speech uttered under a single coherent intonation contour' (Du Bois et al. 1992: 17). Each narrative in Table 1.1 and conversation in Table 1.2 below are listed with details about the speakers, setting, and summary of the content of the speech event. Each example from the corpus in this dissertation is referenced with a unique identifier, the label that begins with 'BJM01-' followed by three digits. The unique identifier is listed on the righthand side for each description below.

[12]Jarai is located approximately10 kilometers southwest of the town of Pagaralam.

Table 1.1: Narratives in the corpus of Besemah

Description	Identifier
Jambu embak kulak 'The large guava' Well-known Besemah fable told by Sutarso (male, 48 years old) at Asfan's house.	BJM01-003
Jeme tujuh beranding ngambik anjang-anjang 'Seven sibling take the *anjang-anjang* fruit' Well-known fable told by Munaya (female, 53 years old) at Munaya's house.	BJM01-005
Radin Panjang 'The long prince' Well-known fable told by Munaya (female, 53 years old) at Munaya's house.	BJM01-006
Anak Raje Tige Berading 'The king's three sons' A well known fable told by Karim (male, 70 years old) at Asfan's house.	BJM01-012
Sang kancil ngaghi liling 'The mousedeer and the snail' A well-known fable told by Karim (male, 70 years old) at Asfan's house.	BJM01-013
Sang kancil ngaghi setue ngagh buwaie 'The mousedeer, the tiger, and the alligator' A well-known fable told by Karim (male, 70 years old) at Asfan's house.	BJM01-014
Kancil sebisanan ngah beghuk 'The mousedeer and his in-laws, the monkey' A well-known fable told by Neti (female, 35 years old).	BJM01-019
Narrative entitled putri jadi burung putih 'The princess became a white bird.' A well-known fable told by Neti (female, 35 years old).	BJM01-020
Petri ngaghi seringguk malai 'The prince and the beautiful spire' A well-known fable told by Parit (female, 57 years old) in Danut's rice paddy.	BJM01-025
Sinamnam enam berading 'Sinannam and the six brother' Well-know fable told by Sawia (female, 77 years old) at her son Sira's house.	BJM01-026

Table 1.2: Conversations in the corpus of Besemah

Description	Identifier
Sejarah Karang Tanding 'History of Karang Tanding' Conversation between extended family members at Yowan's house in Karang Tanding. Sira (male, 48 years old) was recorded the event. It was a casual conversation with his mother Sawia (female, 77 years old) and her cousin Juria (female, 86 years old) about the history of the village Karang Tanding. The conversation revolves around Sira asking questions to Sawia and Juria. Occasionally Yowan (male, 42 years old) and his wife Partiwi (female, 44 years old) join in the conversation.	BJM01-001
Kicikan ding-berading 'Catching up with cousins' Conversation between cousins Munaya (female, 53 years old), Sarkani (male, 41 years old) and Asril (male, 47 years old) inside Munaya's house. The conversation has various topics: Munaya's daily activities, Sarkani's leg problems, and farming and raising chickens.	BJM01-002
Bujangan 'Bachelors' Conversation between six bachelors who are all close friends: Hendi (male, 30 years old), Hairil (male, 33 years old), Rafles (male, 33 years old), Piter (male, 23 years old), Dian (male, 18 years old), and Buwoh (male, 24 years old). Hendi recorded the event at Buwoh's house. The topics vary, but include: the race that they attended early in the day, the party they went to the night before and other stories from the recent past.	BJM01-004
Kelumpuk tani 'Farmers cooperative' Conversation between three friends and neighbors: Emi (female, 36 years old), Kudar (female, 37 years old), and Ina (female, 45 years old). Emi talks about how she is upset that the farmers cooperative asked her to step down from her post. Halfway through the conversation Ina comes into the conversation and asks what the story is. The conversation takes place at Emi's house.	BJM01-008
Nanam cuklat 'Planting cocoa' Conversation between three friends Damsi (male, 54 years old), Burhimin (male, 55 years old), and Aripin (male, 50 years old). All men are in some way related by marriage. They discuss issues related to farming cocoa, vanilla, and coffee. The recording takes place at Aripin's house.	BJM01-010
Musim deghian 'Durian fruit season' Conversation is between three women: Jamisah (female, 43 years old), Rili (female, 19 years old), and Dewi (female, 32 years old). Dewi and Jamisah live in the village of Karang Tanding, but Rili, who was born in Karang Tanding is visiting from a village that is about 10km away. They discuss various issues concerning farming, buying durian at the market, and weddings. The recording takes place at Jamisah's house.	BJM01-011
Kicikan di gaghang 'Talking on the porch'Conversation between two women: Rumsiah (male, 59 years old) and Sawia (female, 77 years old). They were sitting on the porch talking. I asked if I could record them. They sat on the porch for approximately an hour and continued to talk about Sawia's hurt hip after a fall and her recent trip to Jakarta and Bandung.	BJM01-015

1.4 Overview

This study of symmetrical voice constructions in Besemah is divided into three main parts. As there is little grammatical descriptive work on Besemah, Part I is a basic grammar sketch of the language. Chapter 2 describes the segmental phonology in Besemah as well as major phonological and morphophonological alternations. Additionally, this chapter outlines phonotactics, word-level stress and the orthography used in this dissertation. Chapter 3 covers Besemah morphology, including affixes and their major functions, clitics, and roots/root classes. Finally, Chapter 4 describes Besemah syntax. This chapter covers such topics as word classes, basic clause structure, noun phrase structure, tense-aspect-mood markings, and negation.

Part II of the dissertation consists of two chapters that investigate the syntax of symmetrical voice constructions in Besemah. The primary objective of these two chapters is to determine the nature of grammatical relations and symmetrical voice in Besemah. Chapter 5 focuses on the nature of grammatical relations within the clause by investigating quantifiability, coreferential arguments, and reflexive binding. Chapter 6 looks at the nature of grammatical relations across a clause boundary. It explores noun modifying clause constructions, which are functionally equivalent to relative clauses, and several control constructions in Besemah.

Finally, Part III of the dissertation is a single chapter (Chapter 7) that considers voice selection in symmetrical voice constructions (i.e., the factors that lead a speaker to choose one voice over the other). Chapter 7 is a statistical analysis of voice selection that investigates (i) the role of several formal and semantic properties of arguments, the verb, and the clause, (ii) information flow properties, (iii) syntactic priming (i.e., the increased likelihood for a structure to be repeated after hearing the same structure as a prime), and (iv) collostruction strength (i.e., the level of attraction between a verb root and the symmetrical voice construction). Aspects of each of these factors are shown to be statistically significant and are discussed at length in this chapter. Chapter 8 concludes the dissertation by summarizing the analyses in Part II and the findings in Part III.

Part I

Besemah Grammar Sketch

Part I outlines the basic phonology, morphology, and syntax in Besemah. In addition to the consonant and vowel phoneme inventories, Chapter 2 describes major phonological and morphophonological alternations, phonotactics, stress, orthography, and reduplication in Besemah. Chapter 3 describes affixes and their major functions, roots and root classes, and clitics in Besemah. Finally, Chapter 4 presents word classes, basic clause structure, valency-increasing suffixes, noun phrase structure, tense-aspect-mood marking, and negation.

Chapter 2

Phonology

This chapter outlines the basic segmental properties and parts of the suprasegmental properties of Besemah phonology alongside descriptions of the orthography used throughout this dissertation. At present, there is no standard orthography for Besemah, but speakers have become accustomed to sending text messages or occasionally using different types of social media by employing a practical Besemah orthography largely based on the orthography of Standard Indonesian. This practical orthography, however, has quite a bit of variation, so I only use some aspects of it here. The orthography that I have developed here is largely phonemic, notable exceptions being the high central vowel allophone (see Section 2.2 below) and the voiceless velar stop and glottal stop (see Section 2.1 below). These exceptional cases are based upon the opinions of the Besemah speakers with whom I worked closely. However, I do not pretend to have a standard orthography for Besemah in this dissertation. The process of developing a standard orthography will need to involve many more stakeholders in the Besemah community.

2.1 Consonants

The consonant phoneme inventory of Besemah in Table 2.1, in many respects, represents a rather typical inventory for a Malay isolect of Sumatra. The only remarkable difference between Besemah and other isolects lies in the phonemic contrast between the guttural R—a voiced velar fricative /ɣ/ in Besemah—and the alveolar trill /r/. Most Malay isolects have either the guttural R—usually a voiced velar /ɣ/ or uvular fricative /ʁ/—or the alveolar trill, but not both.[1] Table 2.1 presents the 20 consonant phonemes in Besemah; where the orthography differs from the IPA symbol, the orthographic representation is presented to right of the phoneme in angle brackets ⟨⟩.

Table 2.1: Besemah consonants

	Bilabial		Alveolar		Post-alveolar		Palatal		Velar		Glottal
Stop	p	b	t	d					k	g	ʔ ⟨k⟩
Nasal		m		n			ɲ ⟨ny⟩			ŋ ⟨ng⟩	
Tap/Trill				r							
Fricative			s							ɣ ⟨gh⟩	h
Affricate					tʃ ⟨c⟩	dʒ⟨j⟩					
Approximant		w					j ⟨y⟩				
Lateral				l							

As in other Malayic isolects, Besemah contrasts voicing in stops only in syllable onset positions; voiced stop consonants do not occur in coda positions. However, voiceless stop consonants may only occur in coda positions when they are root-final (see section 2.3 on phonotactics). The alveolar tap/trill /r/ is typically realized as a trill word-finally. In all other positions, it is most commonly realized as a tap [ɾ]. In the western highlands dialect of Besemah that is the focus of this study, when the voiced velar fricative /ɣ/ occurs word-finally after a high back vowel, it surfaces as voiced labiovelar approximant [w]. This alternation does not appear to occur in other Besemah dialects.

The status of the glottal stop is somewhat complex. First, as expected, the glottal stop serves as the default, non-phonemic onset of a vowel-initial word with an empty syllable onset—that is,

[1] See (Blust 1988, Adelaar 1992) and (McDonnell 2008) for example minimal pairs and further discussion of the historical development of these phonemes.

a word that would otherwise begin with a vowel (e.g., [ʔikan] 'fish').[2] Strictly speaking, then, there are no vowel-initial words. This glottal stop also occurs at vowel-initial root boundaries as well, but it alternates with the glide [w] and epenthetic [ɣ] (see Section 2.4 on morphophonological alternations below). Second, the glottal stop also commonly occurs in root-final position (e.g., [tampaʔ] 'slap')—the result of a sound change *-k* > *-ʔ* in root-final position (cf. Adelaar 1992). This sound change does not occur in recent loan words (e.g., [sibʊk] 'busy' < Standard Indonesian *sibuk* 'busy', [pulibɪk]/[pəlibɪk] 'plastic bag for growing seeds' possibly < English 'poly bag') or in a small set of roots that are presumably inherited from Proto-Malayic (e.g., *telempak* [tələmpak] 'throw'). There are a very small number of words where the glottal stop is present word-medially, either where an erstwhile morphologically complex word is no longer productive or in the backchannel [ə̃ʔə̃] 'uh-huh'. An example of the prior case is the word [mulaʔi] 'begin' (pronounced [mulaj] with a final diphthong in other Malay isolects) appears to be the result of a combination of **mula*—a loan from the Sanskrit word *mūla* 'beginning'—and the locative applicative suffix *-i* LOC.APPL (see Section 3.1.2). The glottal stop, then, appears to be epenthetic.[3] Other examples include [madaʔə] 'in the past'. In Standard Indonesian and other Malay isolects, the glottal stop appears in a number of loan words, notably loans from Arabic. However, in Besemah, these loan words appear to have been adapted with the voiceless glottal fricative [h] for speakers above 50 years old (e.g., Standard Indonesian *jum'at* [ʤumʔat] is Besemah [ʤəmahat] 'friday' and Standard Indonesian *maaf* [maʔaf] is Besemah [mahap] 'sorry'). In middle aged and younger speakers, the Standard Indonesian pronunciations, especially for *maaf* 'sorry', are more typical.

The glottal fricative /h/ is restricted to root/word-medial and root/word-final positions. If the root occurs without any suffixation or the glottal fricative is final segment in a word, it is typically

[2] As there is no phonemic contrast between syllables with onsets and those without onsets, I do not transcribe the word-initial glottal stop, even when such a word is transcribed phonetically.

[3] Further evidence for this analysis comes from the fact that (i) the glottal stop is somewhat unpredictably epenthesized to the end of several words in Besemah (e.g., Proto-Malayic *mati* > Besemah *matɪʔ* 'dead') and (ii) the unaffixed root *mule* [muli] 'beginning' is present in Besemah, which underwent the sound change *-a* > *-i* (see Section 2.2 below on vowels), is still present in Besemah.

not realized unless it coincides with a prosodic boundary. The glottal fricative /h/ is lost in all initial positions (e.g., Proto-Malayic **hari* > Besemah [aɣi] 'day') and medial positions between vowels of different qualities (Proto-Malayic **tihaŋ* > Besemah [tijaŋ] 'post, pillar' (Adelaar 1992: 96)). The glottal fricative is retained from Proto-Malayic word-finally (e.g., Proto-Malayic **labuh* 'fall, hang down' > [labʊh] 'fall'). Including the Arabic loan words mentioned above, the glottal fricative /h/ occurs root-medially between like vowels (Besemah [tahan] 'strong, able to endure' < Proto-Malayic **tahən* 'strong, able to endure; keep, detain'). It is interesting to note that while many words, such as proper names, are written with a glottal fricative /h/ in both word-initial and word-medial positions, only in word-medial positions is the glottal fricative consistently produced by speakers (e.g., the proper name ⟨Yohan⟩ is pronounced with the /h/ [juhan], while the proper name ⟨Hendi⟩ is pronounced without the /h/ [indi], but the name proper name ⟨Hermina⟩ is pronounced with the initial /h/ [hirminah]). Borrowed words typically retain the glottal fricative word-initially. There are several examples in the corpus where it is still present even when the vowels are adapted to Besemah phonology (see below). Finally, the glottal fricative is epenthetic word-finally in more recent loan words that did not undergo the sound change *-a* > *-ɨ* (e.g., Indonesian *papa* 'father' > *papah*).

2.2 Vowels

The vowel phoneme inventory of Besemah is historically conservative, with only three vowel phonemes /a, i, u/ in addition to the *pepet* [ə] as opposed to the five vowel phonemes in Standard Indonesian and many other Malay isolects.[4] Allophonic variation in Besemah vowels largely depends on two factors: (i) the presence or absence of a coda consonant and (ii) the position within the root. There are two basic types of allophonic variation: high vowel lowering in root-final closed syllables and low vowel raising in root-final open syllables.

The high front vowel /i/ lowers to [ɪ] in the final syllable of the root when the syllable is closed

[4]The three vowel phonemes reflects that of Proto-Malayic, which has been reconstructed with the same three vowel phonemes (Adelaar 1992).

by any coda consonant. The high back vowel /u/ lowers to [ʊ] in the final syllable when followed by a supralaryngeal coda consonant and to [o] when followed by a sublaryngeal consonant (i.e., [ʔ] or [h]). However, this sub- and supralaryngeal lowering effect does not generalize to all speakers. McDonnell (to appear) shows that, of the four male and four female speakers considered in that study, all of the male speakers provided evidence of two vowel qualities in closed root-final syllables, [ʊ] and [o], but only one female speaker showed any evidence of these two vowel qualities. In the orthography used here, all orthographic symbols are represented by their phonemes, meaning [i, ɪ] are represented by ⟨i⟩ and [u, ʊ, o] are represented by ⟨u⟩.

A common historical change that occurred throughout western Indonesia is final /a/ mutation (cf. Tadmor 2003). In Besemah, roots and enclitics, which historically had a final /a/, now end in [ɨ]. There are now no morphemes in Besemah that end in [a]. It is interesting to note that more recent borrowings in Besemah epenthesize a glottal fricative /h/ to roots ending in /a/, thereby preserving the allophonic variation between [a] and [ɨ] (e.g., Standard Indonesian *desa* 'village' is realized as [disah] in Besemah).[5]

Finally, there is a basic (or epenthetic) vowel [ə], referred to by many Austronesian linguists as the *pepet* vowel. The pepet is (i) restricted to prefixes and non-final syllables within a root and (ii) only occurs between two consonants. It is much shorter than the other vowels and is commonly not realized at all. Despite the separate phonemic status of /a/ and the pepet vowel [ə], Besemah speakers represent both [ə] and [ɨ] as ⟨e⟩ when writing the language. Their practical orthography is based on the proximity of vowel qualities rather than the phonemic analysis. Thus, [a] is represented with ⟨a⟩, and [ə, ɨ] are represented with ⟨e⟩. The orthography here follows the same convention. For more on the distinction between the pepet [ə] and root/word-final [ɨ] see McDonnell (2008) and Gordon et al. (2012).

In vowel sequences of a high vowel /i,u/ followed by the low vowel /a/ (i.e., /ua/, /ia/), the low

[5]As mentioned above in the discussion of the glottal fricative /h/, there are many cases where the word-final /h/ is not realized. However, when the the word occurs at the end of a prosodic phrase or is suffixed with a vowel initial suffix *-i* LOC.APPL or *-an* NMLZ, the glottal fricative /h/ is always present.

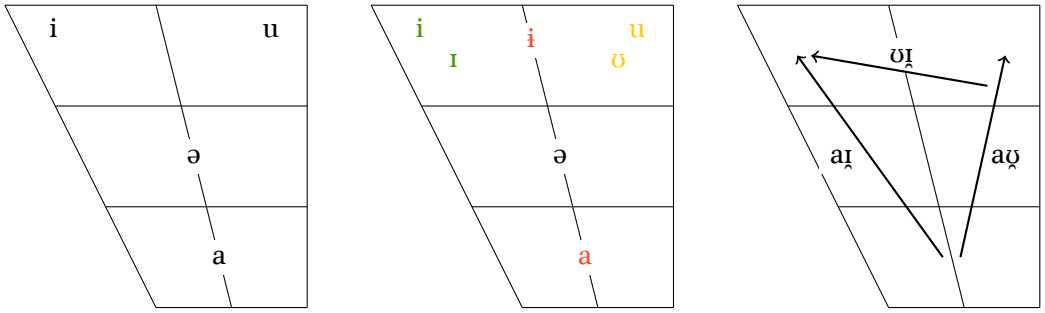
vowel /a/ followed a high vowel /i, u/ (i.e., /ai/, /au/), or the two high vowels (i.e., /ui/, /iu/) occur word-internally across a syllable boundary, so that each vowel is the nucleus of its own syllable; an offglide between the two vowels—[j] after [i] and [w] after [u]—serves as the onset to the second, high vowel nucleus à la Hayes (1989) (e.g., [buat] [bu.wat] 'make', *liagh* [li.jaɣ] 'wild', *pait* [pa.jɪt] 'bitter', *daun* [da.wʊn] 'leaf', *duit* [du.wɪt] 'money', *liut* [li.jʊt] 'slick'). With the exception of the /iu/ sequence, the same is true when the second vowel of the sequence is in the root-final position of disyllabic word—even when final /a/ raises to [ɨ] (e.g., *due* [duwɨ] 'two', *rie* [ri.jɨ] 'village head', *bai* [ba.ji] 'mother (of animals)', *tau* [ta.wu] 'know', *ui* [u.wi] 'rattan'). When vowel sequences of the low vowel followed by a high vowel (i.e., /au/, /ai/) occur in the final syllable of words that have a vowel phoneme in penultimate syllable, the sequences are diphthongs (e.g., *pantau* [pantaʊ̯] 'call', *tupai* [tupaɪ̯] 'squirrel'). Although it only occurs in a handful of words, when the vowel sequence /ui/ occurs in the same environment, it is also a diphthong (e.g., *uncui* [untʃʊɪ̯] 'smoking pipe').

There is a morphophonemic alternation with the third person enclitic =*nye* [ɲɨ] 3 (see Section 2.4 for a fuller explanation) that provides evidence for the diphthong-disyllabic vowel sequence distinction. When =*nye* 3 encliticizes to a root with a final vowel, it surfaces with the palatal nasal (e.g., *bini* [bini]'wife' → *bini-nye* [biniɲɨ] 'his wife'), but when it encliticizes to a root with a final consonant, the enclitic is realized without the palatal nasal (e.g., *ubat* [ubat]'medicine' → *ubat-*(*ny*)*e* [ubatɨ] 'his medicine').[6] Now, what happens when the word is a disyllabic vowel sequence (e.g., *dai* [da.ji] 'face') versus a diphthong (e.g., *gulai* [gulaɪ̯] 'food')? The vowel behaves like a root-final vowel when it is a true vowel sequence (e.g., *dai-nye* [dajiɲɨ] 'her face') and like a root-final consonant when it is a diphthong (e.g., *gulaie* [gulajjɨ] 'her food'). The vowel phonemes, allophones, and diphthongs in Besemah are shown in Figure 2.1 below.

[6]The final consonant of a root always surfaces as a geminate when the suffix begins in a vowel, which is demonstrated in Section 2.4.2 below.

Figure 2.1: Vowel phonemes, vowel allophones and diphthongs in Besemah

(a) Vowel phonemes (b) Vowel allphones (c) Diphthongs



2.3 Phonotactics and stress

Syllables in Besemah are minimally CV (i.e., there are no onsetless syllables) and maximally CVC or CVV. Syllable onsets allow all consonants and show all phonemic contrasts—the only exception being the word-initial glottal fricative /h/, which does not occur root/word-initially (see Section 2.1 above). A number of consonants are disallowed in consonant coda position, including voiced stops /b, d, g/ and affricates /tʃ, dʒ/, no matter the position of the syllable within the root or word. If the closed syllable is in a non-final position within the root, the velar fricative /ɣ/ is disallowed as well. If the velar fricative /ɣ/ occurs in a non-final position within the root, it is always followed by a schwa (e.g., *jeghenih* [dʒəɣənɪh] 'pure').[7] In addition to these restrictions on coda consonants, there is only a small number of segments that occur in codas of non-final syllables, including the nasal stops /m, n, ɲ, ŋ/, the lateral approximant /l/, the trill /r/, and the alveolar fricative /s/. The latter three segments /l/, /r/, and /s/ are much less common. For /l/, I only find two examples *gelgas-an* [gəlgas(an)] 'extremely cold' and *te-jilpak* [(te)jilpaʔ] 'stain'. For /r/, there are many more examples (e.g., *terjang* [tərdʒaŋ] 'kick'). For /s/, there are several loan words (e.g., *tustil* [tustɪl] 'camera' and *pistul* [pistʊl] 'pistol'). When the nasal consonant in non-final coda position within the root is followed by a stop or affricate consonant, the two consonants are homorganic. In fact, /m, n, ɲ/ in coda position can

[7]Note that this behavior contrasts with the trill /r/ in non-final coda position *kerbit* [kərbɪt] 'flashlight'.

only be followed by homorganic stop or affricate consonants (e.g., *jampi* [dʒampi] 'chant', *antat* [antat] 'accompany', *luncat* [luɲtʃat] 'jump'). Only the velar nasal /ŋ/ can be followed by heteroorganic alveolar fricative /s/ (e.g., *angse* [aŋse] 'goose'). Finally, the palatal nasal /ɲ/ cannot occur in the coda word-finally, while the other nasal stops are able to occur in either coda position (e.g., *ketam* [kətam] 'crab', *tuntun* [tuntʊn] 'watch', *kakang* [kakaŋ] 'older sibling').

Word-level stress in Besemah falls on the final syllable of the word. If the word is suffixed or encliticized, stress shifts to the suffix or enclitic. For a detailed analysis of Besemah prosody, see McDonnell (to appear).

2.4 Morphophonological alternations

Besemah evinces a number of morphophonological alternations involving prefixation, suffixation, and encliticization. The major morphophonological alternations are presented below.

2.4.1 Nasal substitution

Generally speaking, nasal substitution in Besemah involves a nasal prefix—represented as a capital *N* in several prefixes—that (i) is homorganic to the first segment of the root to which it attaches and (ii) replaces the first segment if it is a voiceless consonant. Affixes that evince nasal substitution patterns are the agentive voice prefix (*me*)*N*- AV, the agentive/instrumental nominalizer prefix *peN*- NMLZ.AGT/INS, and the locative/process nominalizer circumfix *peN*- -*an* NMLZ.LOC/PROC. The nasal substitution patterns of these prefixes generally behave in the same manner with the exception of roots that begin with a liquid /l/, /r/, or /ɣ/ (see below). Since the prefix *peN*- NMLZ.AGT/INS and the first part of the circumfix *peN*- -*an* NMLZ.LOC/PROC always behave in exactly the same manner, the discussion below only presents examples of the prefix *peN*- NMLZ.AGT/INS.

When the root begins with a vowel, the nasal substitutive prefix surfaces as a velar nasal [ŋ]. Consider the examples in (3) below. In each of the examples in this subsection, both the agentive

voice prefix (*me*)*N*- AV and the agent/instrumental nominalizer *peN*- NMLZ.AGT/INS are presented in succession.

(3) Realization of (*me*)*N*- and *peN*- on vowel-initial roots

N- → **[ŋ]** / __ +**V**

a.	(*me*)*N*-	*ambang*	[ambaŋ]	*ng-ambang*	[ŋambaŋ]	'cultivate'
b.	*peN*-	*udut*	[udʊt]	*peng-udut*	[pəŋudʊt]	'smoker'

When one of the nasal substitutive prefixes attaches to a root that begins with a voiced consonant, it is homorganic to the place of articulation of the first consonant. With the agentive voice prefix (*me*)*N*-, the initial nasal is syllabic. When the root begins with a voiceless consonant, the nasal is homorganic to the place of articulation, but the nasal consonant replaces the initial consonant. Examples of these patterns are shown in (4). Note that the convention that I use throughout the dissertation places the deleted segment of the root in parentheses (e.g., *pulik* 'lie down' is represented as *m*-(*p*)*ulik* 'lie down' when prefixed with (*me*)*N*- AV).

(4) Realization of (*me*)*N*- and *peN*- stop-initial roots

N- → **[m]** / __ +$\left\{\begin{matrix}\textbf{p}\\\textbf{b}\end{matrix}\right\}$

a.	(*me*)*N*-	*pulik*	[pulɪʔ]	*m*-(*p*)*ulik*	[mulɪʔ]	'lay down'
b.	*peN*-	*pecut*	[pətʃʊt]	*pem*-(*p*)*ecut*	[pəmətʃʊt]	'whip'
c.	(*me*)*N*-	*batak*	[bataʔ]	*m-batak*	[m̥bataʔ]	'bring'
d.	*peN*-	*bajik*	[badʒɪʔ]	*pem-bajik*	[pəmbadʒɪʔ]	'hoarder'

N- → **[n]** / __ +$\left\{\begin{matrix}\textbf{t}\\\textbf{d}\end{matrix}\right\}$

e.	(*me*)*N*-	*tutus*	[tutʊs]	*n*-(*t*)*utus*	[nutʊs]	'to hammer'
f.	*peN*-	*tutus*	[tutʊs]	*pen*-(*t*)*utus*	[pənutʊs]	'hammer'
g.	(*me*)*N*-	*dengagh*	[dəŋaɣ]	*ndengagh*	[n̥dəŋaɣ]	'hear'
h.	*peN*-	*damping*	[dampɪŋ]	*pendamping*	[pəndampɪŋ]	'closer one'

$$\textbf{\textit{N}-} \rightarrow [\eta] \; / \; \_\_ + \begin{Bmatrix} \textbf{k} \\ \textbf{g} \end{Bmatrix}$$

i.	(*me*)*N-*	*kinak*	[kinaʔ]	*nginak*	[ŋinaʔ]	'see'
j.	*peN-*	*kaigh*	[kajɪɣ]	*pengaigh*	[pəŋajɪɣ]	'rake'
k.	(*me*)*N-*	*gawih*	[gawɪh]	*nggawih*	[ŋ̩gawih]	'work'
l.	*peN-*	*gelebuk*	[gələbʊʔ]	*penggelebuk*	[pəŋgələbʊʔ]	'braggart'

As seen just above, when the nasal substitutive prefixes attach to roots with initial alveopalatal affricates, the nasal is homorganic to the root. However, unlike the stops above, the voiceless avleopalatal affricate /tʃ/ is not replaced by the nasal in (5).

(5) Realization of (*me*)*N-* and *peN-* with affricate-initial roots

$$\textbf{\textit{N}-} \rightarrow [\textbf{ɲ}] \; / \; \_\_ + \begin{Bmatrix} \textbf{tʃ} \\ \textbf{dʒ} \end{Bmatrix}$$

a.	(*me*)*N-*	*cakagh*	[tʃakaɣ]	*n-cakagh*	[n̪̩tʃakaɣ]	'search'
b.	*peN-*	*cukur*	[tʃukʊr]	*pen-cukur*	[pəɲtʃukʊr]	'razor'
c.	(*me*)*N-*	*juare*	[dʒuwaɾɨ]	*n-juare*	[n̪̩dʒuwaɾɨ]	'gamble'
d.	*peN-*	*juare*	[dʒuwaɾɨ]	*pen-juare*	[pəɲdʒuwaɾɨ]	'gambler'

When the nasal substitutive prefix occurs on roots that begin with the alveolar fricative /s/ the palatal nasal *ny* [ɲ] replaces the root-initial /s/, as in (6).

(6) Realization of (*me*)*N-* and *peN-* with fricative /s/-initial roots

$$\textbf{\textit{N}-} \rightarrow [\textbf{ɲ}] \; / \; \_\_ + \{\textbf{s}\}$$

a.	(*me*)*N-*	*silap*	[silap]	*ny-*(*s*)*ilap*	[ɲilap]	'set on fire'
b.	*peN-*	*sakat*	[sakat]	*peny-*(*s*)*akat*	[pəɲakat]	'bully'

When the nominalizing prefix *peN-* and circumfix *peN- -an* are affixed to roots that begin with a liquid /l, r, ɣ/, the substitutive nasal does not surface, only *pe-* [pe] surfaces, as also shown in (7) below. When the agentive voice prefix (*me*)*N-* attaches to roots that begin with a liquid, the form *me-* [mə] surfaces as in (7).

(7) Realization of *(me)N-* and *peN-* with liquid-initial roots

$$\textbf{\textit{N}-} \rightarrow \emptyset \; / \; \_\_ + \begin{Bmatrix} \textbf{l} \\ \textbf{r} \\ \textbf{ɣ} \end{Bmatrix}$$

a.	*(me)N-*	*langkah*	[laŋkah]	*me-langkah*	[məlaŋkah]	'step'
b.	*peN-*	*lupe*	[lupɨ]	*pe-lupe*	[pəlupɨ]	'forgetful person'
c.	*(me)N-*	*rentas*	[rəntas]	*me-rentas*	[mərəntas]	'cut through'
d.	*peN-*	*rami*	[rami]	*pe-rami*	[pərami]	'unrest'
e.	*(me)N-*	*ghangkung*	[ɣaŋkʊŋ]	*me-ghangkung*	[məɣaŋkʊŋ]	'squat'
f.	*peN-*	*ghait*	[ɣajɪt]	*pe-ghait*	[pəɣajɪt]	'hook'

When the substitutive prefix occurs on roots that begin in a nasal consonant /m, n, ɲ, ŋ/, the root does not change, as in (8). There are very few roots that begin with a nasal consonant and even fewer that readily take nasal substitutive prefixes. I managed to find examples of each nasal in root-initial position, with the exception of the velar nasal [ŋ].

(8) Realization of *(me)N-* and *peN-* with nasal-initial roots

$$\textbf{\textit{N}-} \rightarrow \emptyset \; / \; \_\_ + \begin{Bmatrix} \textbf{m} \\ \textbf{n} \\ \textbf{ɲ} \\ \textbf{ŋ} \end{Bmatrix}$$

a.	*(me)N-*	*makan*	[makan]	*m-(m)akan*	[makan]	'eat'
b.	*peN-*	*makan*	[pəmakan]	*pe-makan*	[pəmakan]	'eater'
c.	*(me)N-*	*naik*	[najɪʔ]	*n-(n)aik*	[najɪʔ]	'climb'
d.	*peN-*	*naik*	[najɪʔ]	*pe-naik*	[pənajɪʔ]	'climber'
e.	*(me)N-*	*nyagu*	[ɲagu]	*ny-(ny)agu(-ka)*	[ɲagu(ka)]	'bore s.o.'
f.	*peN-*	*nyagu*	[ɲagu]	*pe-nyagu*	[pəɲagu]	's.o. who bores easily'

2.4.2 Morphophonemics of vowel-initial suffixes *-an* NMLZ and *-i* LOC.APPL

When a consonant-final root is suffixed with the nominalizer *-an* NMLZ or the locative applicative *-i* LOC.APPL, the final consonant is geminate across the morpheme boundary, as in (9a-d). Gemination even occurs when the final segment is a diphthong, as in (9e-h). Note that the suffix *-i* LOC.APPL may not suffix a root ending with the diphthong [aj], as in (9h).

(9) Gemination before suffixes *-i* LOC.APPL and *-an* NMZR

a.	*-an*	*cughup*	[tʃuɣʊp]	*cughup-an*	[tʃuɣʊppan]	'shower'
b.	*-i*	*idup*	[idʊp]	*idup-i*	[idʊppi]	'care for'
c.	*-an*	*rupuk*	[rupʊʔ]	*rupuk-an*	[rupʊʔʔan]	'thoughts'
d.	*-i*	*ambik*	[ambɪʔ]	*ambik-i*	[ambɪʔʔi]	'take'
e.	*-an*	*pantau*	[pantaw]	*pantau-an*	[pantawwan]	'invited person'
f.	*-i*	*pantau*	[pantaw]	*pantau-i*	[pantawwi]	'invite, call for'
g.	*-an*	*pakai*	[pakaj]	*pakai-an*	[pakajjan]	'knife'
h.	*-i*	—	—	—	—	—

When the root ends in a high front vowel /i/ or high back vowel /u/, the vowel sequence of the root-final vowel and suffix-initial root follow the same root-internal glide formation patterns discussed in Section 2.2 above. When /u/ is followed by either the suffix *-an* NMLZ or *-i* LOC.APPL, the labiovelar glide [w] surfaces at the morpheme boundary. When /i/ is followed by the suffix *-an* NMLZ, the palatal glide [j] surfaces at the morpheme boundary. The suffix *-i* cannot occur after a root that ends with the same segment.

(10) Glide formation before suffixes *-i* LOC.APPL and *-an* NMZR

a.	*-i*	*baju*	[badʒu]	*baju-i*	[badʒuwi]	'take'
b.	*-an*	*ramu-*	[ramu]	*ramu-an*	[ramuwan]	'goods'
c.	*-i*	—	—	—	—	—
d.	*-an*	*beli*	[bəli]	*beli-an*	[bəlijan]	'bought things'

When a root with a final high central vowel [ɨ]—the allophone of /a/—is suffixed with *-i* LOC.APPL or *-an* NMZL, an epenthetic voiced velar fricative [ɣ] surfaces at the morpheme boundary, as in the examples in (11).

(11) Epenthetic [ɣ] before suffixes *-i* LOC.APPL and *-an* NMZR

$$\emptyset \rightarrow [\text{ɣ}] \; / \; \left\{ \begin{matrix} \textbf{\textit{-an}} \\ \textbf{\textit{-i}} \end{matrix} \right\} \_\_ \; {}^{+}\mathbf{V}$$

a.	*-i*	*tanye*	[taɲɨ]	*tanye-(gh)i*	[taɲɨɣi]	'ask'
b.	*-an*	*bace*	[batʃɨ]	*bace-(gh)an*	[batʃɨɣan]	'reading'

2.4.3 Morphophonemics of vowel-final prefixes and vowel-initial roots

Besemah resolves vowel hiatus at the prefix-root boundary differently for the prefix *di-* PV and for the prefixes *be-* MID or *te-* NVOL. When the patientive voice prefix *di-* PV is prefixed to a root with an initial vowel /i/, a glottal stop surfaces at the morpheme boundary. In all other cases, either the root-internal glide formation process is followed, as discussed in Section 2.1, or a glottal stop surfaces at the morpheme boundary. This is exemplified in (12).

(12) The patientive voice prefix *di-* PV on vowel-initial roots

a.	*ingun*	[iŋʊn]	*di-ingun*	[diʔiŋʊn]	'take care of'
b.	*ambik*	[ambɪʔ]	*di-ambik*	[dijambɪʔ]/ [diʔambɪʔ]	'take'
c.	*umung*	[umʊŋ]	*di-umung*	[dijumʊŋ]/[diʔumʊŋ]	'talk'
d.	*enjuk*	[əɲdʒʊʔ]	*di-enjuk*	[dijəɲdʒʊʔ]/[diʔəɲdʒʊʔ]	'give'

When vowel-initial roots are prefixed with *be-* MID or *te-* NVOL, both of which end in a mid central vowel [ə] (i.e., the pepet), a voiced velar fricative [ɣ] surfaces at the morpheme boundary, as in (13).

(13) Epenthetic [ɣ] in prefixes *be-* and *te-*

$$\emptyset \rightarrow [\gamma] \; / \; \left\{ \begin{matrix} \textbf{\textit{be-}} \\ \textbf{\textit{te-}} \end{matrix} \right\} \_\_ +\mathbf{V}$$

a.	*be-*	*ubat*	[ubat]	*begh-ubat*	[bəɣubat]	'get treated'
b.	*te-*	*ingat*	[iŋat]	*tegh-ingat*	[təɣiŋat]	'remember'

There is, however, variation with the realization of *be-* MID and *te-* NVOL with vowel initial roots. In some cases, a glottal stop surfaces (e.g., *be-ubat* [bəʔubat] 'get treated' and *te-ingat* [təʔiŋat] 'remember').[8] In other cases, only the initial consonant of the prefix is realized (e.g., *be-ubat* [bubat] 'get treated' and *te-ingat* [tiŋat] 'remember').

[8]The glottal stop in these examples could be considered to be the initial glottal stop in the root as discussed in Section 2.1. If this is indeed the case, there is a question as to why the voiced velar fricative [ɣ] surfaces in the examples in (13) above. I leave this question for future research.

2.4.4 The enclitic *=nye*

The realization of the third person enclitic *=nye* [ɲɨ] 3 depends on whether it is cliticized directly to a root, or to a base word that is suffixed with *-an* NMZR or circumfixed with *peN- -an* LOC/PROC.NMZR. If the root ends in a vowel, *=nye* is realized (e.g., *kuku* [kuku] 'fingernail' → *kuku=nye* [kukuɲɨ] 'her fingernail'). If the root ends in a consonant or a diphthong (see Section 2.2 above), the final consonant is geminate across the morpheme boundary and only the *=e* is realized (e.g., *tangan* [taŋan] 'arm' → *tangan=(ny)e* [taŋannɨ] 'her hand'). When the enclitic *=nye* occurs after a root suffixed with *-an* NMZR or circumfixed with *peN- -an* LOC/PROC.NMZR, it is realized as separate phonological work *anye* (e.g., *batak-an* [bataʔʔan] 'brought thing' → *batak-an=anye* [bataʔʔan aɲɨ]).

2.4.5 Reduplication

Reduplication signals a distributive function on nouns and verbs and progressive function on verbs (cf. Rubino 2013). There are three phonological forms of reduplication in Besemah: *Cə*-reduplication in (14a), full reduplication in (14b), and full reduplication minus the final coda in (14c) (Blust 2009: 414-415). All three forms carry the full range of meanings.

(14) Three forms of reduplication in Besemah–*manis* [manɪs] 'sweet' and *baju* [badʒu] 'clothes'

a.	*Cə-*	*me-manis*	[mə-manis]	'sweet'
b.	FULL	*manis-manis*	[manɪsmanɪs]	'sweet'
c.	FULL NO CODA	*mani-manis*	[manimanɪs]	'sweet'

Chapter 3

Morphology

This chapter outlines how roots, affixes, and clitics combine to create words in Besemah. In addition to a description of the inventory and basic functions of affixes, the chapter describes roots—outlining how roots falls into several classes—and provides several criteria to distinguish clitics from affixes on the one hand and words on the other hand. The goal of this section is to give the reader a basic understanding of the building blocks of the word in Besemah.

Besemah is a fairly isolating language on the index of fusion and more agglutinative with some mildly fusional prefixes on the index of synthesis (Comrie 1989). The word can simply be (i) a root, (ii) a root plus a combination of a prefix and/or a suffix, or (iii) a root plus a circumfix, all of which may take proclitics and/or enclitics. The language shows no preference for prefixing or suffixing. Affixes include a broad category of verbal voice, several different types of nominalization, adversative, comparative, and valency-increasing morphology. These affixes fall into two broad categories of nominal and verbal morphology. Section 3.1 provides brief descriptions of these affixes and their functions.

The word in Besemah consists minimally of a root. Many roots are free and have the ability to occur on their own without any additional affixation. There are, however, a number of roots that are bound—often referred to as pre-categorical roots in research on western Austronesian languages (cf.

Verhaar 1984, Himmelmann 2008). In some cases, these roots productively combine with the affixes mentioned above, resulting in various verbal and nominal forms. For example, the bound root *cagak* 'stand' never occurs on its own. It attaches to an agentive voice prefix *n-cagak* 'to stand (intransitive)', a non-volitional voice prefix *te-cagak* 'to be standing', or a locative nominalizing circumfix *pen-cagak-an* 'place of something erected'. In other cases, the root has lexicalized with a single affix; one must rely on the form of the affix and the semantics of the lexicalized word to deduce the apparent root. For example, the word *telabuh* 'fall (on an even surface)' is the only form with the apparent root *labuh*, which presumably has the non-volitional voice prefix *te-*. This same prefix occurs on many words with similar meanings (e.g., *tecabur* 'fall (into a body of water)', *tekeripak* 'fall over'). Section 3.2 describes the nature of primarily productive roots and root classes in Besemah.

While the distinction between word and affix is straightforward, the intermediate category of clitic is far from clear. The literature on Malay isolects provides little insight, following conventions for referring to certain morphemes as clitics (e.g., Standard Indonesian third person pronoun *=nya*) without explanation or supporting evidence to distinguish them from affixes on the one hand and from words on the other. In Besemah, clitics comprise a diverse set of elements that include a subset of pronouns with different grammatical functions, several grammatical formatives (e.g., tense-aspect markers, a nominal classifier), and a discourse marker. Section 3.3 lays out five basic criteria that distinguish clitics from both affixes and words; it additionally describes the so-called 'clitic-only' words (Aikhenvald 2002).

3.1 Affixes

The inventory of Besemah affixes is similar to that of other Malay isolects (Adelaar 1992: Ch. 6). However, this inventory includes far fewer affixes than well-known isolects like Standard Indonesian. Affixes fall into two broad categories: nominal affixes and verbal affixes.

3.1.1 Nominal affixes

Nominal affixes include the objective nominalizing suffix *-an* NMLZ, the agent or instrumental nominalizing prefix *peN-* NMLZ.AGT/INS, and the locative or process nominalizing circumfix *peN- -an* NMLZ.LOC/PROC. There is also a numeral prefix *se-* 'one, same' and the reciprocal circumfix *se- -an* RECP. Finally, there are several fossilized words with the nominalizing circumfix *ke- -an* NMLZ.

The objective nominalizing suffix *-an* The most productive nominal affix is the suffix *-an* NMLZ. When attached to dynamic verbal roots, the suffix *-an* NMLZ acts as an objective nominalizer that most commonly designates the resulting action of the root or the patient argument associated with the root (Comrie & Thompson 2007). Examples of this function of *-an* NMLZ are found in (15a-d). When attached to stative verbal roots, the suffix *-an* NMLZ designates the experiencer of the state or the thing that has the quality of the state, as in the examples (15e-f). In very few cases, *-an* NMLZ designates the instrument associated with the root as in (15g) or a location where the root takes place as in (15h); these functions are usually reserved for the instrumental nominalizer *peN-* NMLZ.INS or the locative nominalizer *peN- -an* NMLZ.LOC, respectively (see below).

(15) Objective nominalizer suffix *-an* NMLZ

a.	*pecah*	'break'	*pecah-an*	'broken piece'
b.	*jirih*	'tell a story'	*jirih-an*	'story'
c.	*buat*	'make'	*buat-an*	's.t. made'
d.	*rupuk*	'think'	*rupuk-an*	'thoughts'
e.	*bange*	'stupid'	*bange-ghan*	'the stupid one'
f.	*manis*	'sweet'	*manis-an*	'desserts (i.e., sweet things)'
g.	*ayak*	'sift'	*ayak-an*	'sifter'
h.	*mandi*	'bathe'	*mandi-an*	'bathing place'

In cases where *-an* NMLZ attaches to non-verbal roots, the suffix has more idiosyncratic functions. For example, when suffixed to the nominal root *kawe* 'coffee', it has a locative nominalizing function *kawe-*(*gh*)*an* 'coffee field', similar to (15h), which is not possible with other nominal roots. When attached to a number (e.g., *empat* 'four'), the resulting word means 'approximately NUMBER' (e.g.,

empat-an 'approximately four'). Finally, in a number of cases, the difference between the nominal root and the suffixed word is difficult to discern. For example, *anak* 'child' and *anak-an* 'child' as well as *bujang* 'bachelor'and *bujang-an* 'bachelor' are used interchangeably without any clear meaning differences.

The agentive/instrumental prefix *peN-* The prefix *peN-* NMLZ.AGT/INST is an agentive or instrumental nominalizer, much like the English suffix *-er*. In (16a-c), the *peN-* prefixed word results in an agent who does the action. It is noteworthy that the agent that is commonly designated in the nominalized form refers to someone who habitually does the action of the root as in (16b) or even someone who does the action in some extreme manner as in (16c). The examples in (16d-f) refers to the instrument that carries out the action of the root (16d-e) or even an instrument that shows the quality of the root as in the case of (16f).

(16) Agent/instrumental nominalizing prefix *peN-* NMLZ.AGT/INSTR

a.	*enjuk*	'give'	*peng-enjuk*	'giver'
b.	*udut*	'smoke'	*peng-udut*	'smoker'
c.	*bajik*	'store'	*pem-bajik*	'hoarder'
d.	*pantuk*	'hit'	*pem-(p)antuk*	'tool for hitting'
e.	*kaigh*	'scratch'	*peng-(k)aigh*	'rake'
f.	*beghat*	'heavy'	*pem-beghat*	'weight'

The locative/process nominalizing circumfix *peN- -an* The circumfix *peN- -an* NMLZ.LOC/PROC designates two different types of nominalization: locative and process nominalizations. The latter function of *peN- -an* NMLZ.PROC is translated as an English gerund as illustrated in the examples in (17a-c). The circumfix, then, contrasts nicely with the suffix *-an* NMLZ, which designates a non-process nominalization.

(17) Process nominalizing circumfix *peN- -an* PROC.NMLZ

a.	*kinak*	'see'	*peng-(k)inak-an*	'seeing'	(cf. *kinak-an*	's.t. seen')
b.	*dengagh*	'hear'	*pen-dengagh-an*	'hearing'	(cf. *dengagh-an*	's.t. heard')
c.	*gawih*	'work'	*peng-gawih-an*	'working'	(cf. *gawih-an*	'work')

The locative nominalizing function of the circumfix *peN- -an* NMLZ.LOC designates the location where the root 'happens' as in the examples in (18). In some cases, words circumfixed with *peN- -an* NMLZ.LOC can productively be used to denote locations where the root occurs as in the case of (18a-c). In other cases, the circumfixed words do not productively denote different locations, but refer to a specific place as in the cases of (18d-e). That is, the word *pe-langkah-an* 'threshold' in (18e) can not refer to anything that is stepped over. It must refer to a threshold, even if the threshold is even with the floor around it (i.e., it does not require any literal stepping-over action).

(18) Locative nominalizing circumfix *peN- -an* NMLZ.LOC

a.	*tiduk*	'sleep'	*pen-(t)iduk-an*	'bed/sleeping place'
b.	*mandi*	'bathe'	*pe-mandi-an*	'bath/bathing place'
c.	*laghi*	'run/flee'	*pe-laghi-an*	'refuge/place of s.o. fleeing'
d.	*tanak*	'cook (rice)'	*pen-(t)anak-an*	'kitchen'
e.	*langkah*	'step'	*pe-langkah-an*	'threshold'

The numeral prefix *se-* The prefix *se-* 'one' attaches to many nominal roots or numeral classifiers. In some roots, it takes the additional meaning of 'same NOUN' as in the examples in (19a-b). However, a number of roots do not have this meaning as in (19c).

(19) The numeral prefix *se-* 'one, same'

a.	*dusun*	'village'	*se-dusun*	'one village'	'(of) the same village'
b.	*mubil*	'car'	*se-mubil*	'one car'	'(in) the same car'
c.	*mulan*	'seedling'	*se-mulan*	'one seedling'	—

The reciprocal circumfix *se- -an* The circumfix *se- -an* RECP is a reciprocal marker that designates a reciprocal relationship around the meaning of the root. Typical examples of this circumfix are formed on both verbal roots (20a-b) and nominal roots (20c).

(20) The reciprocal circumfix *se- -an* RECP

a.	*ghusik*	'visit'	*se-ghusik-an*	'people who visit e.o.'
b.	*pacak*	'able to'	*se-pacak-an*	'people who know e.o.'
c.	*bisan*	'mother-in-law'	*se-bisan-an*	'mother-in-laws of a married couple'

The frozen nominalizing circumfix *ke- -an* The circumfix *ke- -an* is no longer productive as a nominal affix in Besemah. It only appears on a small set of words, most of which have undergone significant reduction as in (21). Note that the example in (21c) is now used as a verb. There is a productive adversative circumfix *ke- -an* AVR that is not clearly related to this frozen circumfix (cf. Blust (2009: 393-394); see Section 3.1.2).

(21) Frozen nominal circumfix *ke- -an* NMLZ

a.	*ghase*	'feel'	*keghaseghan*	'feeling'
b.	*ade*	'exist'	*kadan*	'situation'
c.	*tau*	'ability'	*keruan*	'know'

3.1.2 Verbal affixes

Productive verbal affixes include voice prefixes and valency-increasing suffixes as well as an adversative circumfix/suffix and a distributive/reciprocal circumfix. Verbal morphology is intricately intertwined with clause structure and argument structure; therefore, the discussion here briefly mentions the range of meanings of each affix. Section 4.2.1 provides a fuller description of how verbs with this range of morphology affect both clause and argument structure.

The middle voice prefix *be-* The voice prefix *be-* MID occurs with verbs that are prototypically associated with middle voice constructions (cf. Kemmer 1993) as in (22). For example, the prefix occurs on verbs expressing grooming and body care (22a-b), change in body posture (22c), translational motion (22d), naturally reciprocal actions (22e), and emotional states (22f).

(22) Middle voice prefix *be-* MID

a.	*sugu*	'comb'	*be-sugu*	'to comb (hair)'
b.	*siuk*	'change'	*be-siuk*	'to change clothes'
c.	*-tegak*	'stand'	*be-tegak*	'to stand up'
d.	*jalan*	'path'	*be-jalan*	'to walk'
e.	*-ghusik*	'visit'	*be-ghusik*	'to visit e.o.'
f.	*-cicus*	'upset'	*be-cicus*	'to feel upset'

The prefix *be-* MID also functions as a possessive marker (23a), an instrumental marker (23b), and a marker of the typical activity associated with the root (23c), when attached to nominal roots.

(23) Middle voice prefix *be-* MID

a.	*ghumah*	'house'	*be-ghumah*	'to have a house'
b.	*pisau*	'knife'	*be-pisau*	'to use a knife'
c.	*mubil*	'car'	*be-mubil*	'to drive a car'

While other prefixes must attach directly to the root, the middle prefix may attach to nouns that have been suffixed with the objective nominalizer *-an* NMLZ (e.g., *be-rupuk-an* 'have thoughts') or have been circumfixed with process nominalizer *peN- -an* NMLZ.PROC (e.g., *be-pe-ghase-*(*gh*)*an* 'had the feeling').

The reciprocal/distributive circumfix *be- -an* The circumfix *be- -an* MID.RECP/DISTR designates either a distributive action in (24a-b) or a reciprocal action in (24c-d). Note that while this circumfix has the same form as combination of the middle voice prefix *be-* MID and the objective nominalizer *-an* NMLZ, only the circumfix carries the distributive or reciprocal meaning.

(24) Reciprocal or distributive circumfix *be- -an* MID.RECP/DISTR

a.	*pegi*	'go'	*be-pegi-an*	'to go around'
b.	*pulik*	'lie down'	*be-pulik-an*	'many people lie down'
c.	*alau*	'chase'	*begh-alau-an*	'chase e.o.'
d.	*kejil*	'choke'	*be-kejil-an*	'choke e.o.'

Occasionally, the root in the circumfixed form is reduplicated, which further emphasizes its distributive function (e.g., *be-pegi~pegi-an* or *be-pe~pegi-an* 'to go all around').

The non-volitional and comparative prefix *te-* The non-volitional prefix *te-* is prototypically used to mark either actions done unintentionally as in (25a-d) or states as in (25e-f). The unintentionality of the action is obligatory for some actions, such as 'laugh' or 'remember' as in (25c-d).

(25) Non-volitional prefix *te-* NVOL

a.	*beli*	'buy'	*te-beli*	'inadvertently buy'
b.	*batak*	'bring'	*te-batak*	'inadvertently bring'
c.	*-tawe*	'laugh'	*te-tawe*	'laugh'
d.	*-ingat*	'remember'	*tegh-ingat*	'remember'
e.	*cagak*	'stand'	*te-cagak*	'stand'
f.	*cangak*	'open (of mouth)'	*te-cangak*	'opened (of mouth)'

The prefix *te-* NVOL is also used in comparative constructions with intransitive stative roots as in the examples in (26).

(26) Non-volitional prefix *te-* NVOL in comparative constructions

a.	*payah*	'tired'	*te-payah*	'more tired'
b.	*besak*	'big'	*te-besak*	'bigger'
c.	*kecik*	'small'	*te-kecik*	'smaller'

The adversative circumfix *ke- -an* and suffix *-an* The suffix *-an* AVR and circumfix *ke- -an* AVR mark adversative predicates meaning 'to be adversely affect by ROOT', as in (27) and (28), respectively. The adversative suffix *-an* typically attaches to nominal roots with the meaning 'inundated by ROOT' (e.g., ants enveloping a piece of fruit in (27a) or getting smoke in one's eyes in (27b)). However, it is noteworthy that *-an* AVR does attach to other root categories—*mutah* 'vomit' in (27c) is a bound root.

(27) Adversative suffix *-an* AVR

a.	*semut*	'ant'	*semut-an*	'inundated with ants'
b.	*asap*	'smoke'	*asap-an*	'inundated with smoke'
c.	*mutah-*	'vomit'	*mutah-an*	'get vomited on'

The adversative circumfix *ke- -an* AVR typically attaches to verbal roots resulting in the meaning 'to be negatively affected by ROOT' as in (28a-b). The circumfix does, however, attach to non-verbal roots as in (28c).

(28) Adversative circumfix *ke- -an* AVR

a.	*lapagh*	'hungry'	*ke-lapagh-an*	'starving'
b.	*payah*	'tired'	*ke-payah-an*	'exhausted'
c.	*siang*	'afternoon'	*ke-siang-an*	'oversleep'

Roots that occur with the circumfix *ke- -an* AVR do not also occur with the adversative suffix *-an* AVR and vice-versa.

Agentive and patientive voice prefixes Transitive predicates must occur in either an agentive voice or patientive voice construction. The agentive voice is marked by the prefix (*me*)*N-* AV, signaling that the agent argument is the primary argument.[1] Verbs marked with the agentive voice prefix can be either transitive or intransitive (e.g., *m-batak* 'bring (transitive)' or *n-cagak* 'stand (intransitive)'). However, transitive constructions where the agent is the primary argument must have the agentive voice prefix (see Section 4.2.1). In intransitive constructions, roots with the agentive voice prefix typically do not also occur as a bare intransitive verbal predicate. There are, however, a small set of intransitive roots that optionally occur with the agentive voice prefix without any clear meaning differences (e.g., *tinggal* 'leave behind' *n-*(*t*)*inggal* 'AV-leave behind'). Section 3.2 discusses root combinatorics in much more detail.

[1]'Primary argument' is similar to 'subject' for other descriptions of Malay isolects (see Section 2.4 for the morphophonemics of (*me*)*N-* and Section 4.2.1 for the definition of primary argument).

The patientive voice construction, on the other hand, is not as clearcut. While the patient argument is always the primary argument in patientive voice constructions, the verb is not obligatorily affixed. When the agent is first or second person, the agent pronoun directly precedes an unprefixed verb. If the agent is the first person singular, it is procliticized to the verb; all other first and second person pronouns are free pronouns. When the agent is third person, the agent occurs directly following the verb as a free noun phrase or an enclitic *=nye* 3; the verb can also be optionally prefixed with the patientive voice prefix *di-* PV. The patientive voice, then, comes in these three forms, which are exemplified in (29). The examples in (29a) differ from those in (29b-c) based on the person of the agent pronoun (i.e., first and second person versus third person). The examples in (29b) and (29c) differ in the presence of the optional prefix *di-* PV. Finally, in each of the examples, the construction with the free agent pronoun or noun is on the left, followed by an example of the clitic agent pronoun on the right.

(29) Patientive voice constructions with the root *batak* 'bring'

a.	*kami batak*	'we bring...'	*ku=batak*	'I bring ...'
b.	*batak jeme*	'people bring...'	*batak=(ny)e*	'they bring ...'
c.	*di-batak jeme*	'people bring...'	*di-batak=(ny)e*	'they bring ...'

Valency-increasing suffixes The valency-increasing suffixes include the causative/applicative syncretic suffix *-ka* CAUS/APPL and the locative applicative suffix *-i* APPL.LOC. Both of these suffixes can occur on many different types of roots marking various valency changing functions. These valency-increasing suffixes must occur in conjunction with one of the two transitive voice constructions (i.e., agentive and patientive voice constructions).

When the causative/applicative suffix *-ka* CAUS/APPL attaches to different roots, it functions differently as a causative as in (30a-b), an instrumental applicative as in (30c), a benefactive applicative (30d), or in some cases has no apparent effect on the root as in (30e). A fuller discussion of *-ka* CAUS/APPL and its effect argument structure can be found in Section 4.3.

(30) The causative/applicative syncretic suffix *-ka* CAUS/APPL

a.	*duduk*	'sit'	*duduk-ka*	'sit s.o. down'
b.	*makan*	'eat'	*makan-ka*	'feed'
c.	*tujah*	'stab'	*tujah-ka*	'stab with'
d.	*batak*	'bring'	*batak-ka*	'bring for'
e.	*tanam*	'plant'	*tanam-ka*	'plant'

The locative applicative suffix *-i* LOC.APPL has far fewer functions, but it still functions differently when attached to different roots. The suffix can function as a causative as in (31a) or as locative applicative as in (31b-c), a goal/recipient applicative (31d) or have no effect on the argument structure (31e). In the case of (31e), *-i* adds an iterative meaning to the action of the root. A fuller discussion of *-i* LOC.APPL and its effect argument structure can be found in Section 4.3.

(31) The causative/applicative syncretic suffix *-i* CAUS/APPL

a.	*capak*	'discarded'	*capak-i*	'take off'
b.	*duduk*	'sit'	*duduk-i*	'sit on'
c.	*simbur*	'splash'	*simbur-i*	'splash s.o.'
d.	*batak*	'bring'	*batak-i*	'bring s.o. (s.t.)'
e.	*pantau*	'call for'	*pantau-i*	'call for (repeatedly)'

3.2 Roots

Roots in Besemah fall into a number of classes depending upon the morphology required for the root to occur in argument or predicate positions within transitive or intransitive clauses.[2] The first class of roots are free roots. Free roots have the ability to be arguments or predicates without any affixation as in the examples in (32)–(34). Nominal roots are those that prototypically act as arguments, for example, in the case of *jeme* 'people' in (32). Free verbal roots are prototypically predicates that fall into two categories: intransitive verbal roots in the case of *duduk* 'sit' in (33) and transitive verbal roots in the case of *batak* 'bring' in (34).

[2]Content word classes in Besemah are categorized differently at the root- and word-levels. Section 4.1 describes word classes in Besemah.

(32) Bare nominal root as argument

jeme *lah* *payah,*
people PFV tired

'people were tired.' (BJM01-001, 00:01:32.422–00:01:33.263, Speaker: Juria)

(33) Bare intransitive verb root as predicate

die *lah* *duduk.*
3 PFV sit

'they already sat.' (BJM01-015, 00:26:41.785—00:26:42.525, Speaker: Rumsiah)

(34) Bare intransitive verb root as predicate

mutur *batak* *Wawan* *eh.*
motorcycle [PV]bring W. FIN

'they already sat.' (BJM01-004, 00:41:47.154—00:41:48.314, Speaker: Piter)

It is noteworthy, however, that free transitive roots only occur in patientive voice constructions as in the example in (34) above (see Section 4.2.1 for details on patientive voice). When these free transitive roots occur in other transitive constructions, such as the agentive voice, they require the agentive voice prefix (*me*)*N*- as in (35) below. This class of transitive verbal roots, then, shares the properties of both bound and free roots. While they are technically speaking free roots, their ability to be employed in clauses without additional morphology is limited.

(35) Free transitive roots in an agentive voice construction

kamu *m-batak* *mutur* *baih.*
2PL AV-bring motorcycle just

'you all just bring the motorcycle.' (BJM01-011, 00:31:56.304–00:31:47.627, Speaker: Rili)

Finally, roots that cannot occur in these positions without further affixation are bound roots. These bound roots require additional morphology in order to be employed as either arguments or predicates. For this reason, these bound roots have been considered pre-categorical roots, since it is

impossible to categorize them as noun or verb (cf. Verhaar 1984). Consider the root *alih* 'move' in the examples in (36) and (37) below. For the root to be an argument, it must take a nominalizing affix, the nominalizer *-an* NMLZ in (36). In order for the root be a transitive predicate, it must be suffixed with the causative/applicative suffix *-ka* as in (37) in addition to any required voice marking. The agentive voice prefix (*me*)*N-* AV is prefixed to the root in the example below.

(36) Bound root with nominalizing morphology as argument

au	*alih-an*	*di*	*Pagah*	*Diwe,*
yes	move-NMLZ	LOC	P.	D.

'yeah the transplants are from (the village) *Pagah Diwe*,'

(BJM01-001, 00:25:17.229 – 00:25:18.599, Speaker: Juria)

(37) Bound root with causative/applicative morphology as predicate

ng-alih-ka	*ghumah.*
AV-move-CAUS/APPL	house

'(they) moved (the house) like that.'

(BJM01-001, 00:30:32.620–00:30:33.700, Speaker: Juria)

Similarly, the root *capak* 'discard' must be prefixed with a voice marker to be an intransitive predicate. In (38), *capak* 'discard' is prefixed with the non-volitional voice prefix *te-* . If the root is to be used as a transitive predicate, it must be suffixed with the causative/applicative suffix *-ka* CAUS/APPL in (39a) or the locative applicative suffix *-i* LOC.APPL in (39b). As in the example in (37) with *alih* 'move' above, the transitive predicates require voice morphology unless the predicate is in the patientive voice as in (39a).

(38) Patientive voice–second person

picit,
[PV]squeeze

'squeeze (the wound),'

te-capak,
NVOL-discard

'throw away (the puss),'

ghadu.
heal

'(the wound) is healed.'

(BJM01-005, 00:05:44.060–00:05:45.660, Speaker: Munaya)

(39) Bound root with causative/applicative morphology as predicate

a. *capak-ka* *gale* *ke* *luang* *Kighing*
[PV]discard-CAUS/APPL all ALL canyon K.

'(father) threw away all (the tricycles) into *Kighing* canyon'

(BJM01-001, 00:07:59.807–00:08:01.596, Speaker: Sawia)

b. *die* *n-capak-i* *se-* *se-* *baju=nye* *tadi*
3 AV-discard-LOC.APPL HES HES clothes=3 earlier

'He took off his clothes earlier.'

(BJM01-002, 00:21:56.580–00:21:57.739, Speaker: Munaya)

Finally, in the case of *alih* 'move' and *capak* 'discard', the root may also attach to the agentive voice prefix (*me*)*N-* without any valency-increasing suffix. However, the resulting constructions are intransitive as in (40) below. In order for these roots to occur in transitive constructions, they must be suffixed with the locative applicative *-i* or the causative/applicative *-ka* as in (39a) and (37) above.

(40) Bound intransitive roots with agentive voice prefix as predicate

a. *ka* *n-capak* *baih*
FUT AV-discard just

'(The cigarettes) will just be thrown away.'

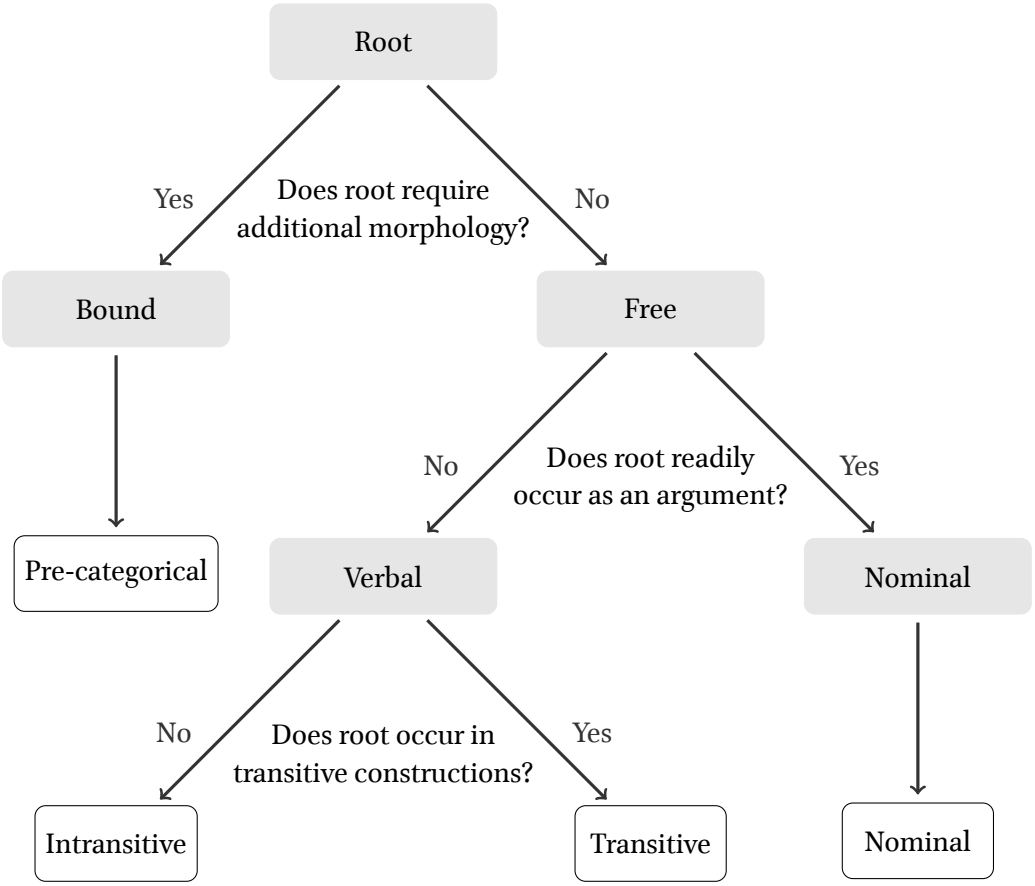
(BJM01-010, 00:09:43.541–00:09:44.421, Speaker: Burhimin)

b. *ng-alih* *ke* *sini* *muni=nye.*
AV-move ALL here QUOT=3

'(I) moved here she said.' (BJM01-011, 00:20:58.318–00:20:59.715, Speaker: Jamisah)

This process of determining the root classes is broken down into an ordered series of binary choices, which is schematized in Figure 3.1 below. This schema essentially outlines the systematic morphosyntactic aspects of root classes, including whether the root is (i) bound or free, (ii) nominal or verbal, and (iii) transitive or intransitive.

Figure 3.1: Schema for determining root categories



Another dimension of roots is their productivity. While some roots only occur with a single affix (see the discussion in Section 3 above), a number of roots can occur with a range of verbal affixes. The prior class of unproductive roots have arguably lexicalized with their affixes and have ceased to be roots in and of themselves (i.e., they have become new roots together with their affixes), despite the presence, in many cases, of an analyzable morphological break. For example, the word

gubukan [gubɔʔʔan] 'bowl (for washing hands)' has the form of a morphologically complex word (i.e., gemination of glottal stop and the lack of prepenultimate vowel neutralization) with an apparent nominalizing suffix *-an*. However, *gubuk*, presumably meaning 'wash', does not occur with any other verbal or even nominal affix.

The combinatorial possibilities of the productive roots, however, seem to run the gamut. Many roots can only occur with a single or small set of affixes (e.g., the nominal *bunting* 'new spouse' occurs on its own or with the prefix *be-* as in *be-bunting* 'get married'). Many roots still are quite productive. For example, consider the four productive roots in Table 3.1 below, which shows the possible combinations of the affixes in the first column, including the nominalizing suffix *-an* (Section 3.1.1) and three verbal voice prefixes (i.e., middle voice *be-* MID, agentive voice *(me)N-* AV, and optional patientive voice prefix *di-* PV) and two valency increasing suffixes (the causative/applicative suffix *-ka* CAUS/APPL and the locative applicative suffix *-i* LOC.APPL) (see Section 3.1.2).

Table 3.1: Root combinatorics for four productive roots

	capak 'discard'	*idup* 'live'	*tanam* 'plant'	*gunting* 'scissors'
FREE	—	*idup* 'live/on'	*tanam* 'plant' (PV-only)	*gunting* 'scissors'
-an	*capak-an* 's.t. discarded'	—	*tanam-an* 'plant'	*gunting-an* 's.t. cut'
be-	*be-capak* 'take off'	—	*be-tanam* 'plant (rice)'	*be-gunting* 'use/have scissors'
te-	*te-capak* 'inadvertently discarded'	*te-idup* 'inadvertently turn on'	*te-tanam* 'be planted'	*te-gunting* 'inadvertently cut'
(me)N-	*n-capak* 'throw away (intransitive)'	—	*n-(t)anam* 'plant'	*ng-gunting* 'cut'
PV	—	—	*(di-)tanam* 'plant'	*di-gunting* 'cut'
-ka	*capak-ka* 'throw away'	*idup-ka* 'turn on'	*tanam-ka* 'plant'	*gunting-ka* 'cut for s.o.'
-i	*capak-i* 'take off'	*idup-i* 'watch over'	*tanam-i* 'plant in'	*gunting-i* 'cut repeatedly'

First, the root *-capak* 'discard' is bound; it requires further affixation to be a predicate or an argument as was shown above. As a bound root, it cannot occur in transitive constructions without further affixation of either *-i* LOC.APPL or *ka* CAUS/APPL. If it attaches to the agentive voice prefix (*me*)*N-*, it is intransitive. Second, the intransitive verbal root *idup* 'live' occurs on its own as a predicate. However, it cannot be affixed with the middle voice prefix *be-* MID, the agentive voice prefix (*me*)*N-* (without further affixation of a valency increasing suffix), or the nominalizer *-an* NMLZ. There is no systematic explanation for these gaps. The root cannot occur in a patient voice construction because it is intransitive. According to the analysis above, this restriction is systematic. When suffixed with a valency-increasing suffix, it can occur in an agentive or patientive voice construction. Third, the transitive verbal root *tanam* 'plant' is free, but only occurs in patientive voice constructions as a free root. The root occurs in all other constructions. Finally, the nominal root *gunting* 'scissors' is a free nominal root. However, unlike a number of other nominal roots, *gunting* 'scissors' is very productive and occurs with all possible affixes. Other nominal roots, however, rarely occur in the patientive voice construction without further valency increasing morphology. These examples highlight the fact that some combinatorial possibilities of the root are systematic (i.e., roots that can occur in the patientive voice), while others are less clearly systematic.

3.3 Distinguishing words, clitics, and affixes

In Besemah, there is a fundamental distinction between content and function words, which is important even when considering the phonological properties of words. In addition to having an open class membership (see Section 4.1 below), content words are, phonologically speaking, minimally bimoraic, meaning that they consist of at least two syllables CV(C).CV(C) (e.g., *kutu* [ku.tu] 'louse') or a single syllable with a coda consonant CVC (e.g., *lang* [laŋ] 'hawk') (see Gordon & Applebaum 2010 on notions of word-minimality cross-linguistically). Single syllable content words, however, include only a small set of words, many of which are loan words (e.g., *cit* [tʃɪt] 'paint' is a loanword from

Dutch). Function words—having a closed class membership—range from a single, monomoraic (C)V syllable to a longer bimoraic polysyllabic word. For example, the closed set of prepositions are mostly single, monomoraic syllables (e.g., *ke*= [kə] ALL, *li*= [li] 'by', etc.), but there is one exception: the preposition *ngaghi* [ŋa.ɣi] 'with', which is bimoraic. Furthermore, while there are a number of single-syllable function words, many of them meet the same bimoraic word minimality conditions that apply to content words (e.g., *lum* [lʊm] NOT.YET). Consequently, phonological words will be considered to be minimally bimoraic. All content words meet this word-minimality condition, but function words are split between those that meet the word-minimality condition and those that are phonologically deficient and do not meet the condition. The latter category are considered clitics.

There have been an ever expanding number of proposed criteria for clitics, beginning with Zwicky (1977). However, there is no single criterion that accounts for a category of clitics. Rather, a diverse set of criteria help loosely define heterogenous groupings of word-like affixes and affix-like words. Consider the following two criteria for clitics; one that distinguishes clitics from words and the other that distinguishes clitics from suffixes. The first simple criterion is the *binding* criterion from Zwicky (1985: 287), which states that clitics cannot occur in isolation, while words can. In Besemah, this criterion is necessary, but is not sufficient to distinguish clitics from words. In Besemah and many Malay isolects, function words can and do occur in isolation (e.g., as the response to a question), but there are still a number of phonologically robust function words that cannot occur on their own (e.g., the conjunction *mangke* [maŋkɨ] 'so that' or the preposition *ngaghi* [ŋaɣi] 'with'). There are, however, some interesting asymmetries here between monomoraic and bimoraic elements. For example, it is possible to use the aspect marker *lum* NOT.YET and the recent past tense marker *empai* REC.PST on their own, but not the perfective marker *la*= PFV or the future tense marker *ka*= FUT. Likewise, the longer form of the demonstrative *titu* DEM.DIST and *tini* DEM.PROX can occur on their own, but the shorter forms cannot occur on their own =*tu* DEM.DIST and =*ni* DEM.PROX. While these pairs provide nice evidence for such a criterion, there are forms that should be able to occur on their own, but alas they cannot. Unlike *lum* NOT.YET and *empai* REC.PST, the imperfective aspect marker

dang IPFV cannot occur on its own.

A second criterion (e.g., from Payne (1997)) states that clitics attach to phrases (e.g., noun phrase, verb phrase), while suffixes attach to roots or stems. In Besemah, this criterion cuts across apparent clitics and is neither a sufficient nor a necessary condition for the definition of clitic. While some clitics do attach to phrasal hosts, this condition does not regularly distinguish clitics from affixes (see below). This short discussion of two criteria for clitics demonstrates that there is no single criterion that can define a clitic category in Besemah. Rather, as is shown below, the behavior of clitics in Besemah fall somewhere between affixes and words along a number of interrelated criteria.

Clitics are minimally defined as phonologically deficient, thus they require a phonological host. This property of clitics distinguishes them from words. However, there is no single property that distinguishes clitics from affixes. Therefore, based on Aikhenvald (2002) and the many references cited therein, clitics in Besemah are distinguished from affixes based on four primary criteria: (i) correlation with words in their syntactic position within the same construction (e.g., Zwicky's (1977) simple vs. special clitics), (ii) phonological cohesion, (iii) selectivity, and (iv) type of host. Within each of these criteria, clitics can range from word-like to affix-like. Theoretically, a clitic is maximally word-like when (i) its position correlates with words in the same syntactic construction, (ii) it is 'loosely' connected to its host, (iii) it selects hosts from a wide range of categories, and (iv) it occurs at phrasal boundaries (i.e., a syntactically structured host). Conversely, an apparent clitic is maximally affix-like if (i) its position differs from words in the same syntactic constructions, (ii) it is more tightly bound or even fusional with its host, (iii) it selects its host from a single category, and (iv) it attaches directly to the host word, not the phrasal host. However, no clitic in Besemah falls into either one of these two groups (see below for examples).

Based on these criteria, clitics form a diverse group of function formatives, including aspect markers, demonstratives, pronouns, prepositions, among others functions, that often cut across functional domains. For example, of the handful of numeral classifiers (see Section 4.4), only the numeral classifier for human beings *gha=* CLS is a clitic; all other numeral classifiers are indepen-

dent words. Furthermore, in many cases, there are clitic-word pairs. For some, the two forms are historically related and can be used interchangeably. For example, the possessive clitic *=ku* 1SG attaches to the end of the possessed noun phrase, marking the possessor (e.g., *ading bujang=ku* 'my husband's younger brother'). When the free pronoun *aku* 1SG occurs in the same position, it serves the same possessive function (e.g., *ading bujang aku* 'my husband's younger bother'). However, there are cases where the alternation between the clitic pronoun and free pronoun occurs, but the forms are not related. For example, the third person possessive enclitic *=(ny)e* 3 and free pronoun *die* 3 function in precisely the same way as the first person possessive pronouns do, but do not have obviously related forms.

In the case of the numeral classifier for humans, the clitic/word alternations result in a different orderings of the numeral and the classifier. That is, the proclitic *gha=* CLS occurs before the numeral (e.g., *gha=due* 'two people'), while the free form occurs after the numeral (*due ughang* 'two people'). Finally, many clitics do not alternate with a free form; the entire class of aspectual clitics and prepositions do not have alternate word forms. There are also cases like the first person agent pronoun *ku=* 1SG, which does not alternate with the free pronoun *aku* 1SG. Table 3.2 presents a presumably complete list of clitics in Besemah. If the clitic is a part of a clitic/word pairing, the word is listed to the right of the clitic. It is important to note that many, but not all clitics are written as separate words in the orthography. When they are written as a separate word, they are represented in the angle brackets in the orthography column. All other clitics are adjoined to their hosts in the orthography and represented in the typical manner.

In order to better understand the range of possibilities of the clitics listed above, it is useful to compare two clitics: the focus enclitic *=lah* FOC and the first person agent proclitic *ku=* 1SG. The focus marker is quite similar to the descriptions of the same focus marker in other Malay isolects, including Standard Malay-Indonesian (Kroeger 2004: 155–157). The proclitic *ku=* 1SG is similar to that in descriptions of other Malay isolects (Cumming 1991: 38).

According to (i) *the correlation with words in their syntactic position within the same construction*,

Table 3.2: Clitics and word equivalents

Function	Orthography	Clitics		Words	
Aspect	⟨la⟩	*la=*	PFV		
	⟨ka⟩	*ka=*	FUT		
		gi=	PERS		
Demonstratives	⟨tu⟩	*=tu*	DEM.DIST	*(t)itu*	DEM.DIST
	⟨ni⟩	*=ni*	DEM.PROX	*(t)ini*	DEM.PROX
Pronouns		*=(ny)e*	3		
		=ku	1SG.POSS	*aku*	1SG.POSS
		ku=	1SG		
Prepositions	⟨ke⟩	*ke=*	ALL		
	⟨di⟩	*di=*	LOC		
	⟨nga⟩	*nga=*	'with'		
	⟨li⟩	*li=*	'by'		
Miscellaneous	⟨ne⟩	*ne=*	N.LI	*ende*	N.LI
		=lah	FOC		
		gha=	CLS	*ugha(ng)*	CLS
	⟨ji⟩	*ji=*	QUOT	*uji*	QUOT

the agent proclitic *ku=* 1SG as a pronoun has a clear person reference and fulfills this function in opposition to other phonologically independent first and second person pronouns that occur in the same syntactic position. Consider the examples in (41) below.

(41) Agent pronouns: the proclitic *ku=* 1SG and free pronoun *kami* 1PL.EXCL

a. *ijat tu lah ku=ambik.*
seed DIST PFV 1SG=[PV]take

'I took the seeds.' (Elicited, Speaker: Hendi)

b. *ijat tu lah kami ambik.*
seed DIST PFV 1PL.EXCL [PV]take

'we took the seeds.' (Elicited, Speaker: Hendi)

In (41a), the agent proclitic *ku=* 1SG attaches to an unprefixed transitive verb *ambik* 'take' in the patientive voice construction (see Section 4.2.1). If the agent is a full pronoun *kami* 1PL.EXCL as in (41b), it occurs in the same position as *ku=* 1SG. Crucially, *kami* 1PL.EXCL in (41b) is not phonologically

dependent on the verb, whereas *ku=* in (41a) is. The enclitic *=lah* FOC, on the other hand, does not correlate with any other word; there are no words that fulfill some similar (or opposing) function and/or occupy the same position(s) in focus constructions. Therefore, according to criterion (i), the proclitic *ku=* 1SG would be considered more word-like and *=lah* FOC would be considered more affix-like.

According to (ii) *phonological cohesion*, *ku=* 1SG and *=lah* FOC show similar degrees of phonological cohesion, but in different ways. Enclitics, such as *=lah*, FOC, show prosodic cohesion as word stress shifts to the final syllable whether the final syllable is a suffix or an enclitic (e.g., *makan* [ma'kan] 'eat' becomes *makan=lah* [makan'lah] 'eat'=FOC). Proclitics (and prefixes) do not affect the stress, but in the case of *ku=* 1SG, cliticization can affect the syllabification of certain vowel initial roots. For example, if *ku=* attaches to the root *enjuk* [əɲdʒʊʔ] 'give', the root-initial vowel is commonly replaced by the vowel in the proclitic, resulting in *ku=enjuk* [kuɲ.dʒʊʔ] 'I give'. This pattern of syllabification does not occur with free pronouns (e.g., *kamu* 2PL) in the same position (e.g., *kamu enjuk* [kamu əɲ.dʒʊʔ] 'you all give'). Therefore, according to criterion (ii), both *ku=* 1SG and *=lah* FOC share equally affix-like patternings.

In regards to (iii) *selectivity*, *ku=* 1SG only attaches to unprefixed transitive verbs as in the example in (41a) above, while *=lah* FOC attaches to a diverse set of elements. In the examples below, *=lah* FOC attaches to an affixed or bare verb in (42) and (43), demonstrative adverb in (44), auxiliary verb in (45), and quantifier in (46).

(42) Enclitic *=lah* FOC on bare patientive voice verb host

aku curit=lah jiku,
1SG [PV]pluck=FOC QUOT.1SG

'I was KICKED OUT (lit. plucked) I said.'

(BJM01-008, 00:05:03.075—00:05:05.530, Speaker: Emi)

(43) Enclitic *=lah* FOC on affixed agentive voice verb host
ng-(k)inak-i=nye=lah,
AV-see-LOC.APPL=3=FOC

'(I) SAW THEM.' (BJM01-010, 00:32:32.447 – 00:32:33.048, Speaker: Aripin)

(44) Enclitic *=lah* FOC on demonstrative adverb
umak la lahir di sini=lah.
mother PFV born LOC here=FOC

'mother was born HERE.' (BJM01-001, 00:03:08.792 – 00:03:10.403, Speaker: Sira)

(45) Enclitic *=lah* FOC on auxiliary verb
pacak=lah m-(p)ucung deghian=(ny)e,
can=FOC AV-pick durian=3

'(we) COULD pick their durian fruit.'

(BJM01-011, 00:05:40.243 – 00:05:41.446, Speaker: Rili)

(46) Enclitic *=lah* FOC on quantifier
la abis gale=lah tuape kinah.
PFV empty all=FOC what ever

'everything was ALL gone.' (BJM01-002, 00:19:59.606 – 00:20:02.805, Speaker: Munaya)

In the final criterion (iv) *type of host*, *=lah* FOC attaches to phrasal constituents in noun phrases, whether the noun phrase is the predicate in (47) or argument in (48) . The enclitic *=lah* FOC attaches to the right edge of the noun phrase, following all other suffixes and enclitics.

(47) Bare intransitive verb root as predicate
sakit angat=lah die tu madak=(ny)e.
sick hot=FOC 3 DEM.DIST formerly=3

'I was kicked out (lit. plucked) I said.'

(BJM01-002, 00:07:05.255 – 00:07:06.972, Speaker: Sarkani)

(48) Bare intransitive verb root as predicate

aku *ng-aning* *die* *tulah,*
1SG AV-hear 3 DEM.PROX=FOC

'I heard HIM.' (BJM01-002, 00:08:23.199 – 00:08:24.010, Speaker: Munaya)

If *=lah* FOC is encliticized to anything other than a noun phrase, its host type is much more free and it attaches to various verbs, auxiliaries, and adverbials as was shown in the examples (42)–(46) above. On the other hand, *ku=* 1SG attaches only to transitive verbs that have not been prefixed. According to criterion (iv) then, *=lah* FOC is a more word-like clitic, while *ku=* is a much more affix-like clitic. A summary of the criteria for these two clitics is provided in Table 3.3 below.

Table 3.3: Example criteria for clitics *=lah* FOC and *ku=* 1SG

	Correlation with words	**Phonological cohesion**	**Selectivity**	**Type of host**
=lah	no correlate	stress	lowly selective	phrases/words
ku=	correlate	syllabification	highly selective	transitive verb

Finally, in Besemah, many of the clitics in Table 3.2 occur alongside other clitics in what Aikhenvald (2002) calls 'clitic-only' words. In many cases, these 'clitic-only' words have fossilized; they show patterns of cliticization that are no longer productive and/or compositional. Therefore, in nearly every case, it is clear that these 'clitic-only' words have lexicalized (or possibly grammaticalized in some cases). In every case, these 'clitic-only' words are made up of a preposition or the light noun proclitic and pronominal enclitic. In Besemah orthography, 'clitic-only' words are represented as separate words as shown in the righthand column below.

Table 3.4: Clitic-only words

Proclitic		**Enclitic**		**Clitic-only word**	
li=	'by'	*=ku*	1SG	*liku*	'by me'
		=nye	3	*linye*	'by them'
ne=	LI.N	*=ku*	1SG	*nekuk* [nəkʊʔ]	'mine'
		=nye	3	*nenye*	'theirs'
ji=	QUOT	*=ku*	1SG	*jiku*	'I said'
		=nye	3	*jinye*	'they said'

Chapter 4

Syntax

This chapter outlines the basic syntax of Besemah. Section 4.1 begins with a discussion of word classes in Besemah, describing the basic properties of major content word classes: nouns, verbs, and adverbs. The next section details the basic clause structure, focusing on verbal predicates in Section 4.2.1 and non-verbal predicates in Section 4.2.2. Finally, several important topics in Besemah syntax are outlined in the remainder of the chapter, including valency increasing suffixes (Section 4.3), noun phrase structure (Section 4.4), tense-aspect-mood (TAM) marking (Section 4.5), and negation (Section 4.6).

4.1 Word classes

In Besemah, there is a fundamental distinction between content words and function words. Content words consist of three open word classes: nouns, verbs, and adverbs. Function words consist of a number of closed word classes. Discussions of several different function word classes are sprinkled throughout this chapter (e.g., TAM markers in Section 4.5, negators in Section 4.6).

4.1.1 Content word classes

The content word classes in Besemah include three classes: noun, verb, and adverb. Besemah, like many other western Austronesian languages, does not distinguish a separate class of adjectives. Rather, words with meanings that correspond to adjectives in other languages form a subclass of (stative) verbs in Besemah (Thompson 1988, Dixon 2004). Verbs prototypically serve predicative functions, whereas nouns are prototypically referential (Hopper & Thompson 1984, Croft 2000). Adverbs are a much more heterogenous class of words that serve various non-predicative and non-referential functions within the clause. Section 3.2 showed that while many nominal and verbal roots occur in the clause without any further affixation, these roots can also occur with various derivational affixes that change the category of the root or significantly alter the argument structure of the verb. For these reasons, root classes and word classes are treated separately. This section focuses on word classes.

Verbs Words that fall into the verb class usually function as predicates. These verbal predicates can occur without any morphology as in (49), but commonly occur with one of four voice prefixes, which were presented in Section 3.1.2. These verbal prefixes include the non-volitional voice *te-* NVOL in (50), the middle voice *be-* MID in (51), the agentive voice (*me*)*N-* AV in (52), and the patientive voice *di-* PV in (53).

(49) Verb without any additional morphology
die *la* *duduk.*
3 PFV sit
'she already sat down.' (BJM01-015, 00:26:41.805–00:26:42.605, Speaker: Rumsiah)

(50) Verb with non-volitional voice prefix *te-* NVOL

ading=(ny)e	*ini*	*tadi*	*te-kinak*	*ngaghi*	*jambu.*
younger.sibling=3	earlier	DEM.PROX	NVOL-see	with	guava

'his little brother earlier saw the guava.'

(BJM01-003, 00:01:00.970–00:01:03.020, Speaker: Sutarso)

(51) Verb with middle voice prefix *be-* MID

sate	*die-*	*die*	*udim*	*be-kiaji*	*eh?*
after	HES	3	CMPL	MID-go.on.Hajj	right

'after he went on the Hajj, right?' (BJM01-001, 00:14:57.732–00:14:59.646, Speaker: Sira)

(52) Verb with agentive voice prefix *(me)N-* AV

Asmida	*ng-ubat-i=nye*	*madak=(ny)e.*
A.	AV-medicine-LOC.APPL=3	back.then=3

'Asmida treated him back then.'

(BJM01-002, 00:06:33.050–00:06:34.110, Speaker: Munaya)

(53) Verb with patientive voice prefix *di-* PV

kami	*tadi*	*la*	*di-tinggal-ka*	*singe=nye*
1PL.EXCL	earlier	PFV	PV-leave-CAUS/APPL	result=3

' earlier, we were already left, as a result.'

(BJM01-002, 00:21:57.345–00:21:58.695, Speaker: Munaya)

The verbal status of any given word is also evinced by its ability to be modified by TAM formatives as in (54)–(56). These formatives typically precede or are procliticized to the verb that they are modifying. In (54), the recent past tense formative *empai* REC.PST directly precedes the verb. In (55), the perfective aspect proclitic *la* PFV attaches to the verb. In (56), the inferential mood formative *cengki* INFR again directly precedes the verb.

(54) Verb with the recent past tense formative *empai* REC.PST

Emi empai balik.
E. REC.PST return

'Emi just returned.' (BJM01-008, 00:20:25.290–00:20:26.520, Speaker: Kudar)

(55) Verb with the perfective aspect formative *la* PFV

die la matik.
3 PFV die

'he already died.' (BJM01-002, 00:13:15.646–00:13:16.906, Speaker: Sawia)

(56) Verb with the inferential mood formative *cengki* INFR

cengki buat=(ny)e tempuyak.
INFR [PV]make=3 k.o.food

'they must have made a *tempuyak* dish.'

(BJM01-010, 00:05:07.932–00:05:59.153, Speaker: Aripin)

Finally, the negative particles have also been used as evidence for a verb class as in (57). Verbal predicates are typically negated with *dide* NEG or *dik* NEG, whereas nominal predicates are typically negated with *bukan* NEG (or its variants *bukane* NEG and *kane* NEG) (see Section 4.6).

(57) Verb with the negative particle *dide* NEG

endung bapang kabah tu dide ng-(k)elaghai.
mother father 2SG DEM.DIST NEG AV-care.for

'your parents (lit. mother-father) did not take care of (you).'

(BJM01-004, 00:13:28.686–00:13:30.114, Speaker: Hendi)

Nouns Words that fall into the noun class are those that are prototypically referential and serve as arguments within the clause. The nominal status of words is evinced by their ability to occur in phrases with descriptive modifiers as in (58), numerals and numeral classifiers as in (59), possessive pronouns as in (60) as well as demonstrative determiners as in (61).

(58) Nouns with descriptive modifiers

kucing kecik la me-lanting-lanting,
cat small PFV AV-RDP-bounce

'the small cat had bounced around,'

(BJM01-025, 00:03:13.150–00:03:14.480, Speaker: Parit)

(59) Nouns with numerals and numeral classifiers

a. *ghumah tige ijat ni,*
house three CLS DEM.PROX

'(as for) these three houses,'

dak-kecik=(ny)e dik bedie liwat di aku.
child=3 NEG exist pass LOC 1SG

'there were not any children aside (lit. pass) from me.'

(BJM01-001, 00:03:48.110–00:03:51.120, Speaker: Sawia)

b. *Duski n-(t)anam empat ratus batang di kebun sini.*
D AV-plant four hundred CLS LOC field here

'Duski planted four hundred trees in the field here.'

(BJM01-010, 00:23:48.854–00:23:51.689, Speaker: Aripin)

(60) Nouns with possessive pronouns

endung bapang kabah tu dide ng-(k)elaghai.
mother father 2SG DEM.DIST NEG AV-care.for

'your parents (lit. mother-father) did not take care of (you).'

(BJM01-004, 00:13:28.686–00:13:30.114, Speaker: Hendi)

(61) Nouns with demonstrative determiners

enduk tu masih be-kilik-an wah.
mother DEM.DIST PERS MID-hold-NMLZ EX

'the mother was still carrying a child (lit. had a carried thing).'

(BJM01-001, 00:01:52.123–00:01:53.604, Speaker: Sawia)

Noun phrases in Besemah are head initial (see Section 4.4). Therefore, modifiers follow the head noun; in (58), the noun *kucing* 'cat' is followed the modifier *kecik* 'small'. Numerals most commonly

occur with a numeral classifier, and the numeral together with numeral classifier can either precede or follow the head noun. The example in (59a) shows the head noun *ghumah* 'house' followed by the numeral *tige* 'three' and the numeral classifier *ijat* CLS (lit. 'seed'). In (59b), the numeral *empat ratus* 'four hundred' occurs before the head noun *batang* CLS (lit. 'tree'), which, in this case, also serves as the classifier. Nominal possession is marked by the order POSSESSED-POSSESSOR. In (60), the compound noun *endung bapang* 'parents (lit. mother father)' is the possessed noun and is followed by the pronoun *kabah* 2SG, which is the possessor. Finally, the enclitic demonstrative determiners *tu* DEM.DIST and *ni* DEM.PROX occur at the end of the noun phrase. In (61), the noun *enduk* 'mother' is followed by the demonstrative determiner *tu* DEM.DIST.

Distinguishing nouns and verbs There are primarily two complicating factors in distinguishing nouns from verbs in Besemah. The first difficulty that makes the noun-verb distinction more opaque comes from the fact that Besemah lacks any copula in predicative nominal constructions. The consequence is that bare intransitive verbal predicates as in (62) appear similar to predicate nominal constructions as in (63).

(62) Verbal predicate

anak	*cucung*	*kamu*	*la*	*takut*	*gale.*
child	grandchildren	2PL	PFV	scare	all

'all of your grandchildren's children were scared.'

(BJM01-002, 00:19:47.985–00:19:49.695, Speaker: Munaya)

(63) Nominal predicate

diwik	*la*	*ketue*	*mak*	*ini.*
self	PFV	head	like	DEM.PROX

'she (lit. self) already (became) the leader now.'

(BJM01-008, 00:16:33.860–00:16:35.000, Speaker: Emi)

At first blush, the two predicates *takut* 'scared' in (62) and *ketue* 'leader' in (63) look very similar. While verbal and nominal predicates take different sets of negators, briefly mentioned above

(see Section 4.6), both are unaffixed, intransitive predicates, and both are preceded by the aspectual clitic *la* PFV. While it is typical for nouns to serve a predicative function, it is not typical for nouns to occur with aspectual formatives. However, one important difference between nominal and verbal predicates is that nominal predicates change meaning when they occur with aspectual markers. That is, they carry an additional inchoative meaning (e.g., '*become* the leader' in (63)). Croft (2000) makes a similar point for Makah, a Wakashan language spoken in Canada (cf. Jacobsen 1979). When a nominal root is used in predicative positions and occurs in a marked momentous aspect, it takes an inchoative meaning. While the predicative nominals can occur with aspect markers, they do change meaning.

The second complicating factor arrises from the combination of two properties of Besemah grammar: (i) arguments of the verb are commonly left unrealized, and (ii) functional elements of the noun phrase are sometimes present in subordinate clauses. These factors lead to instances where a verb appears to be in a referential position. However, upon closer inspection, these are indeed instances of a subordinate clause with unrealized arguments.

First, consider the fact that arguments of the verb are commonly unrealized in Besemah, as in the short dialogue in (64).

(64) Unrealized arguments

1 DAMSI: *dighi di- ngambang-ng-ambang-ka=nye.*
self HES RDP-AV-plant-CAUS/APPL=3
'we planted them (i.e., cocoa seeds),'

2 *mangke dide liut,*
so NEG slick
'in order that (the cocoa seeds) are not slick,'

(0.4)

3 ARIPIN: *dide anu,*
NEG umm

'no umm,'

(2.5)

4 DAMSI: *basuh baih.*
[PV]wash just

'(we) just wash (the cocoa seeds).'

(BJM01-010, 00:26:51.292–00:26:58.070)

In the final line of this conversation, the verb *basuh* 'wash' is a transitive predicate without any of its arguments. Both arguments, however, are clear from the previous discourse. The agent *dighi* 'self' in the first line refers to the participants in the conversation; it is being used as a first person plural inclusive pronoun in the first line and is the implied agent in the last line. The patient argument 'cocoa seeds' is the topic of the current conversation and is referred to with the enclitic *=nye* 3 in the first line and is implied as the single argument of the predicate *liut* 'slick' in the second line and as the patient in the last line. This example demonstrates how arguments of the verb are left unrealized.

Second, consider the structures of noun phrases and subordinate clauses. It is typical for a demonstrative determiner to occur not only after a noun as in (61) above, but also after a subordinate clause as in (65) below.

(65) Marked subordinate clause marked by demonstrative determiner *tu* DEM.DIST

waktu kaman Giri n-(t)anye tu,
when group G. AV-ask DEM.DIST

'when Giri's group asked,'

masih nak se-jutah die.
PERS want one-million 3

'he still wanted one million (rupiah).'

(BJM01-010, 00:34:52.208–00:34:54.639, Speaker: Burhimin)

In this example, the subordinate clause in the first line is marked by the subordinator *waktu* 'when'

before the clause and the demonstrative determiner *tu* DEM.DIST after the clause. When the subordinator and some or all of the arguments of the verb are present, as in the example in (65), the distinction between noun phrase and subordinate clause is fairly clear. However, the subordinator is not always present, and the arguments of the predicate are not always realized. Consider the example in (66).

(66) Unmarked subordinate clause marked by demonstrative determiner *tu* DEM.DIST

1 HAIRIL: *tuape ng-elam kapuh.*
what AV-disappear ETCETERA
'so'

2 PITER: *ng-elam tu,*
AV-disappear DEM.DIST
'(when I) disappeared,'

3 *m-beli guring-an agi.*
AV-buy fry-NMLZ again.
'(I) bought fried snacks again.'

(BJM01-004, 00:59:22.607–00:59:25.522)

In the second line of this short dialogue, there is a subordinate clause without a subordinator, which consists only of a verbal predicate followed by a demonstrative determiner. The lack of subordinator and argument of the verb *ngelam* 'disappear', in addition to the presence of the demonstrative determiner *tu* DEM.DIST, make the verb look as if it were a noun followed by the demonstrative determiner. However, it clear from the discussion above that this example is a subordinate clause.

This type of analysis is further supported by the fact that other properties of nouns do not occur in examples like (66) above. For example, there are no cases where the referent in such an example is possessed as in (60), which is possible for even abstract nouns. In order for such referents to be possessed, they must be nominalized first (see Section 3.1.1). Consider the example in (67) that demonstrates this type of nominalization with the nominalizer *peN- -an* NMLZ.PROC.

(67) Nominalization of possessed noun

kunak=(*ny*)*e* *ng*-(*k*)*aruk* *benagh,*
actually AV-bother true

'actually (the towel) was really bothersome,'

peng-(*k*)*inak-an* *aku* *tadi.*
NMLZ.PROC-see-NMLZ.PROC 1SG earlier

'(according to what) I saw (lit. my seeing).'

(BJM01-004, 00:41:29.840–00:41:31.270, Speaker: Hendi)

In this example, the verbal root *kinak* 'see' is nominalized with the process nominalizing circumfix *peN- -an* NMLZ.PROC, which is, in turn, possessed by the pronoun that follows the noun *aku* 1SG.

Adverbs and adverbials Adverbs are a heterogeneous class of words that are neither prototypically referential nor predicative (Payne 1997: 69–70). These include words that express manner as in (68), time as in (69), frequency as in (70), certainty as in (71), or source of information as in (72). These adverbs occur in many different positions within the clause. For example, they can occur at either the beginning of a clause as in (69) or the end of a clause as in (71). They can also occur before the predicate as in (70) or after the predicate as in (72).

(68) Manner adverb *cepat* 'quick(ly)'

dide *die* *tau* *nak* *cepat* *benagh,*
NEG indeed can want quickly true

'(he) didn't know how to really quickly,'

ng-ambik *pisang* *ni.*
AV-take banana DEM.PROX

'take the banana.' (BJM01-019, 00:01:40.490–00:01:43.730, Speaker: Neti)

(69) Time adverb *kemaghi* 'yesterday'

kemaghi ke kebun ku=tambah-i.
yesterday ALL field 1SG-[PV]add-LOC.APPL

'yesterday I added (the cocoa plants) to the field.'

(BJM01-010, 00:14:21.448–00:14:26.201, Speaker: Aripin)

(70) Frequency adverb *ghapat* 'often'

die tu ghapat ng-ibal ke pughuk iligh tu,
3 DEM.DIST often AV-visit ALL side down.river DEM.DIST.

'they often visit the downriver side,'

(BJM01-002, 00:01:23.929–00:01:26.376, Speaker: Munaya)

(71) Epistemic adverb *kalu* 'probably'

dik bedie Ridi,
NEG exist R.

'Ridi is not here, (lit. there is no Ridi)'

di iligh kalu.
LOC down.river probably

'(he) is down river, probably.'

(BJM01-002, 00:15:18.240–00:15:19.600, Speaker: Asril)

(72) Evidential adverb *uji* QUOT

la tue uji.
PFV old QUOT

'(he) is already old they say.' (BJM01-004, 00:17:12.290–00:17:13.260, Speaker: Hendi)

A number of adverbs are formed with the third person enclitic =(*ny*)*e* and follow the structure of possessed nouns, as in the example in (73) below. While these adverbials may be analyzed as noun phrases, their free distributional patterns within the clause more closely follow that of adverbs than of nouns (cf. Ewing 2005: 236–37).

(73) Epistemic adverb *kunake* 'actually'
kunak=(*ny*)*e* *mudah* *nandie* *tumbuh* *titu.*
actual=3 easy indeed grow DEM.DIST
'actually those (plants) really grew.'
(BJM01-010, 00:12:54.205–00:12:55.869, Speaker: Damsi)

4.2 Basic clause structure

The clause in Besemah minimally consists of a predicate, but typically includes a predicate and anywhere from one to three core arguments. Predicates fall into either verbal or non-verbal categories. Non-verbal predicates are always intransitive and consist of noun phrases or prepositional phrases. Verbal predicates are intransitive, transitive, or ditransitive with the single ditransitive verb *enjuk* 'give'. The vast majority of transitive verbs are marked as agentive voice or patientive voice; there is a small closed class of transitive verbs that are not marked for voice, referred to here as bare transitive verbs.[1] Likewise, intransitive verbal predicates fall into the same basic categories: predicates that take one of several verbal voice prefixes (i.e., *te-* NVOL, *be-* MID) and predicates that occur without any voice morphology. However, the bare intransitive verbs represent a large category of predicates, whereas bare transitive verbs do not.

While many adjuncts are oblique arguments marked by prepositions, some adjuncts are unmarked as in the case of adverbials in Section 4.1.1. Core arguments, however, are always unmarked (e.g., for case). Core arguments are categorized here according to two grammatical relations: the PRIMARY ARGUMENT—analogous to the so-called 'subject' in studies of other Malay isolects—and the SECONDARY ARGUMENT—analogous to 'object' or 'non-subject' in studies of other Malay isolects (Chung 1976a, Musgrave 2001).[2] Generally speaking, the primary argument differs from the sec-

[1]Bare transitive verbs differ from unaffixed roots that occur in the patientive voice constructions, which were discussed in Section 3.2.

[2]In the case of the ditransitive verb, both the recipient and theme arguments are unmarked. However, the recipient patterns with secondary arguments.

ondary argument because it enjoys much more freedom within the clause (see Section 5.2 on word order), and can be quantified by the universal quantifier (see Section 5.3 on quantifiability), while the secondary argument is tightly connected to the predicate (again, see Section 5.2 on word order), and it cannot be quantified by the universal quantifier (again, see Section 5.3 on quantifiability). The treatment of clause structure below describes arguments of the verb in terms of primary arguments and secondary arguments. However, evidence for these grammatical relations is provided in Part II on the symmetrical voice system in Besemah.

As is the case in many Malay isolects, arguments of the predicate are commonly unrealized. While unrealized arguments can be argued to be the default, with argument realization needing motivation, we can draw several generalizations about argument non-realization. For example, on the one hand, arguments that have already been established in the discourse and are clear to participants are commonly unrealized as demonstrated in (64) above. On the other hand, arguments that are non-specific or inferable from the predicate and/or larger context are also unrealized as in (74) and (75), respectively.

(74) Unrealized non-specific arguments

1 DEWI: *laki sughang begawih?*
husband alone MID-work
'(your) husband is working alone?'

2 RILI: *mhmm.*
uh-huh
'uh-huh.'

3 *nge-pak pule die mak ini.*
AV-pack also 3 now DEM.PROX
'he is also packing (stuff) now.'

(BJM01-011, 00:00:29.617–00:00:33.768)

(75) Unrealized inferred arguments

sate=lah kari n-(t)anam,
after=FOC ready AV-plant

'after (we) were ready to plant (coffee).'

tanye-ka=lah jiku.
ask-CAUS/APPL=FOC QUOT.1SG

'ask (them) again I said.'

(BJM01-011, 00:02:08.720–00:02:10.350, Speaker: Rili)

In (74), the patient argument of the verb *ngepak* 'pack' in the last line has not been mentioned and refers to a very general entity that would be equivalent to 'things' or 'stuff' in English. In (75), the patient argument of the verb *nanam* 'plant' in the first line has also not been mentioned in the previous discourse, but clearly refers to 'coffee', at least for the participants in the conversation. The larger context here is what helps participants understand the unrealized referent. For one, coffee is the primary cash crop in the Besemah highlands, so in many ways it might be considered the 'default' referent, given the verb *tanam* 'plant'.

Finally, in order to discuss the properties of each of these core arguments, I employ Comrie's (1978) notation for macro-role labels: S for the single argument of an intransitive verb, A for the most agent-like argument of a transitive verb, and P for the most patient-like argument of a transitive verb. In later discussions of grammatical relations in Part II, I employ a modified version of this system, which further subcategorizes each of the labels according to the voice construction in which it appears.[3]

[3]These labels are not unproblematic, as Mithun & Chafe (1999) have shown, 'because [they obscure] the incommensurable ways in which participants may be related to events or states' (569). The same issue arrises for bare transitive clauses in Besemah (see Section 4.2.1 for discussion). However, for the purposes here, it is a useful convention for discussing grammatical relations and syntactic alignment in Besemah.

4.2.1 Verbal predicates

Verbal predicates vary along two dimensions: transitivity and voice-marking. As mentioned above, the majority of transitive predicates are voice-marked; there are only a handful of transitive predicates that occur without any voice-marking. While this dissertation is primarily concerned with voice-marked transitive predicates, a short description of the bare transitive verbs is presented for the sake of completeness.

Bare transitive verb constructions Bare transitive constructions are restricted to a small closed class of verbs: *ghulih* 'get', *keruan* 'know', *endak/dindak* 'want/not want', *galak* 'want', *ade* 'have', *jadi* 'become'. These verbs cannot take any sort of voice morphology, but they do take two core arguments as in (76) and (77).

(76) Bare transitive verb construction

ayuk	*Hendri,*
older.sister	H.
A	

'Hendri's mom (lit. older sister Hendri),'

ghulih	*kangkung*	*karuk-karuk*	*nagh.*
get	water.spinach	RED-bad	INTENS
	P		

'got really bad water spinach.'

(BJM01-002, 00:29:22.092 – 00:29:22.752, Speaker: Munaya)

(77) Bare transitive verbal predicate

tuape	*li*	*bungsu*	*masih*	*keruan*	*dusun*=(*ny*)*e.*
what	because	youngest.sibling	still	know	village=3
		A			P

'because the youngest (brother) still knew his village.'

(BJM01-012, 00:10:58.430–00:11:00.840, Speaker: Karim)

There is some evidence that these constructions pattern together with agentive voice constructions.

For example, in agentive voice constructions, A is the primary argument, and as such it either precedes the verb or follows the verb and the P argument (see Chapter 5 for more details). Bare transitive constructions behave in the same way. A commonly precedes the verb as in (76) and (77) above, but it can also follow the verb and P as in (78) below. In this example, *jeme dusun tu* 'the people in the village' is the A argument (i.e., the getter) and follows both the verb *ghulih* 'get' and the P argument *empat karung lime karunge* 'five sacks (or) six sacks (of coffee)' (i.e., the gotten thing).

(78) Transitive verbal predicate

la	*ghulih*	*empat*	*karung*	*lime*	*karung*=(*ny*)*e*	*jeme*	*dusun*	*tu.*
PFV	get	four	sack	five	sack=3	people	village	DEM.DIST
		P				A		

'people in the village already got four or five sacks (of coffee).'

(BJM01-011, 00:16:12.408–00:16:14.927, Speaker: Rili)

Finally, like agentive voice constructions, when P is a third person referent, it can be encliticized to the verb (see below) as in (79). In this example, the third person enclitic *=nye* attached to the bare transitive verb *endak* 'want'. Therefore, the primary distinction between bare transitive verbs and agentive voice verbs is the presence of the agentive voice prefix.

(79) Transitive verbal predicate

kate	*bapak*	*tue*	*madak*=(*ny*)*e*	*aku*	*dide*	*endak*=(*ny*)*e.*
QUOTE	father	old	previously=3	1SG	NEG	want=3
				A		=P

'uncle said back then, I do not want it (i.e., an old-style home).'

(BJM01-001, 00:23:08.274–00:23:10.139, Speaker: Sawia)

Voice-marked transitive verb constructions Transitive predicates take two core arguments—A, the more agent-like argument, and P, the more patient-like argument. There is a basic alternation between agentive voice (AV) and patientive voice (PV) constructions. In agentive voice constructions, the verb is prefixed with (*me*)*N-*, and A is the primary argument, while P is the secondary argument

(see Section 2.4 for the morphophonology of the agentive voice prefix). Consider the example of agentive voice in (80).

(80) Agentive voice

Duski	*n-(t)anam*	*empat*	*ratus*	*batang*	*di*	*kebun*	*sini.*
D.	AV-plant	four	hundred	tree	LOC	field	here
A		P					

'Duski planted four hundred trees in the field here.'

(BJM01-010, 00:23:48.854–00:23:51.689, Speaker: Aripin)

In this example, the proper noun *Duski*, the A argument, is the primary argument and *empat ratus batang* 'four hundred plants', the P argument, is the secondary argument. A is typically preverbal, while P follows the verb prefixed with the agentive voice marker. Additionally, when P is a third person pronoun, it can be encliticized as the pronominal enclitic *=nye* 3 to the verb as in (81).

(81) Agentive voice with enclitic *=nye* 3

aku	*n-jemput=(ny)e,*
1SG	AV-pick.up=3
A	=P

'I picked him up.' (BJM01-004, 00:04:58.747–00:04:59.546, Speaker: Hendi)

The patientive voice constructions are more complex than the agentive voice constructions. In the patientive voice construction, P is the primary argument and A is the secondary argument. However, the form of the patientive voice construction crucially depends upon the person of the A argument. If A is first or second person, the verb does not (and cannot) take any additional affixation. Rather, the A pronominal argument immediately precedes the verb. If A is the first person singular pronoun, then it is procliticized to the root (see Section 3.1.2). All other first and second person pronouns occur immediately before the root, but are not procliticized to it. The patientive voice constructions with a first person singular A (i.e., *ku=* 1SG) and second person plural A (i.e., *kamu* 2PL) are demonstrated in (82) and (83), respectively.

(82) Patientive voice–first person

jeme	*ka-*	*Rambai*	*Kace*	*la*	*ku=gaghi*	*ni.*
people	HES	R.	K.	PFV	1SG=visit	DEM.PROX
P					A=	

'I visited the people of Rambai Kace.'

(BJM01-002, 00:15:29.280–00:15:31.490, Speaker: Sarkani)

(83) Patientive voice–second person

nik	*masak-masak,*
N.LI	RDP-ripe
P	

'(the ones) that are ripe (i.e., guava)'

kamu	*anyut-ka*	*gale.*
2PL	[PV]float-CAUS/APPL	all
A		

'you floated all (of them down the river).'

(BJM01-005, 00:02:40.961–00:02:43.021, Speaker: Munaya)

When A is third person in the patientive voice construction, the verb is optionally prefixed with *di-* PV and the secondary argument occurs immediately after the verb if it is an NP as in (84) or is encliticized to the verb if it is a pronoun as in (85). The examples in (a) demonstrate the patientive voice without any additional affixation and the examples in (b) demonstrate the patientive voice with the prefixation of *di-* PV.

(84) Patientive voice–NP

a.

aku	*la*	*ghabal-i*	*jeme*	*dumpit.*
1SG	PFV	[PV]pick.pocket-APPL	people	wallet
P			A	

'People already pick pocketed my wallet (Lit. I was pick pocketed of the wallet.)'

(BJM01-004, 00:59:54.900–00:59:56.580, Speaker: Hendi)

b. *mangke aku di-curit jeme jiku.*
so 1SG PV-pluck people QUOT.1SG
P A

'so the people kicked me out, I said.'

(BJM01-008, 00:09:54.054–00:09:55.554, Speaker: Emi)

(85) Patientive voice–third person

a. *ne dulu lungguk-ka=nye,*
N.LI before [PV]pile-CAUS/APPL=3
P =A

'he piled up (the one) from before (i.e., cocoa seeds)'

(BJM01-010, 00:16:45.227–00:16:46.423, Speaker: Aripin)

b. *aku di-renti-ka=nye kate=nye.*
1SG PV-stop-APPL=3 QUOT=3
P =A

'she stopped me she said.' (BJM01-008, 00:03:46.290–00:03:48.090, Speaker: Kudar)

In patientive voice constructions, the A argument may also occur in an agent phrase marked by one of several prepositions *li* 'by', *nga* 'with' or *ngaghi* 'with'. These prepositions are used interchangeably as a marker for the agent phrase. Examples of A within an agent phrase in a patientive voice construction that either remains unprefixed or is prefixed with *di-* PV is demonstrated in (86a) and (86b), respectively.

(86) Patientive voice with agentive phrase

a. *kalu nak tiup-ka nga Kudri titu.*
probably FUT [PV]blow-CAUS/APPL with K. DEM.DIST
A P

'probably Kudri should blow on (i.e., heal) that (i.e., your wound)'

(BJM01-002, 00:05:09.823–00:05:11.957, Speaker: Munaya)

b. *anye kalu jeme be-te-taun,*
but probably people MID-CV.RED-search

'but probably people (live with their parents) for years,'

...

di-tunde-ka	*saje*	*ngaghi*	*jeme*	*tue*	*tu.*
PV-follow-CAUS/APPL	only	with	people	old	DEM.DIST
		A			

'(they) are taken care of by (their) parents.'

(BJM01-011, 00:05:12.304–00:05:19.486, Speaker: Jamisah)

Furthermore, the A argument in a patientive voice construction may be coreferentially marked with the third person enclitic =(*ny*)*e* 3 and the agent phrase as in (87). Again, in the (a) example, the verb remain unprefixed, and in the (b) example, the verb is prefixed with *di-* PV.

(87) Patientive voice with enclitic and agentive phrase

a.

telepun-i=nye	*li*	*Bubi,*
[PV]telephone-LOC.APPL=3	by	B.
=A	A	

'Bubi called (the hospital in Lahat),'

(BJM01-010, 00:07:28.949–00:07:29.784, Speaker: Burhimin)

b.

aku	*masih*	*di-batak-i=nye*	*li*	*enduk,*
1SG	PERS	PV-bring-LOC.APPL=3	by	mother
P		=A	A	

'I was still brought by mother.'

(BJM01-011, 00:05:12.304–00:05:19.486, Speaker: Jamisah)

Finally, the agent argument may be omitted altogether, typically in cases where the agent is specific and inferable from the context or when the agent is general and unknown. Again, the prefix *di-* PV is still optionally marked on the verb; in (88) the verb is prefixed with *di-* PV and the agent is omitted, and in (89), the verb is unprefixed and the agent is omitted.

(88) Patientive voice with omitted agent

ende	*nining*	*Rusit,*
N.LI	grandmother	R.
P		

'the one that belongs to Rusit (i.e., Rusit's house)'

la	*nyelah=lah*	*la*	*di-tegak-i*	*embak*	*ini.*
PFV	right=FOC	PFV	PV-stand-LOC.APPL	like	DEM.DIST

'right, was already built like this.'

(BJM01-015, 00:27:05.728–00:27:10.550, Speaker: Sawia)

(89) Patientive voice with omitted agent

itik	*nak*	*enjuk.*
duck	FUT	give
R		

'the ducks should be given (food).'

(BJM01-011, 00:23:16.192–00:23:17.444, Speaker: Jamisah)

The nature of these constructions, whether some or all of them should be considered passive constructions or not, is a complex issue. It is taken up in much more detail in Section 5.4.1.

Intransitive predicates Many of the intransitive verbal predicates occur without any voice morphology, consisting simply of the verbal predicate and its primary argument as in (90). The primary argument typically occurs preverbally, but may also follow the predicate as in (91).

(90) Intransitive verbal predicate

aku	*duduk*	*di*	*depan,*
1SG	sit	LOC	front
S			

'I sat in the front,' (BJM01-008, 00:19:35.540–00:19:35.600, Speaker: Emi)

(91) Intransitive verbal predicate

empai	*bangun*	*aku,*
REC.PST	get.up	1SG
		S

'I just woke up,' (BJM01-004, 00:04:56.778–00:04:57.879, Speaker: Rafles)

Other intransitive verbal predicates require a voice prefix that triggers several meanings that were discussed in Section 3.1.2. This subsection looks at the most common intransitive voice prefixes:

(*me*)*N-* AV, *te-* NVOL, and *be-* MID.

In addition to marking transitive constructions, the agentive voice prefix (*me*)*N-* marks intransitive predicates when attached to different types of intransitive roots. The single argument of intransitive verbal roots prefixed with (*me*)*N-* AV range from volitional semantic agents as in (92) to non-volitional semantic patients as in (93).

(92) Intransitive agentive voice (*me*)*N-* AV prefix on verbal root with semantic agent

die	*ng-(k)icik*	*nga*	*kabah.*
3 S	AV-talk	COM	2SG

'he talked to you.' (BJM01-004, 00:33:35.273 – 00:33:36.341, Speaker: Rafles)

(93) Intransitive agentive voice (*me*)*N-* AV prefix on verbal root with semantic patient

anye	*ghumah=(ny)e*	*tu*	*la*	*n-(t)egak*	*di*	*sini*	*eh.*
but	house=3 S	DEM.DIST	PFV	AV-stand	LOC	here	FP

'but his house stood here, right.' (BJM01-001, 00:26:14.995–00:26:16.662, Speaker: Sira)

The prefix (*me*)*N-* AV also attaches to several stative verbs taking the meaning 'become VERB'. Consider the extended example in (94) below. In the second through fourth lines of this example, the agentive voice prefix attaches to stative verbs *besak* 'big', *kecik* 'small', and *keghuh* 'murky'.

(94) Intransitive agentive voice prefix (*me*)*N-* AV attached to stative verb root

mate	*ayik*	*sawah*	*titu*	*mak*	*ini*	*aghi,*
eye S	water	rice.paddy	DEM.DIST	like	this	day

'that is the source of the water these days,'

m-besak	*adak*	*mang,*
AV-big	NEG	uncle

'(the water) does not rise (lit. become big), uncle,'

ng-(k)ecik dide,
AV-small NEG

'(the water) does not fall (lit. become small),'

ng-(k)eghuh dide.
AV-murky NEG

'(the water) does not get mirky.'

(BJM01-002, 00:17:38.745–00:17:43.300, Speaker: Asril)

Finally, the agentive voice prefix attaches to noun roots resulting in a meaning that specifies a typical activity associated with the root as in (95) and (96).

(95) Intransitive agentive voice with nominal root

lum m-buah anguk kate=ku kan.
NOT.YET AV-fruit intend word=1SG right

'(the cocoa plants) haven't yet bore fruit is what I intended to say, right.'

(BJM01-010, 00:12:38.840 – 00:12:41.834, Speaker: Aripin)

(96) Intransitive agentive voice with nominal root

mamang-an kabah,
uncle-NMLZ 2SG

'your uncle,'

(0.4)

ari-an nga Tami,
day-NMLZ with T.

'was a day-laborer with Tami,'

me-lubang.
AV-hole

'(they) dug holes.'

(BJM01-011, 00:03:18.238 – 00:03:21.242, Speaker: Jamisah)

The middle voice prefix *be-* MID is the most frequent of the intransitive voice prefixes. Aside from its function as a middle voice marker (see below), the prefix *be-* MID carries a possessive meaning as

in (97), an instrumental meaning as in (98), or, when it is attached to a nominal root, a meaning that specifies the typical action associated with the root as in (99).

(97) Possessive *be-* MID

a. *aku dide be-pisau kate=nye.*
1SG NEG MID-knife QUOT=3

'I do not have a knife he said.'

(BJM01-005, 00:00:41.249–00:00:43.180, Speaker: Munaya)

b. *lagikah anak=(ny)e dik be-kance,*
even.more child=3 NEG MID-friend

'her kids don't even have friends,'

(BJM01-002, 00:00:45.320–00:00:46.780, Speaker: Munaya)

(98) Instrumental *be-* MID

aku masih mandi be-cibuk=lah,
1SG still bathe MID-ladle=FOC

'I still bathed using a ladle.'

aku be-timbuk ni.
1SG MID-ladle DEM.PROX

'I used a ladle.' (BJM01-002, 00:21:34.140–00:21:36.560, Speaker: Munaya)

(99) Typical action of the root *be-* MID

a. *aku be-cerite nga bik Yul,*
1SG MID-story aunt Y.

'I told the story to aunt Yul.'

(BJM01-002, 00:24:00.505–00:24:01.595, Speaker: Munaya)

b. *be-kerite sak di situ,*
MID-bike ABL LOC there

'(we) rode bicycles from there.'

(BJM01-001, 00:07:46.213–00:07:47.069, Speaker: Sawiah)

In a number of cases, *be-* MID is required in order for the verbal root to be employed in an intransitive construction (i.e., the verbal root cannot be a bare intransitive predicate). In many cases the intransitive predicates alternate with the same root in transitive agentive voice constructions as in (100) and (101). In each of these cases, the single argument of the intransitive predicate marked with *be-* MID (i.e., the primary argument) is a semantic agent analogous to the semantic agent argument (i.e., the primary argument) in the agentive voice transitive constructions. For example, in (100a), the primary argument is the unrealized single argument of the intransitive predicate that refers to the agent (i.e., the first person singular referent), the one who is doing the searching. In (100b), the primary argument is *die* 3, again the one doing the searching. In some cases, a valency-increasing suffix is required in the transitive construction as in (101b). Note that the valency-increasing suffix is not required in (100b).

(100) Semantic agent in middle voice *be-*MID

a. *njadi becakagh-be-cakagh,*
so RDP-MID-search

'so (I) searched,'

ngaghi pen-juluk kapuh ni tadi.
with AGT.NMLZ-poke ETCETERA DEM.PROX earlier

'for a pole and the like (to pick fruit).'

(BJM01-003, 00:01:21.825–00:01:24.650, Speaker: Sutarso)

b. *die n-cakagh (1.2) enggelang kapuh ni=lah*
3 AV-search worm etcetera DEM.PROX=FOC
A P

'They are looking for worms and the like,'

(BJM01-010, 00:02:02.113–00:02:04.740, Speaker: Aripin)

(101) Semantic agent in middle voice *be*-MID

a. *aku nak begh-ije,*
1SG want MID-care.for

'I want to care for myself,' (BJM01-010, 00:12:58.256–00:12:58.972, Speaker: Damsi)

b. *dide ka ng-ije-ka jeme tue.*
NEG FUT AV-care.for-CAUS/APPL people old

'(we) won't care for (our) parents.'

(BJM01-011, 00:04:50.982–00:04:52.843, Speaker: Dewi)

In most instances, the single argument is a semantic agent, as in the examples above. However, in a small number of middle voice constructions the primary argument is a semantic patient as in (102a) and (103a). Note that in these cases the single argument corresponds (semantically) to the semantic patient in the transitive constructions as in (102b) and (103b), respectively. Again, some roots require the addition of a valency-increasing suffix, which for (103b) is the locative applicative *-i* LOC.APPL.

(102) Semantic patient in middle voice *be*-MID[4]

a. *ijat=(ny)e begh-ambur di mane kinah die.*
seed=3S MID-spread LOC where ever 3

'its seeds are spread wherever.'

(BJM01-010, 00:17:32.003–00:17:33.769, Speaker: Damsi)

b. *di-ambur-ambur=(ny)e baih.*
PV-RDP-spread=3=A just

'he just spread out (the seeds).'

(BJM01-010, 00:17:36.194–00:17:36.954, Speaker: Damsi)

[4]The *die* 3 is coreferential with the primary argument *ijate* 'its seeds'.

(103) Semantic patient in middle voice *be-*MID

a. *die* *begh-ubat* *kemaghi?*
3 MID-medicine yesterday
S

'Did he get treated yesterday?'

(BJM01-010, 00:03:00.191–00:03:01.394, Speaker: Damsi)

b. *Asmidah* *ng-ubat-i=nye* *embadak=(ny)e.*
A AV-medicine-LOC.APPL=3 previously=3
A =P

'Asmidah treated him back then'

(BJM01-002, 00:06:32.898–00:06:34.079, Speaker: Munaya)

Additionally, there are some middle voice constructions that appear to be transitive with an apparent additional nominal argument following the verb. These apparently transitive constructions come in two types exemplified in (104)–(106). An example of the first case involves the verb *basuh* 'wash', where the verb prefixed with *be-* MID occurs with or without a body part (usually the hands) immediately after the verb as in (104).

(104) Transitivity in middles

a. *dak-kecik* *tu* *laudim* *be-basuh.*
child DEM.DIST PFV.CMPL MID-wash

'the children already washed up.' (Elicited, Speaker: Hendi)

b. *dak-kecik* *tu* *laudim* *be-basuh* *tangan.*
child DEM.DIST PFV.CMPL MID-wash hand

'the children already washed (their) hands.' (Elicited, Speaker: Hendi)

While the noun *tangan* 'hand' in (104b) appears to be an argument of the verb, there are a number of arguments suggesting that it is not on a par with full NP arguments in transitive constructions. First, the noun must be bare and cannot occur with any additional nominal morphology—even a possessive enclitic. Second, the noun must refer to a body part of the primary argument. If a mother is washing her child or someone is washing dishes, the transitive construction in either the agentive

voice or patientive voice is used as in the example in (105).

(105) Transitive agentive voice with *basuh* 'wash'

balik di ayik,
return LOC water

'(I) returned from the water,'

m-basuh piring.
AV-wash plate

'(I) was washing dishes.'

(BJM01-010, 00:46:29.140–00:46:30.565, Speaker: Jamisah)

In the second case of an apparent transitive middle voice construction, the prefix *be-* MID attaches to a noun phrase rather than a noun root. As a result, the modifier that follows the head noun looks as if it is an additional argument of the verb. Consider the examples in (106) below.

(106) The prefix *be-* MID attaching to noun phrase

a. *dide be-kebun kawe?*
NEG MID-field coffee

'(you) don't have a coffee field?'

(BJM01-011, 00:02:27.616–00:02:28.470, Speaker: Jamisah)

b. *jangan be-racun minyak.*
NEG.IMP MID-poison oil

'don't use liquid weed killer.'

(BJM01-010, 00:20:54.596–00:20:55.602, Speaker: Aripin)

Here, it appears that the nouns *kawe* 'coffee' in (106a) and *minyak* 'oil' in (106b) are separate arguments of the verb. However, based on the characterization of *be-* MID, it makes much more sense to argue that the noun phrase attaches to the prefix, so *be-* MID takes the possessive meaning '*have* a coffee field' in (106a) and the instrumental meaning '*use* liquid weed killer' in (106b).

While many predicates prefixed with *be-* MID can simply be translated as 'have VERB ROOT' or 'use VERB ROOT', there are a number of cases where the verb has a more specific meaning. For example,

be-tanam means specifically 'plant rice' as in (107) below and *belaki* commonly means more than simply 'have a husband', but typically refers to 'getting married (to a man)' as in (108).

(107) Lexicalized middle voice *be-* MID construcion
Ui aku be-tanam ke- ke ghumah Minu,
EX 1SG HES MID-plant ALL house M.
'oh I was planting rice with Minu's family,'
(BJM01-011, 00:09:32.319–00:09:34.251, Speaker: Jamisah)

(108) Lexicalized middle voice *be-* MID construcion
be-laki ke Perandunan
MID-husband ALL P.
'(she) was married off to (the village) *Perandunan*,'
(BJM01-002, 00:13:18.158–00:13:19.053, Speaker: Munaya)

Finally, a strong motivation for claiming that the *be-* MID prefix is treated as a marker of middle voice is that in many ways it behaves as a prototypical middle voice marker (Kemmer 1993). That is, verbs prefixed with *be-* MID fall into many of the categories that Kemmer proposes: grooming/body care (109–110), change in body posture (111), translation (self-induced) motion (112), indirect middle (113), emotion middle (114), and cognition middle (115). For these predicates, the middle voice prefix *be-* MID is obligatory to get the middle voice meanings.

(109) Grooming middle
be-dandan kurang.
MID-make.up insufficient
'(she) does not wear enough makeup.'
(BJM01-004, 00:08:12.431–00:08:13.154, Speaker: Hendi)

(110) Body care middle
kance la be-siuk.
friend PFV MID-change.clothes
'(my) friends already changed clothes.'
(BJM01-004, 00:50:42.864–00:50:43.864, Speaker: Piter)

(111) Change in body posture middle

be-tegak *Dis* *tu,*
MID-stand D. DEM.DIST

'Dis stood up,' (BJM01-002, 00:21:39.825–00:21:40.625, Speaker: Munaya)

(112) Translational motion

be-laghi *die* *tu,*
MID-run 3 DEM.DIST

'it (i.e., the snake) ran,' (BJM01-002, 00:22:08.330–00:22:09.140, Speaker: Munaya)

(113) Indirect middle (naturally-reciprocal)

a. *ghapat* *Sun* *be-ghusik* *nga* *aku.*
often S. MID-visit with 1SG

'Sun often visits with me.'

(BJM01-002, 00:00:19.570–00:00:20.670, Speaker: Munaya)

b. *jeme* *be-lage* *neman.*
people MID-fight exceedingly
S

'people fight too much.' (BJM01-004, 00:29:46.842–00:29:48.111, Speaker: Hendi)

(114) Emotion middle

anye *kamu* *dide=lah* *be-takut,*
but 2PL NEG=FOC MID-scare
S

'but you are not scared,' (BJM01-002, 00:23:01.580–00:23:02.660, Speaker: Asril)

(115) Cognition middle

ai *dighi,*
EX self
S

'ah we,'

be-rupuk *pule.*
MID-think also

'think also.' (BJM01-011, 00:24:04.097–00:24:05.317, Speaker: Dewi)

Some of these categories appear to be only expressed with the prefix *be-* MID. For example, every example that would fit under the grooming category appears to be prefixed with *be-* MID. However, the majority of these categories are not only expressed with predicates that are prefixed with *be-* MID. For example, in the change of body posture category, there are verbal predicates that occur with *be-* MID as in (111) above, but there are also verbs that occur without any prefix that fall into this category (e.g., *duduk* 'sit' in (90) above). As this discussion has shown, one difference between the functions of the prefix *be-* MID in Besemah and other languages that have a middle-marking affix is that *be-* MID has an instrumental meaning. To my knowledge, middle voice markers in other languages do not commonly express an instrumental meaning.

Verbal roots prefixed with *te-* NVOL form a class of predicates that express meanings that are generally non-volitional as in (116), including accidental meanings as in (117) and stative meanings as in (118).

(116) Non-volitional *te-*
au *aku* *di-* *belum* *te-dengagh,*
yes 1SG HES NOT.YET NVOL-hear
S

'yeah I hadn't yet heard,' (BJM01-015, 00:28:06.239–00:28:08.407, Speaker: Sawia)

(117) Accidental *te-*
anye *aku,*
but 1SG

'but I,'

angkah dindak m-beli deghian tu,
result not.want AV-buy durian DEM.DIST

'didn't want to buy that durian (fruit),'

te-beli nga nik lundang.
NVOL-buy with N.LI unripe

'(I) inadvertently bought one that is unripe.'

(BJM01-011, 00:49:07.157–00:49:12.544, Speaker: Jamisah)

(118) Stative *te-*
masih tegh-itung buah mude.
still NVOL-count fruit young
S

'the young fruit is still included (lit. counted).'

(BJM01-010, 00:20:19.720–00:20:21.180, Speaker: Damsi)

The single argument of the *te-* NVOL prefixed predicate most commonly corresponds to A in transitive constructions. For example, in (117), the single argument of the accidental use of the verbal predicate prefixed with *te-* NVOL is the semantic agent. This same semantic agent is used as the primary argument of the agentive voice verb *m-beli* AV-'buy' in the second line.[5] This pattern between the non-volitional construction and the transitive constructions is the same sort of pattern that arose between the primary arguments of the middle voice constructions and the transitive constructions in (100) and (101) above. Likewise, it is also possible that the single argument of a non-volitional predicate corresponds to P in transitive constructions as in (119) and (120).

[5]The example in (116) follows a similar pattern. The single argument is an experiencer (i.e., the hearer *aku* 1SG). When the verb root *dengagh* 'hear' is marked by an agentive voice prefix, the A argument is also an experiencer (i.e., the hearer). However, the example in (118) does not follow this pattern. Rather, the single argument here corresponds (semantically) the P argument in a transitive construction.

(119) Semantic patient argument with *te-* NVOL

sahang la te-kubak gale,
pepper PFV NVOL-peel all
S

'all the pepper was peeled,' (BJM01-010, 00:39:03.587–00:39:05.297, Speaker: Burhimin)

(120) Semantic patient in transitive construction

nyelah mulan anu,
right seeding umm
P

'that's right the seedling umm,'

empai ku=kubak.
pepper PFV
A=

'I just peeled (it),' (BJM01-010, 00:12:36.747–00:12:38.981, Speaker: Aripin)

Finally, the prefix *te-* CMPR also attaches to the predicate in a comparative construction as in (121). It is unclear what, if any, synchronic or diachronic relationship exists between this comparative use of *te-* CMPR and the non-volition uses of *te-* NVOL above.

(121) Comparative *te-* NVOL

tiang=(ny)e embak–
post=3 like
S

'its column is like–'

te-besak nga karung tu peng-(k)inak=ku.
CMPR-big with sack DEM.DET NMLZ.PROC-see=1SG

'is bigger than the sack, according what I see (lit. my seeing).'

(BJM01-010, 00:22:22.202–00:22:25.717, Speaker: Aripin)

4.2.2 Non-verbal predicates

There are two basic types of non-verbal predicates: noun phrases as in (122) and prepositional phrases as in (123). Non-verbal predicates are simply the juxtaposition of an argument and an NP predicate as in (122) or an argument and a PP predicate as in (123); there is no copula in Besemah.

(122) Nominal predicate

anak	*Sun*	*tu*	*lanang*	*pule*	*eh?*
child	S.	DEM.DIST	male	also	FP
S					

'Sun's child is a boy, too right?' (BJM01-002, 00:01:08.550–00:01:10.000, Speaker: Sarkani)

(123) Prepositional predicate

peng-gawih-an	*di*	*Serambi*	*gale.*
LOC.NMLZ-work-LOC.NMLZ	LOC	S	all
S			

'(their) work is all in (the village of) Serambi.'

(BJM01-001, 00:29:33.985–00:29:35.601, Speaker: Juria)

4.3 Valency increasing suffixes

There are two polyfunctional valency-increasing suffixes in Besemah: *-ka* CAUS/APPL and *-i* LOC.APPL. Both suffixes increase the valency of intransitive predicates by either adding an additional A argument—where it functions as a causative—or an additional P argument—where it functions as an applicative. With transitive predicates, these suffixes significantly alter the argument structure in various ways. In the examples of the valency-increasing suffixes, the example in (a) is the base construction (i.e., the construction without the valency-increasing suffix), while the example in (b) is the construction with the causative/applicative suffix.

Both valency-increasing suffixes can function as a causative, where the causative construction adds an additional A argument to the base construction as in (124) for *-ka* CAUS/APPL and (125) for *-i*

LOC.APPL. In the causative alternation, the base constructions are intransitive with the predicate *tinggal* 'stay, leave behind' in (124) and *capak* 'discard' in (125). Each construction has a single argument *jakite* 'his jacket' in (124a) and the unrealized argument 'tobacco' in (125a). When *-ka* CAUS/APPL is suffixed to the root in (124b) and *-i* is suffixed to the root in (125b), it increases the valency by one, adding an A argument *kamu* 2PL in (124b) and *die* 3 in (125b). Because the valency is increased from intransitive to transitive, the construction with the valency increasing suffix must be in either the agentive or patientive voice.

(124) Causative *-ka* CAUS/APPL

a. *di depan jakit=(ny)e tinggal.*
LOC front jacket=3 leave

'his jacket was left behind in the front (of the house).'

(BJM01-004, 00:19:05.852–00:19:07.284, Speaker: Hendi)

b. *ai kamu tadi n-(t)inggal-ka diwik,*
EX 2PL earlier AV-leave-CAUS/APPL self
A P

'ah you all left me (lit. self) behind,'

(BJM01-004, 00:00:52.958–00:00:54.846, Speaker: Rafles)

(125) Causative *-i* LOC.APPL

a. *la abang,*
PFV red

'(the tobacco) was red.'

ka n-capak baih.
FUT AV-discard just

'(the tobacco) will just be thrown out.'

(BJM01-010, 00:09:42.022–00:09:44.357, Speaker: Burhimin)

b. *die n-capak-i se- se- baju=nye tadi.*
3 AV-discard-LOC.APPL HES HES clothes=3 earlier
A P

'he took off his clothes earlier.'

(BJM01-002, 00:02:46.610–00:02:49.000, Speaker: Munaya)

When either valency-increasing suffix attaches to other intransitive predicates, an additional P argument is added to the argument structure as in (126) for *-ka* CAUS/APPL and (127) for *-i* LOC.APPL. The intransitive predicates *ngicik* 'talk' in (126a) and *damping* 'close' in (127a) have a single core argument and an oblique prepositional phrase *nga nining kabah* 'to your grandfather' and *ngaghi aku* 'to me', respectively. When the valency-increasing suffix is added to the base construction, the erstwhile referent in the oblique prepositional phrase from the periphery is expressed in the core as P in (126b) and (127b).

(126) Patient promoting applicative *-ka* CAUS/APPL

a. *ng-(k)icik nga nining kabah*
AV-talk with grandfather 2SG

'(I) talked to your grandfather.'

(BJM01-011, 00:54:16.770–00:54:17.486, Speaker: Jamisah)

b. *anye kalu ng-(k)icik-ka Magui ni.*
but probably AV-talk-CAUS/APPL M. DEM.DIST
P

'but (she) was probably talking to Magui.'

(BJM01-004, 00:05:15.638–00:05:17.549, Speaker: Hendi)

(127) Patient promoting applicative *-i* LOC.APPL

a. *la damping benagh ngaghi aku kate Dis ni.*
PFV close true with 1SG QUOT D. DEM.PROX

'(the snake) was really close to me Dis said,'

(BJM01-002, 00:21:17.170–00:21:18.776, Speaker: Munaya)

b. *die tu endak n-damping-i peng-gawih-an die.*
3 DEM.DIST want AV-close-LOC.APPL LOC.NMLZ-work-LOC.NMLZ 3
A P

'they wanted to move close to their place of work.'

(BJM01-001, 00:29:28.693–00:29:31.020, Speaker: Juriah)

In the examples above, the suffixes *-ka* CAUS/APPL and *-i* LOC.APPL by and large behave in the

same way; they either add A in the causative constructions or P in the applicative construction. However, when these suffixes are added to transitive predicates, each marks a different type of semantic relationship between the predicate and the P argument. First, consider the examples in (128) and (129) where *-ka* CAUS/APPL acts as an instrumental applicative and benefactive applicative, respectively. In (128a), P is *diwik* 'self' (i.e., the one who is being poked), but with the addition of *-ka* CAUS/APPL, P is now *ghanting* 'stick' (i.e., the instrument with which he is poking). Note that the number of arguments does not change with the addition of *-ka* CAUS/APPL, rather the argument structure is reorganized so that P is an instrument.

(128) Instrumental applicative *-ka* CAUS/APPL

a. *n-jujuk-jujuk* *diwik* *Pelik,*
AV-RDP-poke self P.
P A

'Pelik is bothering (lit. poking at) me,'

(BJM01-004, 00:23:15.895–00:23:17.440, Speaker: Dian)

b. *jujuk-ka=nye* *ghanting* *tadi.*
poke-CAUS/APPL=3 stick earlier
=A P

'he poked out a stick.' (BJM01-014, 00:05:55.120–00:05:57.130, Speaker: Karim)

The benefactive applicative function of *-ka* CAUS/APPL behaves differently. In studies on cognate suffixes in other Malay isolects, it has been proposed that an additional beneficiary argument is added to transitive verbs, resulting in a ditransitive construction (e.g., Cole & Son 2004). In Besemah, there is no evidence that a beneficiary argument is, in fact, added to the argument structure. Rather, the beneficiary is implied, but the argument structure remains the same. Consider the example of the benefactive applicative function of *-ka* CAUS/APPL in (129). The only difference between the base construction and the benefactive applicative construction is the fact that there is an implied beneficiary in (129b); in both constructions, A and P remain the same (i.e., A is the buyer and P is the bought thing). There are no cases in the corpus where there is a beneficiary (implied or overt)

in the base construction with the verb *beli* 'buy'. There are three other instances (excluding (129b)) where *-ka* CAUS/APPL attaches to *beli* 'buy'. Each of these instances has an implied beneficiary.

(129) Benefactive applicative *-ka* CAUS/APPL

a. *la* *nak* *m-beli* *mutur,*
PFV want AV-buy motorcycle
P

'I should buy a motorcycle,'

(BJM01-004, 00:09:09.342–00:09:10.846, Speaker: Rafles)

b. *beli-ka=nye* *empat* *ijat.*
[PV]buy-CAUS/APPL four seed
=A P

'he bought (my family) four pieces (of durian fruit).'

(BJM01-011, 00:06:50.645–00:06:51.760, Speaker: Rili)

When attached to transitive predicates, the suffix *-i* LOC.APPL does not increase the valence of the verb. Rather, it reorganizes the argument structure, so that P is a location as in (130) or a goal as in (131). That is, in (130b), P is the location where the plants are planted (i.e., *pinggir ni* 'the edge (of the field)'), and, in (131b), P is the goal, the person who is asked (i.e., *kabah* 2SG).

(130) Locative promoting applicative *-i* LOC.APPL

a. *Duski* *n-(t)anam* *empat* *ratus* *batang* *di* *kebun* *sini.*
D AV-plant four hundred tree LOC field here
A P

'Duski planted four hundred trees in the field here.'

(BJM01-010, 00:23:48.854–00:23:51.689, Speaker: Aripin)

b. *pinggir* *ni* *masih* *nak* *tanam-i* *nga* *padi.*
edge DEM.DIST PERS FUT [PV]plant-LOC.APPL with rice
P

'(I) still need to plant the edge with rice.'

(BJM01-011, 00:12:37.350–00:12:39.062, Speaker: Jamisah)

(131) Goal promoting *-i* LOC.APPL

a. *endung Erda n-(t)anye ngaghi aku luk ini jiku yuk.*
mother E. AV-ask with 1SG like this QUOT older.sister

'Erda's mom (should have) asked (it) to me like this, older sister.'
(BJM01-008, 00:21:59.090–00:22:01.600, Speaker: Emi)

b. *endung Erda tu,*
mother E. DEM.DIST
A

'Erda's mother,'

n-(t)anyegh-i kabah kate=nye.
AV-ask-LOC.APPL 2SG P QUOT=3

'asked you she said.'
(BJM01-008, 00:10:57.545–00:10:59.890, Speaker: Emi)

4.4 Noun phrase structure

Noun phrases minimally consist of a noun, but may include numerals, modifiers, possessors, and demonstrative determiners. As is discussed in Section 4.1.1, Besemah noun phrases are largely head-initial, only numerals may precede the head noun, although it is also possible for numerals to follow the head noun. All other modifiers follow the head noun, including a demonstrative determiner in (132), descriptive modifier in (133), and possessive NP or possessive pronoun in (134) and (135), respectively. These examples are repeated here from Section 4.1.1 for convenience.

(132) NP: noun–demonstrative determiner
enduk tu masih be-kilik-an wah.
mother DEM.DET still MID-carry-NMLZ

'mother was still carrying (a child) (lit. had a carried one).'
(BJM01-001, 00:01:52.065–00:01:53.556, Speaker: Juria)

(133) NP: noun–descriptive modifier

kucing kecik la me-lanting-lanting,
cat small PFV AV-RDP-bounce

'the litter cat had bounded around,'

(BJM01-026, 00:03:13.150–00:03:14.480, Speaker: Parit)

(134) NP: possessed NP–possessor NP

anak Sun tu lanang pule eh?
child S. DEM.DIST male also FP

'Sun's child is a boy, too right?' (BJM01-002, 00:01:08.550–00:01:10.000, Speaker: Sarkani)

(135) NP: possessed NP–possessor pronoun

endung bapang kabah tu dide ng-(k)elaghai.
mother father 2SG DEM.DIST NEG AV-care.for

'your parents (lit. mother-father) did not take care of (you).'

(BJM01-004, 00:13:28.686–00:13:30.114, Speaker: Hendi)

Numerals typically occur with one of several numeral classifiers (e.g., *gha=* or *ughang* 'person' for humans, *ikuk* 'tail' for animals, *ijat* 'seed' and *butik* 'grain' for inanimate objects of various shapes and sizes, *batang* 'stick' for long, thin inanimate objects). The numeral must precede the numeral classifier, except in the case of the human classifier proclitic *gha=* (see Section 3.3). The numeral and classifier can either precede or follow the head noun. However, there are no examples where the numeral and numeral classifier precede the head noun in the corpus. Typically, as shown in (136a), if a numeral classifier is present, the head noun is not also present. If the head noun is present, the numeral and numeral classifier follow the head noun as in (136b). It is possible, based on this example, to elicit an example where the numeral and numeral classifier preceded the head noun (e.g., *tige ijat ghumah ni* 'these three houses'; Hendi p.c.).

(136) Nouns with numerals and numeral classifiers

a. *Duski n-(t)anam empat ratus batang di kebun sini.*
D AV-plant four hundred tree LOC field here
A P

'Duski planted four hundred trees in the field here.'

(BJM01-010, 00:23:48.854–00:23:51.689, Speaker: Aripin)

b. *ghumah tige ijat ni,*
house three CLS DEM.PROX

'(as for) these three houses,'

dak-kecik=(ny)e dik bedie liwat di aku.
child=3 NEG exist pass LOC 1SG

'there were not any children aside (lit. pass) from me.'

(BJM01-001, 00:03:48.110–00:03:51.120, Speaker: Sawia)

Finally, there are no examples of NPs that contain all elements of an NP found in the corpus. However, it is possible to elicit a case where a full NP with the structure in (137) with an example in (138).

(137) Noun phrase structure

NP → NUMERAL–CLASSIFIER–NOUN–MODIFIER–DEMONSTRATIVE DETERMINER

(138) Full NP structure
due ikuk kucing kecik=ku tu be-laghi.
two CLS cat small=1SG DEM.DIST MID-run

'my two small cats ran away.' (Elicited, Speaker: Hendi)

4.5 TAM markers

Tense, aspect, and mood are typically marked with auxiliary verbs that by and large occur before the verb (see discussion of modals below for one exception). Aspect markers include the perfective *la* PFV in (139), imperfective *dang* IPFV in (140), completive *udim* CMPL in (141), experiential *ade* EXP in (142), negative experiential aspect marker *kelah* NEG.EXP in (143), persistive *masih* PERS and *gi=*

PERS in (144), and negative persistive (i.e., 'not yet') (*be*)*lum* NPERS in (145). The imperfective aspect marker *dang* IPFV is considered imperfective and not progressive because it occurs with stative predicates as in (140b). The term experiential aspect specifies a situation that has at some time been experienced (e.g., 'I have eaten snails (before)') (cf. Li & Thompson 1981: 226-32). The experiential aspect marker *ade* EXP is also the existential verb *ade* 'exist'. The negative experiential aspect marker *kelah* NEXP is a negative polarity item and requires negation, much like 'ever' in English. The negative persistive tense marker (*be*)*lum* NPERS carries a negative meaning and can be used to 'license' negative polarity items, such as the negative experiential aspect marker *kelah* NEXP.

(139) Perfective aspect marker *la* PFV

ende	*ninik*	*ghumah*	*Rai*	*la*	*e-*	*rubuh.*
N.LI	grandmother	house	R.	PFV	HES	collapse

'the one that belonged to Rai's family (lit. house) already collapsed.'

(BJM01-001, 00:32:53.189–00:32:56.997, Speaker: Sawia)

(140) Imperfective aspect marker *dang* IPFV

a.

die	*dang*	*be-masak*	*tadi,*
3	IPFV	MID-cook	earlier

'he was cooking earlier,'

ambik=(ny)e	*baju=nye*	*tadi.*
[PV]take=3	clothes=3	earlier

'they took his clothes earlier.'

(BJM01-006, 00:02:51.960–00:02:55.140, Speaker: Munaya)

b.

aku	*dang*	*di*	*Jawe*	*die*	*n-(t)elepun.*
1SG	IPFV	LOC	J.	3	AV-telephone

'I was in Java, (when) they called.'

(BJM01-015, 00:19:58.130–00:19:59.780, Speaker: Rumsiah)

(141) Completive aspect marker *udim* CMPL

sate udim m-(m)akan=(ny)e,
after CMPL AV-eat=(ny)e

'after (I) finished eating it,'

lemak aku
pleasant 1SG

'I felt satisfied.' (BJM01-001, 00:09:54.171–00:09:55.861, Speaker: Rili)

(142) Experiential aspect marker *ade* EXP

aku ade ng-aning jeme be-cerite.
1SG EXP AV-hear people MID-story

'I have (lit. ever) heard people tell stories.'

(BJM01-002, 00:30:23.226–00:30:25.180, Speaker: Munaya)

(143) Negative experiential aspect marker *kelah* NEXP

ame aku,
TOP 1SG

'as for me,'

tape dik kelah ng-(k)upi
what NEG NEXP AV-coffee

'(I) don't ever drink coffee.'

(BJM01-011, 00:46:40.901–00:46:42.686, Speaker: Rili)

(144) Persistive aspect marker *masih* PERS and *gi=* PERS

a. *aku masih di-batak-i=nye li enduk,*
1SG PERS PV-bring-LOC.APPL=(ny)e by mother

'mother, she still brought me,'

madak=(ny)e mandi situ.
previously=3 bathe there

'to bathe there back then.' (BJM01-001, 00:19:33.286–00:19:36.483, Speaker: Sawia)

b. *aku gi nginak=(ny)e sawah ende ini.*
1SG PERS AV-see=3 rice.paddy LN DEM.PROX

'I still see it, the rice paddy, that one.'

(BJM01-001, 00:33:39.806–00:33:41.661, Speaker: Sawia)

(145) Negative persistive tense marker *(be)lum* NPERS
au aku di- belum te-dengagh,
yes 1SG HES NOT.YET NVOL-hear

'yeah I hadn't yet heard,' (BJM01-015, 00:28:06.239–00:28:08.407, Speaker: Sawia)

Tense markers include the future tense markers *ka* FUT and *endak/nak* FUT in (146) and (147), respectively, and the recent past tense marker *empai* REC.PST in (148). The future tense marker *endak/nak* FUT also functions as modal marker expressing both volition and obligation, while the future tense marker *ka* FUT conveys no other modal meaning.

(146) Future tense marker *ka* FUT
misal=(ny)e kampung kerbai ka m-(p)eghut-i ikan tu.
example=3 group woman FUT AV-stomach-LOC.APPL DEM.DIST

'for example (when) a group will gut fish.'

(BJM01-002, 00:02:41.293–00:02:44.890, Speaker: Asril)

(147) Future tense marker *nak* FUT
ngape kakak Ripki nak ng-ajung die n-(t)anye-ka=nye.
why older.brother R. FUT AV-order 3 AV-ask-CAUS/APPL=3

'why will Ripki's dad ask her to ask for it.'

(BJM01-008, 00:16:55.390–00:16:57.950, Speaker: Emi)

(148) Recent past tense marker *empai* REC.PST
aku laju empai n-(t)anam be-belas-an batang tu.
1SG then REC.PST AV-plant RDP-teen-NMLZ tree DEM.DIST

'I went ahead and planted fifteen or so trees.'

(BJM01-001, 00:30:43.400–00:30:45.980, Speaker: Damsi)

Modal markers include *pacak* 'can' in (149), which marks ability, *bulih* 'may' in (150), which marks permission, *galak* 'want' in (151), which marks desire, volition, *endak/nak* 'want' in (152), which marks desire, volition, obligation, and the inferential modal *cengki/cingki* INFR in (153). The modal maker *bulih* 'may' is somewhat rare in the corpus and appears to be a more recent borrowing from Standard Indonesian. The inferential modal marker is used in situations where the speaker did not directly observe the information that they are sharing, but infers it in some way. For example, if someone's car is not in their driveway, one would use the inferential modal marker to say that this person must have left based on the fact that their car is not in the driveway. The inferential modal marker *cengki* INFR, then, could be translated as 'must have' in English.

(149) Abilitative modal marker *pacak* 'can'

rumbungan	(*0.3*)	*pacak*	*m-bukak*	*lapak.*
group		can	AV-open	mat

'the group can open a mat (to play cards).'

(BJM01-004, 00:31:22.331–00:31:24.230, Speaker: Hendi)

(150) Permissive modal marker *bulih* 'may'

se-rame-ghan	*ibarat=(ny)e*	*mubil*	*tu*	*wah.*
RECP-own-RECP	example=3	car	DEM.DIST	FP

'for example, the car was shared ownership,'

bulih	*m-(p)akai,*
may	AV-use

'(he) was allowed to use (the car).'

(BJM01-011, 00:29:26.390–00:29:29.260, Speaker: Rili)

(151) Desire modal marker *galak* 'want'

aku	*galak*	*m-(m)akan*	*jambu*	*ni*	*kate*	*tupai.*
1SG	want	AV-eat	guava	DEM.DIST	QUOT	squirrel

'"I want to eat the guava," said the squirrel.'

(BJM01-003, 00:02:01.540–00:02:04.220, Speaker: Sutarso)

(152) Volition and obligation marker *nak/endak* 'want' and 'need'

a. *entah ngape Dis tu nak kayik nian,*
NEG.know why D. DEM.DIST want to.water really

'I don't know why Dis really wanted to go to the water,'

(BJM01-002, 00:21:36.867–00:21:38.947, Speaker: Munaya)

b. *la nak m-beli mutur,*
PFV want AV-buy motorcycle

'I should buy a motorcycle,'

kalu la ade main-an kunci.
if PFV exist play-NMLZ key

'if (I) already have a keychain.'

(BJM01-004, 00:09:09.342–00:09:11.975, Speaker: Rafles)

(153) Inferential modal marker *cengki* INFR

cengki ade jeme kecelakaan,
INFR exist people accident

'there must have been people who got in accidents.'

(BJM01-004, 00:29:42.982–00:29:45.118, Speaker: Hendi)

There are a number of suppletive pairs of affirmative-negative modal markers. For example, the modal used for permission in the affirmative is *bulih* 'may', but in the negative, permission is expressed with the modal marker *kene* 'may (not)'. In and of itself, *kene* 'may (not)' is not negative, but it requires negation as in (154). Similarly, ability is signaled with the modal *pacak* 'can'. When this ability modal is negated, the modal marker *tau* 'can (not)' is used as in (155).

(154) Negative permissive modal marker *kene* 'may'

dik kene di-capak-i,
NEG may PV-discard-LOC.APPL,

'the plastic may not be taken off,'

(BJM01-011, 00:17:20.089–00:17:21.349, Speaker: Jamisah)

(155) Negative abilitative modal marker *tau* 'can'

masalah=(ny)e aku dik tau m-(p)egi-ka=nye agi,
problem=3 1SG NEG cannot AV-go-CAUS/APPL again,

'the problem is I cannot run it (i.e., the group) again,'

(BJM01-008, 00:18:25.075–00:18:27.295, Speaker: Emi)

4.6 Negation

Negation is typically expressed with the negative particles *dide* NEG or *dik* NEG. These particles occur before the predicate and any auxiliaries as in (156).

(156) Pre-predicate negative marker *dide* NEG or *dik* NEG

a. *siring-siring dide seghut ige,*
RDP-stream NEG overgrown exceed

'those streams are too overgrown,

(BJM01-002, 00:25:33.700–00:25:35.062, Speaker: Munaya)

b. *lagikah anak=(ny)e dik be-kance,*
even.more child=3 NEG MID-friend

'her kids don't even have friends,'

(BJM01-002, 00:00:45.320–00:00:46.780, Speaker: Munaya)

There is a negative particle *adak* NEG that is far less frequent. Unlike *dide* NEG and *dik* NEG, *adak* NEG only occurs after the predicate as in (157).

(157) Post-predicate negative marker *adak* NEG

takut=lah kamu
scare=FOC 2PL

'you are more scared,'

ng-(k)inak adak
AV-see NEG

'(because you can) not see.'

(BJM01-002, 00:26:20.377–00:26:21.713, Speaker: Asril)

As mentioned in Section 4.1.1, there is yet another negative particle that comes in various forms: *bukan* NEG, *bukane* NEG, or *kane* NEG. When a nominal predicate is being negated, this negative particle (and not *dide* NEG or *dik* NEG) is typically employed as in (158). In this example the nominal predicate *kance* 'friend' is negated.

(158) Nominal negative marker *bukan* NEG

Tumi,
T.

'Tumi,'

(0.9)

mamang-an kane kance.
uncle-NMLZ NEG friend

'is (my) uncle not a friend.'

(BJM01-004, 00:01:32.107–00:01:35.154, Speaker: Hendi)

However, the negative particle *bukan* NEG is also employed with non-nominal predicates to mark contrast as in the extended example in (159) below. In this example from a story about a squirrel who tricks a prince out of a guava, the second and third lines that use *bukan* NEG (i.e., where the squirrel didn't drop the guava or give the guava to the prince's younger brother) contrast with the fourth line (i.e., where the squirrel ate the guava instead).

(159) Contrastive negative marker *bukan* NEG

sate sampai ke pucuk,
after arrive ALL top

'after (he) arrived at the top (of the tree),'

jambu	*tadi*	*bukane*	*di-umban-ka=nye,*
guava	earlier	NEG	PV-fall-CAUS/APPL=3

'he didn't drop the guava down (from the tree),'

bukan	*di-enjuk-ka*	*ngaghi*	*ading*	*petri*	*ni*	*tadi,*
NEG	PV-give-CAUS/APPL	with	younger.sibling	prince	DEM.DIST	earlier

'he didn't give (the guava) to the prince's younger brother,'

di-makan=(ny)e.
PV-eat=3

'he ate (the guava).'

(BJM01-003, 00:01:46.710 –00:01:53.370, Speaker: Sutarso)

Part II

The syntax of symmetrical voice constructions in Besemah

Part II is concerned with the syntactic properties of symmetrical voice constructions in Besemah, particularly the nature of grammatical relations and syntactic alignment. The following chapters build on previous discussions of grammatical relations in western Austronesian languages (e.g., Chung (1976a,b), Mithun (1994), Musgrave (2000, 2001), Arka (2003), and Arka & Manning (2008), Riesberg (2014), Mithun (2016)). Chapter 5 describes the nature of grammatical relations within the clause, while Chapter 6 describes grammatical relations across clauses. The discussion is based on evidence from several well-known constructions that have been argued to reveal the nature of grammatical relations in western Austronesian languages (e.g., quantifier float and binding in Chapter 5, and relativization and control in Chapter 6). One distinguishing feature of the discussion of grammatical relations in these chapters is the reliance on natural discourse data, in contrast with the elicited examples typical of many of the discussions on grammatical relations in western Indonesian languages (e.g., Chung (1976a,b), Musgrave (2000, 2001), Arka (2003), and Arka & Manning (2008)). I do not discard elicited examples altogether; natural discourse data make up the majority of examples, but elicited examples based on natural discourse data have also been used (Mithun 2001). A very small number of examples are invented and subsequently checked.

Chapter 5

Grammatical relations within the clause

In the next two chapters, grammatical relations are taken to be both language- and construction-specific (Dryer 1997, Van Valin & LaPolla 1997, Croft 2001, LaPolla 2006, Bickel 2010). That is, the analyses here do not assume that Besemah has a 'subject' and/or 'object' grammatical relation, or even that Besemah has a single set of grammatical relations that applies throughout the entire grammar of the language. Instead, the next two chapters demonstrate that arguments evince different patterns of syntactic alignment within different constructions. By surveying a variety of syntactic properties from word order generalizations (in Section 5.1) to the specifics of reflexive binding (in Section 5.5), I propose that 'subject' and 'object' relations are neither justified nor useful for understanding symmetrical voice in Besemah. Rather, I subscribe to the notion that the use of the terms 'subject' and 'object' implies some resemblance to 'subject' and 'object' in other languages, where they are robust categories (Comrie 1989, LaPolla 1993). The next two chapters show that no such resemblance exists in Besemah. It would, however, be wrong to say that Besemah has no grammatical relations whatsoever. There are a few syntactic properties, such as word order (in Section 5.2) and quantifiability (in Section 5.3), that provide fairly good evidence for at least one primary grammatical relation into which a set of arguments called PRIMARY ARGUMENTS may enter, and less solid evidence for a second grammatical relation into which a set of arguments called SECONDARY

ARGUMENTS may enter. Because of the scant evidence for the secondary argument grammatical relation, an ancillary issue arrises concerning the core/oblique status of some secondary arguments (see Sections 5.4 and 5.5). The nature of primary arguments and secondary arguments is discussed below.

5.1 Symmetrical voice & grammatical relations

Grammatical relations are defined here as the syntactic relations between the verb and its arguments (cf. Bickel 2010). However, Besemah, like many western Indonesian languages, lacks more transparent evidence for a grammatical relation, what Keenan (1976) refers as 'coding' evidence (e.g., case and agreement). Because of this 'underspecification' in the grammar, determining whether arguments have a grammatical relation in western Indonesian languages has relied upon a number of 'diagnostic' constructions that are based upon what Keenan (1976) refers to as 'behavioral' evidence, such as control, raising, relativization, 'quantifier float', and reflexive binding (see Arka (2003) for a fairly complete list of these diagnostics in another western Indonesian language, Balinese). The next two chapters address a number of these constructions, especially those that have been shown to be diagnostic for grammatical relations across several western Austronesian languages (e.g., Kroeger 1993, Wechsler & Arka 1998, Musgrave 2001, Gil 2002, Arka 2003, Arka & Manning 2008). In this chapter, 'diagnostic' constructions that operate within the clause are treated, including word order in Section 5.2, quantifiability in Section 5.3, coreferential arguments in Section 5.4, and reflexive binding in Section 5.5. The next chapter addresses the 'diagnostic' constructions that operate across clauses, including control and relativization.

It is important to note that each of these topics could easily constitute a chapter on its own. These topics are treated here only insofar as they are able to—or not able to—serve as diagnostics for grammatical relations in Besemah. This chapter and the next follow the general spirit of LaPolla (1993) by demonstrating that a number of the properties that are commonly thought to provide ev-

idence for grammatical relations in western Indonesian languages do not in fact do so in Besemah. These chapters primarily provide evidence against such syntactic properties as diagnostic of grammatical relations and call for a more nuanced, construction-specific understanding of such syntactic properties in Besemah. The diagnostics do, however, reveal important aspects of Besemah grammar (e.g., the nature of noun modifying clause construction in Section 6.1 in the next chapter) and help us to see the importance of individual constructions for understanding grammatical relations.

In order to discuss the grammatical relations and syntactic alignment in Besemah, this chapter continues to employ Comrie's (1978) notation for macro-role labels S, A, and P from Chapter 4. The single argument of the intransitive, S, remains the same as it did in Chapter 4 and is the same throughout the dissertation. However, the arguments in transitive clauses are further subcategorized according to the voice construction in which they appear. That is, A and P in agentive voice constructions are represented as A_{AV} and P_{AV}, respectively. Likewise, A and P in patientive voice constructions are represented as A_{PV} and P_{PV}, respectively. To see how these labels are employed, recall the basic structure of intransitive clauses in (160), transitive clauses in the agentive voice in (161), patientive voice in (162) for first and second person A, and (163) for third person A.

(160) Intransitive clauses

a. *jeme* *la* *datang* *nian.*
people PFV come really
S

'People really came.' (BJM01-015, 00:26:27.100–00:26:28.250, Speaker: Rumsiah)

b. *mungkin* *die* *nak* *be-jalan* *biase,*
probably 3 want MID-walk normally
S

'it (i.e., the snake) wanted to move normally,'

(BJM01-010, 00:22:47.382–00:22:48.815, Speaker: Asril)

c. *mungkin* *die* *tegh-ingat.*
probably 3 NVOL-remember
S

'she probably remembers.'

(BJM01-004, 00:28:06.239–00:28:08.407, Speaker: Rafles)

Intransitive verbal predicates occur in either a bare form, as in (160a), or in the middle voice with the prefix *be-* MID on the verb, as in (160b), or the non-volitional voice with the prefix *te-* NVOL on the verb, as in (160c). The single argument S in each construction (i.e., *jeme* 'people' in (160a) and *die* 3 in (160b) and (160c)) is the primary argument, which is demonstrated below, and canonically occurs before the predicate. For the next two chapters, bare intransitive predicates are primarily used to exemplify intransitive clauses. However, if the voice-marked intransitive clauses significantly differ in some grammatical property that is relevant to the discussion at hand, the analysis includes the differences. For example, in Section 5.4, the form of coreferential arguments of some non-volitional voice-marked verbs behaves differently than coreferential arguments of most bare intransitive verbs.

(161) Transitive clause in the agentive voice

jeme *la* *m-buat* *sawah.*
people PFV AV-make rice.paddy
A P

'people already made a rice paddy.'

(BJM01-001, 00:34:19.970–00:34:21.250, Speaker: Sawiah)

The agentive voice construction in (161), where the verb is marked by the homorganic nasal prefix *(me)N-* AV, the A_{AV} argument (i.e., *jeme* 'people') is the primary argument, and the P_{AV} argument (i.e., *sawah* 'rice paddy') is the secondary argument. The primary argument canonically occurs in the pre-verbal position, while the secondary argument occurs in the post-verbal position.

(162) Transitive clauses in the patientive voice with first/second person agent

a. *nyelah mulan anu,*
right seedling umm
P

'that's right the seedling umm,'

empai ku=kubak.
PFV 1SG=[PV]peel
A=

'I just peeled (it),' (BJM01-010, 00:12:36.747–00:12:38.981, Speaker: Aripin)

b. *budak tuk n-jual Jarum tadi,*
woman N.LI AV-sell J. earlier
P

'the girl, the one who sold Jarum (cigarettes) earlier,'

la kami garih-i.
PFV 1PL.EXCL [PV]visit-LOC.APPL
A

'I just peeled (it),' (BJM01-004, 00:49:06.910–00:49:10.800, Speaker: Piter)

(163) Transitive clauses in the patientive voice with third person agent

a. *Mikah ghumah–*
M. house
P

'Mikah from the family (lit. house) of–'

(1.8)

la laghi-ka jeme.
PFV [PV]run-CAUS/APPL people
A

'was run off by people.' (BJM01-004, 00:30:48.195–00:30:52.070, Speaker: Hairil)

b. *ne dulu lungguk-ka=nye,*
N.LI before [PV]pile-CAUS/APPL=3
P =A

'he piled up (the one) from before (i.e., cocoa seeds)'

(BJM01-010, 00:16:45.227–00:16:46.423, Speaker: Aripin)

c. *ai* *tuape* *kawan* *di-kungkun-i* *jeme,*
EXCL what friend PV-visit-LOC.APPL people
P A

'ah because someone visited (my) friend.'

(BJM01-015, 00:05:58.860–00:06:00.560, Speaker: Rumsiah)

d. *aku* *di-renti-ka=nye* *kate=nye.*
1SG PV-stop-APPL=3 QUOT=3
P =A

'she stopped me she said.' (BJM01-008, 00:03:46.290–00:03:48.090, Speaker: Kudar)

In the patientive voice constructions in (162) and (163), where the verb is optionally prefixed with *di-* PV (see below), P_{PV} is the primary argument (i.e., *mulan* 'seedling' in (162a), *budak* 'girl' in (162b), *Mikah* '*Mikah* (proper name)' in (163a), *ne dulu* 'the (cocoa seeds) from before' in (163b), *kawan* 'friend' in (163c), and *aku* 1SG in in (163d)). However, the forms of patientive voice constructions differ based on the person of the A_{PV} argument, which is the secondary argument. When A_{PV} is first or second person, then the verb cannot take any voice prefix, and A_{PV} occurs directly before the verb. In (162a), A_{PV} (i.e., *ku=* 1SG) is procliticized directly to the verb; only the first person singular pronoun procliticizes to the verb. In (162b), A_{PV} (i.e., *kami* 1PL.EXCL) occurs directly before the verb; nothing can intervene between the A_{PV} and the verb. When A_{PV} is third person, it occurs after the verb; the verb optionally takes the prefix *di-* PV. In (163a-b), the verb is unprefixed and A_{PV} directly follows the verb—if it is an NP in (163a)—or A_{PV} is enclitized to the verb—if it is a pronoun in (163b). In (163c-d), the verb is prefixed with *di-* PV, and A_{PV} again either occurs after the verb in (163c) or is encliticized to it in (163d).

The next two sections provide evidence to support the notion that S, A_{AV}, and P_{PV} pattern together as the primary argument. The 'diagnostic' constructions for a primary argument grammatical relation within the clause include the syntactic properties of word order (Section 5.2) and quantifiability (Section 5.3). As mentioned earlier, there is little evidence that P_{AV} and A_{PV} pattern together as the secondary argument, aside from the fact that they do not behave like primary arguments.

However, in Section 5.4, the core argument status of the secondary argument, A_{PV}, is discussed with regard to its behavior as a coreferential argument. As discussed in Chapter 1, the core argument status of A_{PV} is crucial for the voice system to be considered symmetrical. If A_{PV} is *not* core, the construction would be better analyzed as passive. Section 5.4 addresses the status of A_{PV} in light of recent studies that propose that it is not core. Finally, one construction that has been widely discussed in regards to the status of core argument is reflexive binding (e.g., Arka & Manning (2008) for Standard Indonesian). In Section 5.5, reflexive binding constructions are shown to be very limited in Besemah and do not provide evidence for the status of core arguments or grammatical relations.

5.2 Word order

In Besemah, evidence for a distinction between primary argument and secondary argument grammatical relations is based on the relative freedom that each argument has within the clause. On the one hand, S, A_{AV}, and P_{PV} (i.e., primary arguments), are free to occur before or after the *predicate complex*, which includes the verb, the secondary argument, and optionally any oblique arguments. On the other hand, P_{AV} and A_{PV} (i.e., secondary arguments) are tightly constrained: they must occur next to the verb. That is, if the A_{PV} argument is in the first or second person in a patientive voice construction, it directly precedes the verb. If the A_{PV} argument is in the third person, it occurs directly after the verb.[1] In the examples in (160)–(163) in the previous section, the primary arguments, S, A_{AV}, P_{PV}, are preverbal. In the same examples, the secondary arguments, P_{AV} and A_{PV} occur next to the verb, whether these are clitics or full forms, third person A_{PV} or P_{AV} arguments, or first or second person A_{PV} arguments.

In analogous examples in (164)–(168) below, the primary arguments, S, A_{AV}, P_{PV}, are shown to

[1]First and second person pronouns in the patientive voice construction have long been considered to be clitics in standard varieties of Malay-Indonesian (cf. Musgrave 2000). However, clitics are taken here to evince some sort of phonological dependence on their host. In Besemah, only the first person singular form *ku*= 1SG provides such evidence. Therefore, I do not assume that the other arguments are clitics. Instead, these arguments are closely connected to the verb syntactically, but not phonologically dependent upon it (see Section 3.3).

occur after the predicate complex, which again includes both the verb and the secondary argument. In cases where there is an oblique, the primary argument can occur either before or after the oblique.

(164) Intransitive clauses with post-predicate primary argument

a. *dide pageghan jeme,*
NEG surprised people
S

'people aren't surprised.' (BJM01-004, 00:12:43.035–00:12:44.052, Speaker: Rafles)

b. *belum be-bunting Nili.*
NPERS MID-marry N.
S

'Nili isn't married yet.' (BJM01-004, 00:32:30.474–00:32:31.939, Speaker: Rafles)

c. *dide te-kinak aku.*
NEG NVOL-see 1SG
S

'I didn't see.' (BJM01-001, 00:20:22.984–00:20:24.599, Speaker: Juria)

In these examples of bare intransitive, middle voice, and non-volitional voice clauses, S—the primary argument—occurs after the predicate (i.e., *jeme* 'people' in (164a), *Nili* '(proper name)' in (164b), and *aku* 1SG in (164c)). If there is an oblique prepositional phrase, as in the examples in (165), S can either precede the oblique prepositional phrase in (165a) or follow the oblique prepositional phrase in (165b).

(165) Intransitive clauses with oblique and post-predicate primary argument

a. *kesal nagh nian aku nga Antun,*
irritated real real 1SG with A.
S

'I was really really irritated with Antun,'

(BJM01-004, 00:26:32.726–00:26:34.341, Speaker: Hairil)

b. *laju dide te-kinak nga die aku.*
then NEG NVOL-see with 3 1SG
S

'so I didn't see her.' (BJM01-015, 00:18:26.230–00:18:29.130, Speaker: Rumsiah)

In agentive voice constructions, A_{AV}—the primary argument—follows the the predicate complex (i.e., agentive voice-marked verb and P_{AV}—the secondary argument). In (166a), A_{AV} (i.e., *kami* 1PL.EXCL) follows both the verb (i.e.,. *numburi* 'crash into') and P_{AV} (i.e., *lubang* 'hole'). As one would expect, if P_{AV} is an enclitic as in (166b), A_{AV} follows both the verb (i.e., *ngambik* 'take') and the P_{AV} enclitic (i.e., *=nye* 3).

(166) Agentive voice with post-predicate primary argument

a. *gak-geluguk n-(t)umbur-i lubang kami di malam.*
ONOM AV-strike-LOC.APPL hole 1PL.EXCL earlier night
P A

'boom boom, (I) was crashing into the potholes last night.'

(BJM01-004, 00:34:48.595–00:34:50.127, Speaker: Hendi)

b. *dik beghani ng-ambik=(ny)e jeme ku=rupuk eh,*
NEG brave AV-take=3 people 1SG=think yeah
=P A

'people aren't brave (enough) to take it, I think, yeah.'

(BJM01-004, 01:00:03.498–01:00:05.250, Speaker: Hairil)

In patientive voice constructions, P_{PV}—the primary argument—can follow the predicate complex (i.e., verb and A_{PV}). When the A_{PV} secondary argument is first or second person, as in the examples in (167), the P_{PV} primary argument (i.e., *talinye* 'its rope' in (167a) and *mate* 'eye' in (167b)) follows the predicate complex.

(167) Patientive voice with first/second person agent and post-predicate primary argument

a. *pacak* *ku=ijak-ka* *tali=nye* *tu,*
can 1SG=[PV]step-CAUS/APPL rope=3 DEM.DIST
A= P

'I can step on its rope.' (BJM01-011, 00:14:02.868–00:14:05.070, Speaker: Jamisah)

b. *di* *mane* *kabah* *gucuh* *mate?*
LOC where 2SG [PV]punch eye
A P

'you punched (his) eye, where (were you)?'

(BJM01-004, 00:27:32.850–00:27:34.060, Speaker: Hendi)

When the A_{PV} secondary arguments are in the third person and follow the verb, the P_{PV} primary arguments (i.e., *diwik* 'self' in (168a) and *dighi* 'self' in (168b)) again follow the entire predicate complex.

(168) Patientive voice with third person agent and post-predicate primary argument

a. *tinggal-ka* *jeme* *diwik,*
[PV]leave-CAUS/APPL people self
A P

'people left me (lit. self) behind.'

(BJM01-004, 00:01:09.430–00:01:10.674, Speaker: Rafles)

b. *dide,*
NEG
P

'no,'

kasialah *allah,*
thank God,

di-sakat *jeme* *dighi.*
PV-bother people self
A P

'thank God, people didn't bother me.'

(BJM01-011, 00:28:29.773–00:28:33.229, Speaker: Jamisah)

These examples show that S, A_{AV}, and P_{PV}—the primary arguments—have much more positional freedom, occurring either before the predicate complex in the examples in (160)–(163) in Section 5.1 above or after the predicate complex in the examples in (164)–(168) directly above.

In all of the transitive examples, P_{AV} and A_{PV}—the secondary arguments—are adjacent to the verb. While this is the most common position for secondary arguments, it is possible for an adverb to occur between the agentive voice-marked verb and the P_{AV} argument. It is not possible, however, for any element to occur between the patientive voice-marked verb and the A_{PV} argument. That is, there is an difference between secondary arguments, such that A_{PV} is tightly connected to the verb, but P_{AV} is slightly less tightly connected to the verb. Consider the agentive voice examples in (169) and the patientive voice example in (170).

(169) Intervening adverb between agentive voice-marked verb and P_{AV} secondary argument

a. *ka endik ape m-bentuk agi kelumpuk tu?*
FUT for what AV-form again group DEM.DIST
↑ P

'why (lit. for what) did (they)form a group again?'

(BJM01-008, 00:01:20.615–00:01:22.960, Speaker: Emi)

b. *amu aku,*
TOP 1SG
A

'as for me,'

(0.9)

dang itu nyelah m-buat nian kutak itu tu wah.
IPFV DIST.DEM right AV-make really box DEM.DIST DEM.DIST FP
↑ P

'at that time, right, (they) really made the box, yeah.'

(BJM01-002, 00:28:29.773–00:28:33.229, Speaker: Munaya)

(170) Patientive voice with third person agent and post-predicate primary argument

mimang	*di-tunggu-tunggu*	*jeme*	*nian,*
really	PV-RDP-leave	people	really
		A	↑

'people are really waiting for (the racers).'

(BJM01-004, 00:03:41.032–00:03:42.131, Speaker: Hendi)

In (169), there are adverbs that intervene between the agentive voice-marked verbs and P_{AV}. In (169a), the adverb *agi* 'again' occurs between the verb and P_{AV}, while, in (169b), the adverb *nian* 'really' occurs between the verb and P_{AV}. In (170), the adverb *nian* 'really' occurs after the patientive-marked verb and A_{PV}; it cannot intervene between the the patientive marked verb and A_{PV}.

Based on the word order properties above, S, A_{AV}, and P_{PV} all pattern together in precisely the same way; they are free to occur before or after the predicate complex. This is evidence that these arguments should be considered primary arguments. However, while P_{AV} and A_{PV} are generally more restricted within the clause, they do not pattern in precisely the same ways; A_{PV} is more tightly connected to the verb and P_{AV} is less tightly connected to the verb. Based on word order, I propose the alignment pattern in Figure 5.1 below. The solid gray highlighting S, A_{AV}, and P_{PV} represent the better defined primary argument grammatical relation, while the diagonal lines through P_{AV} and A_{PV} represent a maybe less defined secondary argument grammatical relation.

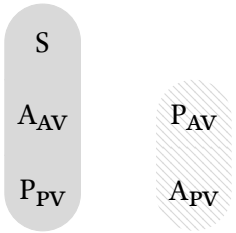


Figure 5.1: Word order alignment

5.3 Quantifiability

Probably the most convincing piece of evidence for the primary argument grammatical relation comes from the *quantifiability*—the ability for the argument to be quantified by the universal quantifier. Quantifiability is closely related to what has traditionally be referred to as 'quantifier float' (cf. Bobaljik 2001 for an overview of quantifier float). This section first presents an overview of quantifier float and grammatical relations, then presents the notions of quantifiability in Besemah. In addition to being expressed within the noun phrase, quantifiers in many languages may also occur outside of the noun phrase and still quantify the head noun (Whaley 2001).[2] Quantifiers that are outside of the noun phrase are considered 'floated quantifiers', and the noun phrase that is the target of this floated quantifier is said to have 'launched' the quantifier as in the examples in English in (171).

(171) Quantifier float in English

a. [All the students]$_{NP}$ have finished the assignment.

b. [The students]$_{NP}$ have all finished the assignment. (Bobaljik 2001)

In (171a), the universal quantifier *all* is within the noun phrase quantifying the head noun *students*. However, in (171b), the universal quantifier *all* has 'floated' out of the noun phrase, but still quantifies the head noun *students*. In (171b), *all* is the floated quantifier and the subject noun phrase *the students* is said to have 'launched' the quantifier. Languages differ as to which arguments have the ability to 'launch' floating quantifiers. For example, in English only subjects can launch floating quantifiers, while in French core arguments can launch floating quantifiers (Sportiche 1988).

In western Austronesian languages, the same types of patterns emerge. For example, Balinese and Standard Indonesian have been shown to restrict quantifier float to core arguments (Arka (2008), Arka & Simpson (2008) for Balinese; Musgrave (2000, 2001) for Standard Indonesian). The examples from Standard Indonesian in (172) – (175) demonstrate that the universal quantifier *semua* 'all'

[2] A number of linguists have proposed that quantifiers occur within the quantifier phrase (e.g., Sportiche (1988)). Therefore, the quantifier would not be within the noun phrase, but adjacent to it. I make no such distinction between noun phrase and quantifier phrase here.

can occur outside of the noun phrase, but only refer to core arguments. In (172), the quantifier *semua* 'all' precedes the noun it is quantifying (i.e., *pemain* 'player') within the noun phrase. In (173), only the S argument *orang-orang Sasak* 'Sasak people' can be quantified by *semua* 'all', and not the noun phrase in the oblique prepositional phrase *dengan anak-anak* 'with the children'. In the transitive clauses in (174) and (175), both core arguments can be quantified, according to Musgrave (2001) and Arka (2005). In the agentive voice construction in (174), the P_{AV} argument is shown to be quantified by the floated quantifier.[3] Likewise, in the patientive voice construction in (175), both the P_{PV} and A_{PV} arguments may be quantified by the floated quantifier.[4]

(172) Quantifier within noun phrase in bare intransitive verb in Standard Indonesian

[$_{NP}$	*Semua*	*pemain*	*musik*]	*pulang*	*pagi.*
	all	player	music	go.home	morning
	Q	S			

'All the musicians left early.' (Musgrave 2001: 26)

(173) Quantifier float with bare intransitive verb in Standard Indonesian

Orang-orang	*Sasak*	*datang*	*dengan*	*anak-anak*	*semua=nya.*
people-RDP	S.	come	with	child-RDP	all=3SG
S					Q

'All the *Sasak* people came with their children.'
*'The *Sasak* people came with all their children.' (Musgrave 2001: 69)

[3]Unfortunately, Musgrave (2001), Arka (2005), and Riesberg (2014), in their discussions of quantifier float in Standard Indonesian, do not provide any examples where the floated quantifier quantifies theA_{AV} argument. Each of them, however, proposes that core arguments can launch floated quantifiers.

[4]There are some noteworthy features of these constructions that are not necessary for this illustration, but are worth mentioning. First, the universal quantifier *semua* 'all' must be encliticized with the third person pronoun/associative marker *=nya* 3SG (cf. Ewing 2005 for a description of *=nya* 3SG). Second, constructions where the quantifier 'floats' in Standard Indonesian and Balinese are strongly dispreferred (Riesberg 2014: 59-60). As we shall see below, constructions where the quantifier 'floats' in Besemah are strongly preferred.

(174) Quantifier float with agentive voice in Standard Indonesian

saya	*mem-(p)ukul*	*anak-anak*	*itu*	*kemarin*	*semua=nya.*
1SG	AV-hit	RDP-child	DEM.PROX	yesterday	all=3SG.
A		P			Q

'I hit all the children yesterday.' (Musgrave 2001: 70)

(175) Quantifier float with patientive voice in Standard Indonesian

anak-anak	*kami*	*pukul*	*kemarin*	*semua=nya*
child-RDP	1PL.EXCL	[PV]hit	yesterday	all=3SG
P	A			Q

'All the children were hit by us, yesterday.'
'The children were hit by all of us, yesterday.' (Riesberg 2014: 49)

Quantifier float has also been used by Schachter (1976, 1977) and Kroeger (1993) for Tagalog as a 'diagnostic' for subject arguments. Schachter and Kroeger propose that only subject arguments (i.e, for them, arguments preceded by the *ang* case marker) can 'launch floating quantifiers', meaning that for the non-subject argument to be quantified, the quantifier must occur within the noun phrase. Consider the examples in (176)–(179) below.[5]

(176) Universal quantifier within noun phrase in Tagalog[6]

B<um>a-basa	[$_{NP}$ *ang*	*lahat*	*ng*	*mga*	*bata*]	*ng*	*mga*	*libro.*
<AV>RDP-read	NOM	all	GEN	PL	child	GEN	PL	book
	A					P		

'All (the) children are reading some books.'
(Riesberg 2014: 52, Original source Schachter 1977: 287)

(177) Floating quantifier in intransitive construction in Tagalog

Na-tu-tulog	*lahat*	*ang*	*mga*	*bata.*
AV-RDP-sleep	all	NOM	PL	child
		S		

'All (the) children are reading some books.' (Schachter & Otanes 1972: 148)

[5]It is interesting to note that while it is possible to float quantifiers in Tagalog, according to Schachter (1976), it is typical to express them within a noun phrase.

[6]The glossing in these examples has been slightly altered to reflect the Leipzig Glossing Rules.

(178) Floating quantifier in transitive actor voice construction in Tagalog

B<um>a-basa	*lahat*	*ang*	*mga*	*bata*	*ng*	*mga*	*libro.*
<AV>RDP-read	all	NOM	PL	child	GEN	PL	book
		A			P		

'All (the) children are reading some books.'

(Riesberg 2014: 52, Original source Schachter 1977: 287)

(179) Floating quantifier in transitive patient voice construction in Tagalog

S<in>u-sulat-ø	*lahat*	*ng*	*mga*	*bata*	*ang*	*mga*	*liham.*
<RLS>RDP-write-PV	all	GEN	PL	child	NOM	PL	book
		A			P		

'The children are writing all the books.'

(Riesberg 2014: 52, Original source Schachter 1976: 501)

In (176), the universal quantifier *lahat* 'all' occurs within the noun phrase marked by the *ang* NOM case marker. In the intransitive clause in (177), the universal quantifier *lahat* 'all' occurs directly after the predicate and outside of the *ang* NOM case marked noun phrase. In the transitive clauses in (178) and (179), the quantifier *lahat* 'all' occurs after the predicate, but only quantifies the *ang* NOM case marked noun phrase, whether this is A in the actor voice in (178) or P in the patient voice in (179). For Schachter (1976, 1977) and Kroeger (1993), this evidence from quantifier float supports the idea that the *ang* case-marked noun phrase is the subject.

The universal quantifier in Besemah is in some sense behaves similarly to what Schachter (1976, 1977) and Kroeger (1993) propose for Tagalog. The 'floated' universal quantifier in Besemah is restricted to quantifying S, A_{AV}, and P_{PV}—the primary arguments (for examples, see below). However, the universal quantifier in Besemah differs in important ways. First, while 'floating' the universal quantifier is exceptional, or at the very least less frequent, in Tagalog, it is the norm in Besemah. Consider the frequency of the 'floated' universal quantifier in the Besemah corpus versus the universal quantifier that occurs within a noun phrase or pronominally in Table 5.1.

This table shows that, of the 250 total instances of the universal quantifier in the Besemah corpus, a full 238 (95%) are instances where the quantifier 'floats'. The frequency of 'floated' quantifiers

Table 5.1: Universal quantifiers in the corpus of 50,000 words (*n = 250*)

'FLOATED'	NP	PRONOMINAL
238 (95%)	11 (4%)	1 (<1%)

provides strong evidence that it is the preferred means of universally quantifying a referent.

Second, the universal quantifier *gale* 'all' takes no additional morphological marking when it is floated (see the first line of the example in (181) below). However, when the universal quantifier occurs within a noun phrase or is used pronominally, it takes additional morphology. When the universal quantifier occurs within the noun phrase, it precedes the noun and is prefixed with the numeral prefix *se-* 'one' (see Section 3.1.1) or the partially reduplicated prefix *ge-* RDP.CV (see Section 2.4.5 for the description of partial reduplication). Note that there are no examples in the Besemah corpus of the universal quantifier with the partially reduplicated prefix *ge-* RDP.CV, but it is perfectly acceptable to replace the numeral *se-* 'one' with the partially reduplicated prefix *ge-* RDP.CV in (180) below (Hendi, p.c.).

(180) Universal quantifier *segale* 'all' within a noun phrase
se-gale be- jeme la tipu-ka=nye,
one-all HES people PFV [PV]deceive-CAUS/APPL=3
'he tricked all the people.' (BJM01-013, 00:00:33.490–00:00:35.765, Speaker: Karim)

When the universal quantifier is used pronominally (i.e., meaning 'everything'), the root *gale* 'all' is prefixed with *se-* 'one' or *ge-* RDP.CV and encliticized with the third person pronoun *=nye* 3 as in (181). Again, it is perfectly acceptable to replace the prefix *se-* 'one' with the partially reduplicated prefix *ge-* RDP.CV in the example in (181) below (Hendi, p.c.). The fact that the universal quantifier is morphologically less complex and far more frequent provides solid evidence that 'floating' the quantifier is more or less the basic means of universal quantification. Note that in the first line of the example in (181), there is a 'floated' quantifier *gale* 'all' without any affixation, which is discussed at length in Section 5.3.1 below.

(181) Pronominal universal quantifier *segalenye* 'all'

mak ini *mahal* *gale* *mak ini,*
now DEM.PROX expensive all now DEM.PROX

'nowadays all (the vegetables) are expensive nowadays,'

(1.2)

se-gale=nye.
one-all=3.

'everything (is expensive).'

(BJM01-002, 00:29:19.363–00:29:22.005, Speaker: Asril)

Finally, and most surprisingly, the restriction on universal quantifiers in Besemah is much stronger than in Tagalog: in Besemah, secondary arguments (i.e., A_{PV} and P_{AV}) may not be quantified with the universal quantifier, whether this quantifier is 'floated' or within the noun phrase. That is, in Tagalog, either argument can be quantified with the universal quantifier, but only subjects can 'launch' quantifiers. In Besemah, secondary arguments cannot be quantified with the universal quantifier. Evidence for this proposal is provided below. For this reason, the 'diagnostic' for Besemah is *not* quantifier float, but *quantifiability* (i.e., the ability for the argument to be quantified by the universal quantifier). While the primary objective in this section is to demonstrate that quantifiability provides evidence for the primary argument grammatical relation, it is noteworthy that the means of universal quantification in Besemah is unique. To my knowledge, no other language has been described where (i) 'floated' quantifiers as opposed to quantification within the noun phrase is the basic means of quantification, and (ii) only the primary argument can be quantified.

5.3.1 Quantifiability in Besemah

In Besemah, the 'floated' universal quantifier *gale* 'all' can occur in several positions within the clause: directly after the primary argument, after the auxiliary and before the predicate, after the predicate/predicate complex (i.e., the verb and any secondary arguments, if transitive), and after

an oblique. By far the most common position is the post-verbal position as demonstrated with the frequencies in Table 5.2.

Table 5.2: Positions of 'floated' universal quantifiers in corpus of 50,000 words (n = 238)

Post Primary Argument	**Post Auxiliary**	**Post Predicate**	**Post Oblique**
4 (2%)	4 (2%)	227 (95%)	3 (1%)

Despite its position within the clause, the universal quantifier *gale* 'all' only quantifies the primary argument. Consider the examples in (182)–(185). When the 'floated' quantifier occurs in an intransitive clause, as in (182), it quantifies S. These examples in (182) demonstrate that 'floated' universal quantifiers operate in the same way for the bare intransitive verb in (182a), the middle voice verb in (182b), and the non-volitional voice verb in (182c). Finally, if S follows the verb and quantifier, it is quantified in the same way, as in (182b).

(182) 'Floated' quantifiers in intransitive constructions

a. *anak cucung kamu la takut gale,*
child grandchild 2PL PFV scared all
S Q

'all of your grandchildren are already scared,'

(BJM01-002, 00:19:47.941–00:19:49.641, Speaker: Munaya)

b. *ad- be-kebun gale die eh.*
HES MID-field all 3 FP
Q S

'they all had fields.' (BJM01-001, 00:11:59.334–00:12:00.455, Speaker: Juria)

c. *sahang la te-kubak gale,*
pepper PFV NVOL-peel all
S Q

'all the pepper was peeled,'

(BJM01-010, 00:39:03.587–00:39:05.297, Speaker: Burhimin)

In transitive constructions, the behavior of the 'floated' universal quantifier *gale* 'all' is more interesting. In agentive voice constructions, if a secondary P_{AV} argument is realized, the quantifier

occurs after the verb and P_{AV}, as in (183). In the first example in (183a), the A_{AV} argument *jeme jungut tu* 'people on the corner' is the primary argument and the only referent that *gale* 'all' quantifies. The P_{AV} argument, the pronoun *die* 3, is the secondary argument and occurs after the agentive voice-marked verb *ngicikka* 'talk about' and directly before the quantifier *gale* 'all'. Despite its adjacent position to the quantifier, P_{AV} is not quantified by *gale* 'all'. In (183b), the quantifier again immediately follows P_{AV}, the secondary argument *deghian* 'durian (fruit)', but again the quantifier targets A_{AV}, the primary argument, *dak kecik* 'children'.

(183) 'Floated' quantifiers in agentive voice

a. *jeme* *jungut* *tu* *la* *ng-(k)icik-ka* *die* *gale,*
people corner DEM.DIST PFV AV-talk-CAUS/APPL 3 all
A P Q

'all the people on the corner talked about them,'
NOT: 'the people on the corner talked about all of them,'

(BJM01-008, 00:22:34.285–00:22:36.615, Speaker: Emi)

b. *kinak-i* *dak* *kecik* *be-susun,*
[PV]see-LOC.APPL child small MID-line
A

'(I) saw the children lining up,'

m-beli *deghian* *gale.*
AV-buy durian all
P Q

'all (of them) were buying durian.'
NOT: '(they) were buying all the durian.'

(BJM01-010, 00:06:37.715–00:06:42.425, Speaker: Damsi)

In the patientive voice constructions, only P_{PV}—the primary argument—can be quantified by *gale* 'all'. If A_{PV}—the secondary argument—is in the third person, the quantifier follows the predicate complex, as in (184). In (184a), the P_{PV} primary argument *anjang-anjang* 'k.o. fruit' is introduced in the first line. The quantifier *gale* 'all' occurs after the patientive voice-marked verb and A_{PV} secondary argument *dituane* 'they took'. In this case, only the primary argument *anjang-anjang* 'k.o.

fruit' is quantified. Likewise, in (184b), the quantifier immediately follows the patientive voice verb, which occurs without the prefix *di-* PV, and the A_{PV} secondary argument. However, it only quantifies the P_{PV} primary argument, the nominalized clause *nik ngerapung* 'the ones that floated'.

(184) 'Floated' quantifiers in patientive voice with third person A_{PV}

a. *Petri tadi laju dide dapat=(ny)e anjang-anjang tadi,*
P. earlier then NEG get=3 RDP-k.o.fruit earlier
P

'Princess then did not get them, the *anjang* fruit earlier,'

la di-tuan=(ny)e gale nga kakang=(ny)e enam berading tadi.
PFV PV-own=3 all with older.brother=3 six brothers earlier
=A Q A

'all (the *anjang* fruit) was taken by them, her six older siblings.'

(BJM01-005, 00:01:21.569–00:01:26.860, Speaker: Munaya)

b. *nik ng-(k)erapung tadi,*
N.LI AV-float earlier
P

'the one's that float,'

anyut-ka=nye gale.
[PV]float-CAUS/APPL=3 all
A Q

'they floated all (of them) (down the river).'

(BJM01-005, 00:02:05.481–00:02:07.205, Speaker: Munaya)

Finally, if the A_{PV} secondary argument is in the first or second person, it occurs before the verb, and the quantifier follows the verb, as in (185). In (185), the P_{PV} primary argument, the nominalized clause *nik masak-masak* 'the ones that are ripe', is introduced in the first line. In the second line, the A_{PV} secondary argument *kamu* 2PL precedes the verb, while the quantifier follows the verb. Again, *gale* 'all' only quantifies the P_{PV} primary argument in the first line.

(185) 'Floated' quantifiers in patientive voice with first/second person A_{PV}

nik *masak-masak,*
N.LI RDP-ripe
P

'all (the fruit) that is ripe,'

kamu *anyut-ka* *gale.*
2PL [PV]float-CAUS/APPL all
A Q

'you floated (down the river).'

(BJM01-005, 00:02:40.961–00:02:43.021, Speaker: Munaya)

These examples demonstrate two characteristic properties of quantifiability with *gale* 'all' in Besemah. First, the quantifier most frequently directly follows the verb, when there is no secondary argument, or in the case of transitive clauses the predicate complex, when there is a secondary argument. Second, the quantifier targets the primary argument in intransitive and transitive constructions. It is important to note that the examples in (183)–(185) were carefully chosen to include two plural arguments. In each of these examples, both arguments are possible targets for quantification based on the semantics of the noun phrase itself (i.e., there were no singular noun phrases). Despite this fact, it is only possible for the quantifier to target A_{AV} or P_{PV}, the primary argument in each case.

To summarize quantifiability in Besemah thus far, the quantifier *gale* 'all' always targets the primary argument in symmetrical voice constructions even when it immediately follows the secondary argument. What is most interesting and unique to Besemah, however, is that the quantifiers cannot target the secondary argument. That is, in most languages where quantifier float only targets the subject, the quantifier is free to target any other argument as long as the argument and the quantifier are in the same noun phrase. Subjects, then, in such languages, are the only argument that are able to 'launch' quantifiers. However, in Besemah primary arguments are the only core arguments that can be quantified. Therefore, the same alignment pattern that we saw with word order in the last section applies also to quantifiability, which is exemplified in Figure 5.2 below. Again, secondary

arguments, A_{PV} and P_{AV}, only pattern together insofar as they are not able to be quantified.

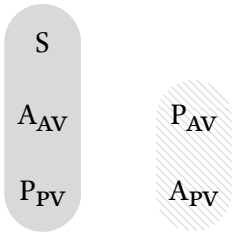


Figure 5.2: Alignment of quantifiability

5.3.2 Elicitation of universal quantifier constructions

This subsection is a short postscript to the discussion of quantifiability above. The fact that it relies on elicitation is not unproblematic. As Gil (1994, 2001) has shown for other Malay isolects, elicitation can be misleading, resulting in either (i) the rejection of common constructions due to the influence of more prestigious varieties (e.g., Standard Indonesian), or (ii) the acceptance of structures that appear to come from the more prestigious varieties, but are not necessarily 'present' in the basilectal Malay isolect. For these reasons, I have a generally pessimistic outlook on using elicited examples, and thus far, elicitation has been limited. However, the elicited examples in this subsection are helpful in further supporting the findings of quantifiability from the corpus study. Furthermore, the elicited examples are also helpful in trying to understand the properties of quantifiers within the noun phrase, which are rather rare in the corpus. In what follows, I employ the traditional symbols * and ?* for 'ungrammaticality'. For the purposes here, * simply means that all of the speakers that I questioned said something like, 'I have not heard this construction before' and 'one cannot say this construction in Besemah'. The ?* simply means that a minority of speakers said something like, 'one can say this construction', or the speakers said something like, 'sure, it is possible to say this, but it sounds funny to me', while the majority of speakers rejected the example.

One may question the analysis of quantifiability thus far: is the prohibition on the quantification

of secondary arguments a (strong) preference in the corpus, or is it a strict prohibition? In an effort to answer this question, elicitation using video stimuli was conducted with 10 Besemah speakers. Some elicitation sessions were carried out one-on-one between me and the speaker, but others were conducted in groups. The elicitation sessions were conducted entirely in Besemah.[7] The videos that speakers were shown included three teenagers doing various tasks that involved all or some of them doing something to all or some of something: taking spoons out of a cup (exemplified in Figures 5.3–5.5), kicking soccer balls, hanging up laundry, taking down laundry, sitting in chairs, eating cookies, putting on hats, drinking water, and taking money off a table. Speakers were shown a video and asked what had happened. The participants never answered with a quantifier, so I would typically provide examples, like those in (186)–(189) below. I asked if the example was something that they had heard before, and if the example was something that I could say in Besemah. In each case, I manipulated both the voice and the position of the quantifier. Overall, the results confirm the analysis above: universal quantifiers only target primary arguments; secondary arguments cannot be quantified.

Figure 5.3 is a screenshot of the video where all the people took some of the spoons (i.e., the screen shot shows all three teenagers with a spoon, but there are still spoons left in the cup). As expected, speakers can only describe this video using an agentive voice clause, when A_{AV} is the primary argument, as in (186). It is not possible to quantify the A_{PV} in the patientive voice construction in (187).

[7]The reasons for conducting elicitation sessions one-on-one and in groups were more practical than planned (i.e., it is not culturally appropriate to exclude someone during an elicitation session). However, the varied settings proved useful. I saw how different speakers reacted to the videos individually, but I also heard speakers discuss the videos and how to express their meanings.

Figure 5.3: Screen shot of video used for elicitation for the clause 'all the people took spoons' in (186)–(189)

(186) Floated universal quantifier targeting *jeme* 'people' in agentive voice

Jeme ng-ambik sidu gale.
people AV-take spoon all

'All the people took spoons.'

(187) Floated universal quantifier targeting *jeme* 'people' in patientive voice

Sidu di-ambik jeme gale.
spoon PV-take people all
A P Q

* 'The people took all the spoons.'

What may be more surprising is the fact that the agentive voice is still used to describe the video in Figure 5.3, even when the universal quantifier is within the noun phrase, as in (188). It is not possible

in the patientive voice to quantify A_{PV}, as in (189).

(188) Universal quantifier within noun phrase targeting *jeme* 'people' in agentive voice

Ge-gale	*jeme*	*ng-ambik*	*sidu.*
RDP-all	people	AV-take	spoon
Q	P		A

'All the people took spoons.'

(189) Universal quantifier within noun phrase targeting *jeme* 'people' in patientive voice

* *Sidu*	(*di-*)*ambik*	*ge-gale*	*jeme.*
spoon	(PV-)take	RDP-all	people
A		Q	P

INTENDED: 'All the people took spoons.'

Figure 5.4 shows a screenshot of the video where all of the spoons have been taken, but not all of the people have spoons (i.e., two of the three teenagers have taken the two spoons that were in the cup). Again, the same results from the corpus are borne out: the patientive voice must be used, and the quantifier targets the P_{PV} primary argument, as in (190). It is not possible in the agentive voice for the quantifier to target P_{AV}, as in (186).

Figure 5.4: Screen shot of video used for elicitation for the clause 'the people took all the spoons' in (190)–(192)

(190) Floated universal quantifier targeting *jeme* 'people' in agentive voice

Sidu	*di-ambik*	*jeme*	*gale.*
spoon	PV-take	people	all
A		P	Q

'The people took all the spoons.'

(191) Floated universal quantifier targeting *sidu* 'spoon' in agentive voice

Jeme	*ng-ambik*	*sidu*	*gale.*
people	AV-take	spoon	all

* 'The people took all the spoons.'

When the universal quantifier is within the noun phrase, the patientive voice in (192) is still strongly preferred. Two of the ten speakers felt that it was still okay to quantify P_{AV}, hence the '?*' symbol

next to the example in (193).

(192) Universal quantifier within noun phrase targeting *sidu* 'spoons' in patientive voice

Ge-gale	*sidu*	(*di-*)*ambik*	*jeme.*
RDP.CV-all	spoon	(PV-)take	people
Q	P		A

'All the spoons were taken by the people.'

(193) Universal quantifier within noun phrase targeting *sidu* 'spoons' in agentive voice

?*_Jeme_	*ng-ambik*	*ge-gale*	*sidu.*
people	AV-take	RDP.CV-all	spoon
A		Q	P

INTENDED: 'People took all the spoons.'

Finally, Figure 5.5 shows a screenshot of the video where all of the people took all of the spoons (i.e., all three teenagers have taken spoons, and there are no more spoons in the cup).

Figure 5.5: Screen shot of video used for elicitation for the clause 'all the kids took all the spoons' in (194) and (195)

As expected, it is not possible to quantify both arguments of the verb, whether it is an agentive voice construction in (194) or the patientive voice construction in (195).

(194) Universal quantifier within noun phrase targeting both arguments in agentive voice

* *Ge-gale* *jeme* *ng-ambik* *ge-gale* *sidu.*
people AV-take RDP-all spoon
A Q P

INTENDED: 'All the people took all the spoons.'

(195) Universal quantifier within noun phrase targeting both arguments in patientive voice

* *Ge-gale* *sidu* *(di-)ambik* *ge-gale* *jeme.*
RDP-all spoon (PV-)take all people
Q P A

'All the spoons were taken by all the people.'

While elicitation is generally of limited use in the diglossic contexts of western Indonesia (see above), the use of video stimuli in this elicitation task helps to confirm the patterns that were attested in the Besemah corpus. In the end, Besemah has an unusual pattern of universal quantification, such that only primary arguments—S, A_{AV}, and P_{PV}—can be quantified, and secondary arguments—P_{AV} and A_{PV}—cannot be quantified. The next section turns to a different 'diagnostic' construction, coreferential argument constructions, which focuses on A_{PV} arguments and questions surrounding the transitivity of patientive voice constructions.

5.4 Coreferential arguments

Coreferential arguments describe cases in which an argument (pronoun or noun phrase) is expressed twice within the same clause, each time referring to the same referent. The general functional motivation for coreferential arguments appears to be one of antitopicalization (i.e., 'to confirm established information' (Mithun 1999: 196) based on Chafe's (1976) notion of antitopic). Essentially, the speaker is confirming, re-establishing, or resolving any ambiguity of a referent in discourse. What is interesting in Besemah is that with some arguments (i.e., A_{PV}, and a subset of S arguments), the coreferential argument takes a preposition, and with other arguments (i.e., A_{AV}, P_{AV}, P_{PV} and most S

arguments), the coreferential argument remains unmarked. Consider the examples in (196)–(200). In each of the examples, the coreferential argument occurs without any additional marking. In (196), the S argument *die* 3 before the bare intransitive verb *main* 'play' is coreferential with the proper noun *Force-One*, which refers to a model of Honda motorcycle.

(196) Coreferential argument S

die$_i$	*tadi*	*kan*	*langsung*	*main*	*Force-One*$_i$	*tadi.*
3	earlier	right	direct	play	F.	earlier
S					S	

'they (the motorcycles), right, raced immediately, the Force-One (motorcycles).'

(BJM01-004, 00:41:04.949–00:41:06.606, Speaker: Piter)

In (197), the A_{AV} argument *die* 3 before the agentive voice-marked verb *mikaki* 'to pocket' is coreferential with the noun phrase *ghaini* 'this person' after the predicate complex.

(197) Coreferential argument A_{AV}

die$_i$	*m-(p)ikak-i*	*kiung*	*mas*	*pule*	*gha=ini*$_i$	*kan.*
3	AV-pocket-APPL	snail	gold	also	person=DEM.PROX	right
A		P			A	

'she pocketed gold snails this person right.'

(BJM01-011, 00:09:07.384–00:09:09.604, Speaker: Jamisah)

In (198) and (199), the noun phrase P_{PV} arguments (i.e., *kawe tu* 'the coffee (plant)' in (198) and *pinggir ni* 'the edge' in (199)) are coreferential with demonstrative pronouns (i.e., *titu* DEM.DIST in (198) and *tini* DEM.PROX in (199)).

(198) Coreferential argument P_{PV}

dide	*di-riwil*	*titu*$_i$	*kawe*	*tu*$_i$.
NEG	PV-trim	DEM.DIST	coffee	DEM.DIST
		P	P	

'those weren't trimmed, the coffee (plants).'

(BJM01-011, 00:16:32.704–00:16:34.336, Speaker: Rili)

(199) Coreferential argument P_{PV}

pinggir	*ni*$_i$	*masih*	*nak*	*tanam-i*	*nga*	*padi,*
edge	DEM.PROX	PERS	want	[PV]plant-LOC.APPL	with	rice
P						

'the edge should be planted with rice,'

jiku	*tini*$_i$.
QUOT.1SG	DEM.PROX
	P

'this, I said.' (BJM01-011, 00:12:37.350–00:12:39.610, Speaker: Jamisah)

Finally, in (200), the P_{AV} argument *=nye* 3 encliticizes to the agentive voice-marked verb *ngambiki* 'take' and is coreferential with the noun *kiung* 'snail', which directly follows it. What is important to note is that in each of these examples in (196)–(200) above, neither of the arguments is marked (i.e., with a preposition).

(200) Coreferential argument P_{AV}

die	*ni*	*galak*	*anu*	*ng-ambik-i=nye*$_i$	*kiung*$_i$.
3	DEM.PROX	want	umm	AV-take-LOC.APPL=3	snail
A				=P	P

'she wanted umm to take them, the snails.'

(BJM01-011, 00:11:33.459–00:11:35.773, Speaker: Jamisah)

However, when A_{PV} arguments are coreferential, they are expressed in a prepositional phrase marked by one of three prepositions: *nga* 'with' in (201a), *ngaghi* 'with' in (201b), or *li* 'by' in (201c). As in the other cases, the patientive voice verb may occur with or without the patientive voice prefix *di-* PV.

(201) Coreferential argument A_{PV}

a. | *tanye-ka=nye*$_i$ | *agi,* |
|---|---|
| ask-CAUS/APPL=3 | again, |
| =A | |

'he asked again,'

nga *bapang* *Gitah*$_i$ *rasan*=(*ny*)*e.*
with father G. agreement=3
A P

'Gitah's father, (about) the agreement.'

(BJM01-011, 00:02:03.206–00:02:04.980, Speaker: Rili)

b. *pantau*=(*ny*)*e*$_i$ *ngaghi* *anak*=(*ny*)*e*$_i$,
[PV]call=3 by child=3
=A A

'they, the children, called (their parents).'

(BJM01-002, 00:15:02.302–00:15:03.330, Speaker: Munaya)

c. *ade* *dide* *die* *di-pantau*=(*ny*)*e*$_i$ *agi* *li* *endung* *Erda*$_i$*?*
exist NEG 3 PV-call=3 again by mother E.
P =A A

'Was she (or was she) not called by Erda's mom?'

(BJM01-008, 00:19:53.110–00:19:55.180, Speaker: Ina)

When A_{PV} is in the first or second person, the same pattern is present, as in (202). In this example, the clitic pronoun *ku*= 1SG is coreferential with the prepositional phrase *liku* 'by me'.

(202) Coreferential argument 1SG A_{PV}

langsung *ku*$_i$=*tulak-ka* *liku*$_i$.
direct 1SG=[PV]push-CAUS/APPL by.1SG
A= A

'I pushed (him) right away.' (BJM01-004, 01:00:29.175–01:00:30.080, Speaker: Piter)

What is even more surprising is that there is a very small class of intransitive verbs of cognition, wherein the single argument is coreferential with a prepositional phrase. This class of predicates are either prefixed with the non-volitional prefix *te-* NVOL as in (203a) or are words with the frozen circumfix *ke- -an*, as in (203b) (see Section 3.1.1 for a description of the frozen circumfix *ke- -an*).

(203) Coreferential argument 1SG S

a. *aku*$_i$ *masih tegh-ingat* *liku*$_i$.
1SG PERS NVOL-remember by.1SG
S S

'I still remember.' (BJM01-001, 00:34:06.736–00:34:07.803, Speaker: Sawiah)

b. *aku*$_i$ *dide keruan liku*$_i$.
1SG NEG know by.1SG
S S

'I didn't know.' (BJM01-011, 00:15:04.517–00:15:06.052, Speaker: Jamisah)

While it might be possible to provide a synchronic analysis of these forms based on the semantic role of the single argument, there is a more likely diachronic explanation for this pattern. First, consider the examples of the non-volitional voice-marked verb in (204).

(204) Non-volitional voice with agent prepositional phrase

a. *HP* *te-santuk* *liku.*
cell.phone NVOL-trip by.1SG
S

'I stubbed my toe on the cell phone.' (Elicited, Speaker: Hendi)

b. *aku* *te-santuk*
1SG NVOL-trip
S

'I stubbed my toe.' (Elicited, Speaker: Hendi)

c. **aku* *te-santuk* *liku.*
1SG NVOL-trip by.1SG
S

'I stubbed my toe.' (Elicited, Speaker: Hendi)

When the single argument of the non-volitional marked verb is a patient (i.e., *HP* 'cell phone'), it is possible—but not common—to express an agent in an oblique prepositional phrase (i.e., *liku* 'by me', as in (204a)). In (204b), it is possible to have agent single argument (i.e., the one who stubs

his toe, *aku* 1SG). However, it is not possible for this single argument to be coreferential with the prepositional phrase *liku* 'by me' in (204c).

One possible explanation, then, is that the verbs *teghingat* 'remember' and *keruan* 'know', at one time, were able to take theme arguments (i.e., something remembered, or something known)—analogous to the patient argument in the example in (204a)—and experiencer arguments in a prepositional phrase (i.e., the one who remembers, or the one who knows)—analogous to the agent argument in (204a). In fact, cognate words in Standard Indonesian, *teringat* 'remembered' and *ketahuan* 'be found out', behave exactly in this way. Consider the Standard Indonesian examples in (205). In each example, the theme is the single argument and the experiencer is in the prepositional phrase headed by *oleh* 'by'.

(205) *teringat* 'remembered' and *ketahuan* 'be found out' in Standard Indonesian

a. *Keluarga itu ter-ingat oleh saya.*
family DEM.DIST NVOL-remember by 1SG
S

'I suddenly though of that family.' (Sneddon et al. 2010: 120)

b. *Dia ketahuan oleh ayahnya.*
3SG FOUND.OUT by father=3SG
S

'He was found out by his father.' (Sneddon et al. 2010: 127)

In Besemah, then, the constructions with *teghingat* 'remember' and *keruan* 'know' appear to have conflated the theme single argument construction with the experiencer single argument construction, giving rise to the coreferential argument constructions in (203). It is important to note that only a handful of verbs behave in this way. Aside from *teghingat* 'remember' and *keruan* 'know', the only other verbs that take coreferential prepositional phrase arguments are *te-pikir* NVOL-'think' and *te-rupuk* NVOL-'think'. When the verb is stative as in (206) below, the coreferential argument is unmarked.

(206) Coreferential argument 1SG A_{AV}

aku$_i$	*syukur=lah*	*mak*	*ini*	*aku*$_i$.
1SG	thankful=FOC	NOW	DEM.PROX	1SG
S				S

'I am thankful nowadays.' (BJM01-011, 00:54:37.941–00:54:39.700, Speaker: Rafles)

The general pattern, then, is that the form of the A_{PV} coreferential argument is different than the other arguments, except for a limited number of S arguments, as is depicted in Figure 5.6 below.

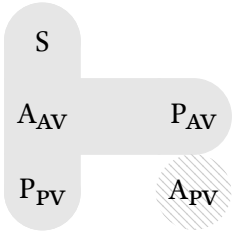


Figure 5.6: Coreferential argument alignment

The form of these A_{PV} coreferential arguments in Besemah, then, raises an important question in the study of symmetrical voice systems. Is the difference between A_{PV} and the other arguments indicative of another distinction, namely the core/oblique distinction? If this property of A_{PV} arguments reveals that they are oblique, then these constructions may be best analyzed as intransitive, passive constructions and not transitive patientive voice constructions. This question is addressed in the next subsection.

5.4.1 Coreferential arguments, passive constructions, and the status of A_{AV}

These coreferential argument constructions, especially the marking of A_{PV} with a preposition, are not unique to Besemah. Recent analyses of these constructions have largely taken the perspective that the formal marking of the coreferential A_{PV} in a prepositional phrase provides evidence that A_{PV} is *not* a core argument. For example, Arka (2008) for Balinese proposes that constructions

analogous to those in (201), where the A_{PV} is marked with the third person agent pronoun and a prepositional phrase, are indeed passive constructions. More specifically, Arka proposes that there are two separate constructions in Balinese based on the presence or absence of the coreferential A_{PV} argument. If the A_{PV} argument is only expressed as a clitic pronoun attached to the verb, it is a transitive patientive voice construction.[8] If A_{PV} is expressed with a prepositional agent phrase, the erstwhile A_{PV} clitic pronoun is no longer considered an A_{PV} clitic pronoun, but has grammaticalized into a passive suffix. Thus, for Arka, there is a distinction between constructions with a single A_{PV} argument (i.e., transitive patientive voice construction) and constructions with what I have called a coreferential A_{PV} arguments (i.e., a passive with a demoted agent). Arka (2008) relies on quantifier float and reflexive binding to show that the A_{PV} argument marked by a prepositional phrase does not behave like a core argument. Therefore, the A_{PV} argument is demoted to oblique, which means the construction must be a passive.

There is a similar analysis for Acehnese by Legate (2012), following earlier work by Lawler (1977, 1988), that goes further than Arka's analysis of Balinese. Legate (2012) proposes that analogous coreferential argument constructions demonstrate that all patientive voice constructions are indeed passive. For Legate, the oblique status of the coreferential A_{PV} argument within the prepositional phrase *reveals* that these constructions are passive (i.e., the agent argument has been 'demoted' to an oblique phrase (cf. Shibatani 1988)). These studies—based entirely on invented, elicited examples—take the perspective that the coreferential argument expressed within the prepositional phrase reveals something about the pronominal argument that attaches to the verb. However, while these coreferential constructions are considered passive by Legate and Arka, neither study has looked at how these constructions have been used in natural discourse.

This subsection demonstrates that the coreferential A_{PV} arguments in prepositional phrases behave differently in discourse compared to A_{PV} arguments in more canonically passive constructions, where A_{PV} is only expressed in a prepositional agent phrase without any enclitic on the verb. The

[8]For Arka, these constructions are undergoer voice, which is analogous to the patientive voice here.

point here is that coreferential arguments do not provide strong evidence that these patientive voice constructions are really intransitive constructions, behaving like passive constructions in other languages. To make this proposal more concrete, consider the example in (207) where, in the final line of the example, A_{PV} is only expressed in a prepositional phrase without any coreferential enclitic agent pronoun.

(207) A_{PV} in prepositional agent phrase only (non-coreferential A_{PV})

ade jeme be-rayak ke sini,
exist people MID-visit ALL here,

'there was someone (who) visited here,'

dide di-te-timbang,
NEG PV-RDP-weigh,

'(the cocoa seeds) weren't weighed,'

beli=nye.
[PV]buy=3

'he (i.e., the buyer) bought (the cocoa seeds),'

→ *empat ribu jual-ka li jeme.*
four thousand [PV]sell-APPL by people

'(for) four thousand (the cocoa seeds) were sold by someone (i.e., his wife).'

(BJM01-004, 00:14:09.331–00:14:19.868, Speaker: Aripin)

In this example, the speaker is telling a short story about how a buyer came into the village to purchase cocoa seeds from local famers. His wife sold their cocoa seeds for a very low price without even weighing them. In the last line, the speaker uses the patientive voice verb *jualkah* 'sell' followed by the prepositional agent phrase *li jeme* 'by someone'. This example differs from the coreferential arguments because there is no A_{PV} enclitic on the verb. In many ways, this example looks like a passive. The speaker appears to be minimizing the responsibility of the agent, his wife (Shibatani 1988). He does this, not only by putting the A_{PV} argument in a prepositional phrase, but also by not

mentioning her by name; he simply uses *jeme* 'someone'. In this excerpt, it is also important to note that the topic of conversation is the price of cocoa seeds, and the speaker does not mention his wife, save for this one time.

When A_{PV} in a prepositional phrase is coreferential with the A_{PV} enclitic on a patientive voice verb, as in (208), its discourse status is very different. In the extended example in (208), the coreferential A_{PV} argument occurs in line 12, marked by the double arrow. Unlike the example in (207) above, the A_{PV} argument *bagung* 'boar' is topical, having been referred to for the first time in line 2 as the P_{AV} secondary argument, in line 5 as a part of the predicate *bebagung* 'have boar', as an unrealized A_{AV} primary argument in line 7, and as the enclitic A_{PV} *=nye* 3 in line 11. Furthermore, after the coreferential argument is mentioned in line 12, *bagung* 'boar' continues as an A_{PV} enclitic in line 14 and A_{AV} pronoun *die* 3 in line 15. Each time *bagung* 'boar' is mentioned, it is marked with a single arrow.

(208) Coreferential A_{PV} argument (BJM01-010, 00:01:36.573–00:02:05.204)

1	BURHIMIN:		*n-(t)unggu pipit,* AV-wait k.o.bird,	'(he) is guarding against birds,'
2		→	*n-(t)unggu bagung kalu.* AV-wait boar probably.	'(he) is guarding against boar, probably.'
3	ARIPIN:		*au taruk=lah,* yes example=FOC	'yes, but (lit. for example),'
4			*cuman dide amu ng-ganggu=nye anye.* only NEG TOP AV-bother=3 but	'but (he) doesn't (need to), if (the animals) don't bother it (i.e., the rice paddy),'
5	BURHIMIN:	→	*dide be-bagung?* NEG MID-boar	'(the rice paddy) doesn't have boar?'
6	ARIPIN:		*ade,* exist	'there is,'
7		→	*empai ni m-(m)asuk-i=nye* REC.PST DET.PROX AV-enter-LOC.APPL	'just now, (the animals) entered into it,'
8			*ambang-an sawi=nye endik–* seedling-NMLZ mustard.greens=3 N.LI	'the seedling area for the mustard greens, (the one) that–'

9		*laju urung n-(t)anam-ka=nye.* then cancel AV-plant-CAUS/APPL=3	'then (he) couldn't (lit. canceled) planting them,'
10		*ne kiplang kite anu tu,* N.LI plot 1PL.INCL umm DEM.DIST	'(the seedling area) on our plot,'
11	→	*ne la sung- sungkagh-i=nye.* N.LI PFV HES [PV]nest-LOC.APPL=3	'is (the one) that they (i.e., the boars) nested in,'
12	BURHIMIN:⇒	*sangkagh-i=nye nga bagung?* [PV]nest-LOC.APPL=3 with boar	'the boar nested in (the seedling area)?'
13	ARIPIN:	*e'e.* uhuh	'uhuh.'
14	→	*anu sungkagh-i=nye,* umm [PV]nest-LOC.APPL=3	'they are nesting in (the seedling area),'
15	→	*die n-cakagh enggelang kapuh nilah.* 3 AV-search worm ETC DEM.PROX=FOC	'they are looking for worms and the like.'

Based on these two examples, which are representative of the differing statuses of A_{PV} arguments in the corpus, it is clear that coreferential arguments are topical and persist throughout a stretch of discourse, while A_{PV} arguments that are only expressed in a prepositional agentive phrase are ephemeral and not topical. This discussion provides good evidence that constructions with coreferential arguments differ from more canonical passive constructions without coreferential arguments. Thus, despite the formal properties of coreferential A_{PV} arguments in a prepositional phrase, the coreferential argument behaves very differently than an A_{PV} argument in a passive construction. Thus, while it is tempting to analyze the presence of a preposition on A_{PV} coreferential arguments as one that distinguishes core arguments from obliques, examples from natural discourse do not support such an analysis. Rather, the A_{PV} coreferential argument construction behaves differently than A_{PV} arguments expressed in a passive construction.

5.5 Reflexive binding

In recent studies of symmetrical voice languages, reflexive binding constructions have been used in much the same way coreferential argument constructions were used in the previous section, to

determine if the A_{PV} argument is core or oblique (e.g., Arka 2003, Arka & Manning 2008, Riesberg 2014). An example of this type of study is found in Arka & Manning (2008) on Standard Indonesian. Arka & Manning propose that the reflexive pronoun (i.e., the 'binder') could only co-refer to (i.e., 'bind') the agent core argument antecedent noun phrase or pronoun (i.e., the 'bindee'). For Arka & Manning, the reflexive pronoun—*diri* 'self' plus a possessive pronoun (e.g., *=nya* 3SG in (209) or *saya* 1SG in (211a) below)—is able to bind S in (209), A_{AV} in (210), and A_{PV} in (211).

In (209), the verb is a bare intransitive verb *ingat* 'remember', and the single antecedent argument *dia* 3SG is bound by the reflexive pronoun *dirinya* 'himself' in the oblique prepositional phrase headed by the preposition *dengan* 'with'.

(209) Reflexive pronoun in oblique with S antecedent in Standard Indonesian

Dia	*tidak*	*ingat*	*dengan*	*diri=nya*
3SG	NEG	ingat	with	self=3SG
S				REFL

'He didn't remember himself.' (Arka & Manning 2008: 55)

In (210), the antecedent A_{AV} argument *dia* 3SG is bound by the reflexive pronoun *dirinya* 'himself' in the P_{AV} post-verbal position.

(210) Reflexive pronoun with A_{AV} antecedent in Standard Indonesian

Dia	*tidak*	*meny-(s)erah-kan*	*diri=nya*
3SG	NEG	AV-surrender-CAUS/APPL	self=3SG
A			REFL

'He didn't surrender himself.' (Arka & Manning 2008: 59)

In (211a), the antecedent A_{PV} argument *saya* 1SG occurs directly before the patientive voice verb; it binds the reflexive pronoun *diri saya* 'myself' in the P_{PV} position. In (211b), the antecedent A_{PV} argument *=nya* 3SG is encliticized to the verb, which is prefixed with the patientive voice prefix *di-* PV; it binds the reflexive pronoun *dirinya* 'himself' in the P_{PV} pre-verbal position. Thus far, based on Arka & Manning (2008), S and A arguments can bind the reflexive pronoun in the both agentive

and patientive voice constructions.

(211) Reflexive pronoun with A_{PV} pronominal antecedent in Standard Indonesian

a. *Diri saya saya serah-kan ke polisi.*
self 1SG 1SG [PV]surrender-CAUS/APPL ALL police
REFL A

'I surrendered myself to the police.' (Arka & Manning 2008: 54)

b. *Diri=nya tidak di-perhati-kan=nya*
self=3SG NEG PV-care-CAUS/APPL=3SG
REFL =A

'He didn't care for himself.' (Arka & Manning 2008: 59)

However, Arka & Manning (2008) propose that the reflexive pronoun cannot bind the A_{PV} antecedent argument, when (i) A_{PV} is in an agent prepositional phrase, as in (212a-b), or (ii) A_{PV} is a noun phrase occurring after the patientive voice marked verb, as in (212c).

(212) Reflexive pronoun with third person A_{PV} antecedent in Standard Indonesian

a. ??*Diri=nya tidak di-aju-kan sebagai calon oleh=nya*
self=3SG NEG PV-nominate-CAUS/APPL as candidate by=3SG
REFL A

INTENDED: 'Amir did not surrender himself to the police.'

(Arka & Manning 2008: 49)

b. ?**Diri=nya tidak di-serah-kan oleh Amir*
self=3SG NEG PV-care-CAUS/APPL by A.
REFL A

INTENDED: 'Amir did not surrender himself to the police.'

(Arka & Manning 2008: 48)

c. ?**Diri=nya tidak di-perhati-kan Amir*
self=3SG NEG PV-care-CAUS/APPL A.
REFL A

INTENDED: 'Amir didn't care for himself.' (Arka & Manning 2008: 61)

In (212a-b), the A_{PV} arguments, *oleh=nya* 'by him' and *oleh Amir* 'by Amir', respectively, are in prepo-

sitional phrases and cannot bind the reflexive pronoun *dirinya* 'himself'. In (212c), the A_{PV} argument is a noun phrase *Amir* 'Amir' and still cannot bind the reflexive pronoun *dirinya* 'himself'.[9]

For Arka & Manning, then, the examples in (212) demonstrate that only pronominal A_{PV} arguments that are encliticized to the verb are core. While this analysis of reflexive binding in Standard Indonesian has been treated as relatively uncontroversial in the literature on symmetrical voice (cf. Riesberg 2014: 67–69), the nature of reflexive binding and reflexive pronouns in a number of Malay isolects (e.g., Riau Indonesian (e.g., Gil 2001), Singaporean Malay (Cole & Hermon 1998)) and other western Indonesian languages (e.g., Madurese (Davies 2008)) is far from clear.[10] In the end, reflexive binding does not reveal anything novel about grammatical relations or the core/oblique status of A_{PV} arguments in Besemah because reflexive binding constructions only occur in the agentive voice. What makes the analysis of these constructions in Besemah difficult is (i) apparent reflexive pronouns that are cognate with reflexive pronouns in related languages are not used as such, (ii) reflexive meanings are typically expressed in other ways (e.g., middle voice marking on the verb), and (iii) 'true' reflexive binding constructions are extremely rare in the corpus (i.e., a single instance) and, furthermore, difficult to elicit (see below).

First, Besemah has several different pronominal forms that are cognate with reflexive pronouns in other Malay isolects. These include *dighi* 'self' and *sendighi* 'self' or 'alone' (cf. Adelaar 1992). Furthermore, Besemah has even borrowed an apparent reflexive pronoun from Javanese (i.e., *diwik* 'self'). In the corpus, these pronouns are common, but do not function as reflexive pronouns, with a single exception (see below), as in (213)–(216). The examples below demonstrate that these 're-

[9] Arka & Manning (2008) explain the unacceptability of the example in (212c) by proposing that in this case the preposition *oleh* 'by' has been omitted. Thus, the A_{PV} argument in the example in (212c) is oblique by virtue of the omission of the preposition. However, aside from its inability to bind the reflexive pronoun, there is no further evidence for there being a omitted preposition in (212c).

[10] The analysis of binding in Arka & Manning (2008) raises a number of questions. These issues, however, are not relevant to reflexive binding constructions in Besemah, so I do not address them here. However, a recent paper by Kroeger (2014) argues that a number of the restrictions that Arka & Manning (2008) propose can in fact be explained by discourse factors, and not syntactic factors as Arka & Manning suggest. Kroeger proposes that highly topical antecedents are more likely to binds reflexive pronouns. Presumably, the pronominal A_{PV} arguments in (211) are higher in topicality than the A_{PV} noun phrase arguments in (212).

flexive' pronouns serve as different arguments within the clause (i.e., S in (213), A_{AV} in (214a), P_{AV} in (214b), P_{PV} in (215a), A_{PV} in (215b)). They can even be possessive pronouns, as in (216). These pronouns typically refer to a speech-act participant, but can also refer to a third person referent as in (213b). Without a full analysis of the use of these pronouns, what is important to note here is that these 'reflexive' pronouns are not being used in 'reflexive' binding constructions.

(213) 'Reflexive' pronouns in intransitive constructions

a. *ai* *dighi,*
EXCL self
S

'ah we,'

be-rupuk *pule.*
MID-think also

'think also.' (BJM01-011, 00:24:04.097–00:24:05.317, Speaker: Dewi)

b. *diwik* *la* *ketue* *mak* *ini.*
self PFV head like DEM.PROX
S

'she (lit. self) already (became) the leader now.'

(BJM01-008, 00:16:33.860–00:16:35.000, Speaker: Emi)

(214) 'Reflexive' pronouns in agentive voice constructions

a. *dighi* *di-* *ngambang-ng-ambang-ka=nye.*
self HES RDP-AV-plant-CAUS/APPL=3
A =P

'we planted them (i.e., cocoa seeds),'

(BJM01-010, 00:26:51.292–00:26:53.560, Speaker: Damsi)

b. *ai* *kamu* *tadi* *n-(t)inggal-ka* *diwik,*
EXCL 2PL earlier AV-leave-CAUS/APPL self
A P

'ah you all left me (lit. self) behind,'

(BJM01-004, 00:00:52.958–00:00:54.846, Speaker: Rafles)

(215) 'Reflexive' pronouns in patientive voice constructions

a. *di-sakat jeme dighi.*
PV-bother people self
A P

'people didn't bother me (lit. self).'

(BJM01-011, 00:28:29.773–00:28:33.229, Speaker: Jamisah)

b. *capak-i nga dighi.*
[PV]discard-LOC.APPL with self
A

'(so) you (lit. self) threw away (the grafted plants).'

(BJM01-011, 00:14:52.823–00:14:53.679, Speaker: Dewi)

(216) 'Reflexive' pronoun as possessive pronoun

aku m-(p)arkir-ka mutur jiku,
1SG AV-park-CAUS/APPL motorcycle QUOT.1SG

'I parked (my) motorcycle, I thought'

kalu lantak=(ny)e mutur diwik ni.
probably [PV]crash=3 motorcycle self DEM.DIST

'probably it (e.g., the Telagah car) will hit my motorcycle.'

(BJM01-004, 00:33:04.260–00:33:14.534, Speaker: Hendi)

Second, constructions that are translated as reflexive binding constructions in English are typically expressed by other means (see more examples in (221) below), primarily with the middle voice prefix discussed in Section 4.2.1, and exemplified in the elicited clauses in (217).

(217) Middle-voice verbs with reflexive meanings

a. *dak-kecik tu dang be-basuh.*
child DEM.DIST IPFV MID-wash

'the children are washing (themselves).' (Elicited, Speaker: Hendi)

b. *dak-kecik tu dang be-kace.*
child DEM.DIST IPFV MID-glass

'the children are looking (at themselves) in the mirror.' (Elicited, Speaker: Hendi)

Finally, there is only one example of a reflexive binding construction in the corpus in (218) below. In this example from a narrative about a princess being tricked to marry a snake, the princess and the snake marry themselves off (i.e., instead of their parents marrying them off). In this example, the A_{AV} antecedent argument *putri tadi ngaghi ulagh tadi* 'the princess and the snake' appears in the second line after the predicate complex. The reflexive pronoun *sendighi* 'self' occupies the P_{AV} secondary argument position after the agentive voice-marked verb *ngawinka* 'marry off'. What is interesting is that this example uses the form *sendighi* 'self', which appears to be the preferred form in reflexive binding constructions (see below). Because this example is the only case of a reflexive binding construction in the corpus, the next subsection looks at some elicited examples of reflexive binding, revealing that the single instance from the corpus in (218) is, in fact, representative of reflexive binding constructions in Besemah. That is, reflexive binding only occurs in agentive voice constructions, in which the A_{AV} primary argument antecedent is bound by the reflexive pronoun in the P_{AV} post-verbal position.

(218) Reflexive binding construction in the agentive voice

nyelah laju ng-(k)awin-ka sendighi pule uji.
right then AV-marry-CAUS/APPL self also QUOT

'that's right (they) also married themselves they say.'

(1.0)

putri tadi ngaghi (1.2) ulagh tadi.
princess earlier with snake earlier
A A

'the princess and the snake.'

(BJM01-026, 00:10:58.407–00:11:05.705, Speaker: Sawia)

5.5.1 Eliciting reflexive binding constructions

This subsection explores the nature of reflexive binding constructions in Besemah using elicited examples. As mentioned in Section 5.3.2 on quantifiability, elicitation poses many challenges in Malay isolects. The same caveats mentioned in that section apply here.

This subsection reports two different elicitation tasks. The first draws on the single instance of reflexive binding in the corpus in (218) above. The example was manipulated, so that there were examples in the agentive and patientive voice with the A antecedent in all possible positions. In the second elicitation task, I performed several 'reflexive' actions (see below) and asked speakers to describe what I was doing. Because this task proved to be unsuccessful in eliciting reflexive binding constructions, I provided examples similar to the reflexive binding construction in (218) alongside the action to see if these constructions were possible. The same three Besemah speakers took part in each of these elicitation tasks in one-on-one sessions that were conducted entirely in Besemah. Despite the difficulties in elicitation, the results are fairly clear: (i) reflexive binding constructions are not typical in Besemah, and (ii) reflexive binding constructions are restricted to the agentive voice; the reflexive pronoun occupies the P_{AV} post-verbal position, which binds the antecedent A_{AV} primary argument.

Utilizing the example in (218) from the corpus, it was only possible to elicit constructions where the reflexive pronoun was in the P_{AV} post-verbal position. I met with three Besemah speakers, separately, all of whom accepted the example in the agentive voice in (219), which is closely based on the example from the corpus. The only difference in (219) is that the A_{AV} argument was changed to the pronoun *die* 3. It was also possible to use another reflexive pronoun, *dighinye* 'himself, herself, themselves', which is made up of *dighi* 'self' and the third person possessive pronoun *=nye* 3. For the sake of simplicity, I only present examples with *sendighi* 'self', since both reflexive pronouns were equally (un)acceptable in each example.

(219) Reflexive binding in agentive voice based on corpus example

nyelah	*laju*	*die*$_i$	*ng-(k)awin-ka*	*sendighi*$_i$	*pule*	*uji.*
right	then	3	AV-marry-CAUS/APPL	self	also	QUOT
		A		REFL		

'that's right they also married themselves off they say.'

(Elicited, Speaker: Hendi, Sarkani, Sutarso)

When the agentive voice was changed to patientive voice, however, the same three speakers rejected any reflexive binding example, as in (220).

(220) Reflexive binding in patientive voice based on corpus example

a. **nyelah laju sendighi*$_i$ *di-kawin-ka=nye*$_i$ *pule uji.*
right then self PV-marry-CAUS/APPL=3 also QUOT
REFL =P

'that's right they also married themselves off they say.'

(Elicited, Speakers: Hendi, Sarkani, Sutarso)

b. **nyelah laju sendighi*$_i$ *kawin-ka=nye*$_i$ *pule uji.*
right then self [PV]marry-CAUS/APPL=3 also QUOT
REFL =P

'that's right they also married themselves off they say.'

(Elicited, Speakers: Hendi, Sarkani, Sutarso)

c. **nyelah laju sendighi*$_i$ *di-kawin-ka jeme*$_i$ *pule uji.*
right then self PV-marry-CAUS/APPL people also QUOT
REFL A

'that's right the people also married themselves off they say.'

(Elicited, Speakers: Hendi, Sarkani, Sutarso)

d. **nyelah laju sendighi*$_i$ *di-kawin-ka nga jeme*$_i$ *pule uji.*
right then self PV-marry-CAUS/APPL with people also QUOT
REFL A

'that's right the people also married themselves off they say.'

(Elicited, Speakers: Hendi, Sarkani, Sutarso)

e. **nyelah* *laju* *sendighi*$_i$ *kami*$_i$ *kawin-ka* *pule* *uji.*
right then self 1PL.EXCL [PV]marry-CAUS/APPL also QUOT
REFL A

'that's right the people also married themselves off they say.'

(Elicited, Speakers: Hendi, Sarkani, Sutarso)

These examples show cases where the A_{PV} is pronominal with the *di-* PV prefix in (220a) or without the prefix in (220b), A_{PV} is a noun phrase in (220c), A_{PV} is in a prepositional phrase in (220d), and A_{PV} is expressed with a first person pronoun in (220e). According to the three speakers, none of these were possible in Besemah.

In the second elicitation task, there were a number of responses, when I preformed 'reflexive' activities and asked the speakers what I was doing. For example, I pinched myself, (pretended to) cut myself, looked at myself in a mirror, looked at myself in a photograph, took a picture of myself, etc. In each case, I was given responses that did not involve reflexive pronouns. Instead, I received constructions like those in (221). Where in English (and probably other languages) one would expect a reflexive pronoun, I was given different noun phrases, such as *daging* 'flesh' in (221a) or *tangan* 'hand' in (221b), or the middle voice construction in (221c).

(221) Attempted elicitation of reflexive constructions

a. *aku* *ng-*(*k*)*ibit* *daging*
1SG AV-pinch flesh
A P

'I pinched myself (lit. I pinched (my) flesh).' (Elicited, Speaker: Sutarso)

b. *aku* *te-ighis* *nga* *tangan*
1SG NVOL-slice with hand
S

'I sliced myself (lit. I accidentally sliced (my) hand).' (Elicited, Speaker: Hendi)

c. *aku* *be-kace*
1SG MID-glass
S

'I looked at myself in the mirror.' (Elicited, Speaker: Hendi)

d. *aku* *ng-(k)inak-i* *putuh=ku* *di* *HP.*
1SG AV-se-LOC.APPL photo=1SG LOC cell.phone
A P

'I looked at myself in a photo on my phone (lit. I looked at my picture on the cell phone).'
(Elicited, Speaker: Hendi)

I then asked more specifically if one of the reflexive pronouns could be used in these examples. For some examples, it was not possible to elicit reflexive constructions. For verbs like *ighis* 'slice', speakers could only use the intransitive non-volitional voice to express cutting oneself. For other examples, it was possible, as in (222).

(222) Elicited reflexive binding constructions in agentive voice *kibit* 'pinch'

a. *aku* *ng-(k)ibit* *sendighi*
1SG AV-pinch self
A REFL

'I pinched myself.' (Elicited, Speakers: Hendi)

b. *die* *ng-(k)ibit* *sendighi*
3 AV-pinch self
A REFL

'he pinched himself.' (Elicited, Speakers: Hendi)

In this example, again, the reflexive pronoun *sendighi* 'self' is in the P_{AV} post-verbal position, and its antecedent is the A_{AV} primary argument. Note that it would be possible for the reflexive pronoun to be *dighi=ku* 'self'=1SG (i.e., 'myself') in (222a) and *dighi=nye* 'self'=3 in (222b). However, it was not possible to elicit reflexive binding constructions in the patientive voice, as in (223).

(223) Elicited reflexive binding constructions in patientive voice *kibit* 'pinch'

a. **sendighi* *ku=kibit*
self 1SG-[PV]pinch
REFL A=

INTENDED: 'I pinched myself.' (Elicited, Speakers: Hendi, Sarkani, Sutarso)

b. **sendighi* *di-kibit=(ny)e*
self PV-pinch=3
REFL =A

INTENDED: 'he pinched himself.' (Elicited, Speakers: Hendi, Sarkani, Sutarso)

With other verbs, this is precisely the same pattern that emerges, as in (224) in the agentive voice and (225) in the patientive voice.

(224) Elicited reflexive binding constructions in agentive voice with *kinak* 'see'

a. *aku* *ng-(k)inak-i* *sendighi* *di* *kace.*
1SG AV-see-LOC.APPL self LOC glass
A REFL

'I saw myself in the window.' (Elicited, Speakers: Hendi, Sarkani, Sutarso)

b. *die* *ng-(k)inak-i* *sendighi* *di* *kace.*
3 AV-see-LOC.APPL self LOC glass
A REFL

'he saw himself in the window.' (Elicited, Speakers: Hendi, Sarkani, Sutarso)

(225) Elicited reflexive binding constructions in patientive voice with *kinak* 'see'

a. **sendighi* *ku=kinak-i* *di* *kace*
self 1SG-[PV]pinch LOC glass
REFL A=

INTENDED: 'I saw myself in the window.' (Elicited, Speakers: Hendi)

b. **sendighi* *di-kinak-i=(ny)e* *di* *kace*
self PV-see-LOC.APPL=3 LOC glass
REFL =A

INTENDED: 'he saw himself in the window.' (Elicited, Speakers: Hendi)

In all of these examples, then, it was not possible to use any other voice aside from the agentive voice, confirming the finding from the corpus.

In some sense, it may be surprising that reflexive binding constructions are only possible in the agentive voice, given that these constructions occur in both agentive and patientive voice constructions in other Malay isolects (cf. Cole et al. 2015). However, in Besemah, there is a similar restriction in the transitive reciprocal construction, which is functionally closely related to the reflexive construction (Givón 2001).[11] In the transitive reciprocal construction, the reciprocal pronoun *sangi* RECP immediately precedes the unprefixed patientive voice verb as in (226) below. The transitive reciprocal construction, like the reflexive binding construction, is limited to a single voice. Unlike the reflexive binding construction's restriction to the agentive voice, the transitive reciprocal construction is limited to the patientive voice construction.

(226) Reciprocal construction in the patientive voice

mangke kebile be-temu tu,
then when MID-meet DEM.DIST

'so when (we) met.'

(1.1)

masih pule sangi ghingge-ka.
PERS also RECP [PV]greet-CAUS/APPL

'(we) still also greeted each other.'

(BJM01-011, 00:40:14.246 – 00:40:18.433 , Speaker: Jamisah)

5.6 Conclusion

This chapter demonstrated that there is fairly strong evidence that S, A_{AV}, and P_{PV} all have a primary argument grammatical relation, while there is less solid evidence that P_{AV} and A_{PV} have a secondary

[11] Intransitive reciprocal constructions are morphologically expressed, see Section 3.1.1.

argument grammatical relation, based on word order in Section 5.2 and quantifiability in Section 5.3. The status of A_{PV} as a core secondary argument was called into question in Section 5.4. However, A_{PV} in coreferential argument constructions was shown to behave quite differently than A_{PV} arguments in passive constructions; A_{PV} arguments in prepositional phrases without a coreferential argument appear *not* to be core arguments, while constructions A_{PV} arguments in prepositional phrases with a coreferential argument are core arguments. Finally, reflexive binding constructions in Section 5.5 were shown to reveal little about the status of secondary arguments.

Chapter 6

Grammatical relations across clause boundaries

The previous chapter outlined the nature of grammatical relations within the clause by investigating several 'diagnostic' constructions: word order (Section 5.2), quantifiability (Section 5.3), coreferential arguments (Section 5.4), and reflexive binding (Section 5.5). This chapter treats grammatical relations across clause boundaries. Two constructions are investigated in particular in an effort to understand grammatical relations in Besemah: noun modifying clause constructions—analogous to relative clause constructions—in Section 6.1, and control/raising constructions in Section 6.2. There are, however, two issues that arise when utilizing these 'diagnostic' constructions to provide evidence for grammatical relations.

First, in western Austronesian languages, 'diagnostic' constructions for grammatical relations that operate across a clause boundary typically involve an unrealized argument—often referred to as an 'omitted' argument—that receives its reference from another argument outside of the clause. In relative clause constructions, the unrealized, so-called 'gapped' argument within the relative clause receives its reference from the head noun. In control constructions, the unrealized 'controllee' argument in the complement clause receives its reference from the 'controller' argument in the matrix

clause. The nature of this evidence raises a number of questions for a language like Besemah, because unrealized arguments (i) are *not* (always) syntactically determined and (ii) are pervasive in natural discourse. The question is, in any given construction, is the argument unrealized (e.g., in a relative clause or a complement clause) because it is grammatically constrained by the construction, or is it because there are larger discourse/pragmatic factors at play?

Second, an equally serious issue that arises in these 'diagnostic' constructions is that the relationship between two clauses or a noun phrase plus a clause is not clearly defined (see Givón 2001: Ch. 12 on clausal integration). For example, in the languages of western Indonesia, apparent relative clause constructions have been treated in much the same way that relative clauses have been analyzed in English: the head noun co-refers to the 'omitted' argument within the relative clause. The analyses of western Indonesian languages only differ in their recognition that there is a restriction, such that only 'omitted' subject arguments within the modifying clause can co-refer to the head noun (Chung 1976, Musgrave 2001, Arka 2003). However, for two western Indonesian languages, Sasak and Sumbawan, Shibatani (2008) proposes that the syntactic relationship between head noun and modifying clause is not warranted because, among other properties, headless relative clauses are pervasive. Instead, he analyzes these presumably headless relative clauses as clausal nominalizations (e.g., 'the one who ate the fish'), and the presumably headed relative clauses as appositive constructions (e.g., the dog, the one who ate fish). Furthermore, various types of complementation have traditionally been analyzed in much the same way as English complementation (Vamarasi 1999, Musgrave 2001). However, Englebretson (2003) argues that what has been traditionally analyzed as grammatical complementation in Standard Indonesian is not a grammatical category in colloquial Indonesian. Rather, the element that has been analyzed as the complementizer (i.e., *bahwa* COMP) is actually a discourse marker, and constructions that have been analyzed as complement clauses without the complementizer are simply juxtaposed clauses whose inter-clausal relation is resolved inferentially.

These two issues—the indeterminate nature of unrealized arguments and the opaque relation-

ship between two clauses or a noun plus a clause—play a prominent role in the analysis of grammatical relations across clause boundaries in Besemah. In fact, due to these two factors, this chapter is somewhat pessimistic concerning the potential for these 'diagnostic' constructions to provide any evidence for grammatical relations in Besemah. In Section 6.1, I argue that what appear to be relative clauses in Besemah are not relative clauses at all. Rather, these constructions are best analyzed as noun modifying clause constructions, following the analyses of Mastumoto (1997) and Comrie (1998) for Japanese and other languages. Essentially, these constructions consist of a *noun + modifying clause* without the syntactic restriction of the 'omitted' argument co-referring to the head noun that characterizes relative clause constructions. This finding is quite unexpected, given that most languages in western Indonesia are analyzed as possessing a relative clause construction.[1]

In Section 6.2, the analysis of control/raising constructions in Besemah is much less decisive. After a brief discussion of the evidence for separate control and raising constructions in Besemah, I conclude that there is no evidence to make such a distinction. Then, two ostensible control/raising constructions from the corpus are analyzed, each involving different matrix verbs: the verbs *galak* and *endak* both meaning 'want' (Section 6.2.1) and the voice-marked transitive verb *ajung* 'order' (Section 6.2.2). While each construction evinces different properties, these constructions do not clearly provide further support for grammatical relations in Besemah. Finally, several constructions that have been used as 'diagnostic' constructions—including secondary predicate constructions, adjunct fronting, and possessor topicalization (Kroeger 1993, Arka 2003)—were (i) not found in the corpus and (ii) too difficult for me to elicit clear, natural examples. In each case, I was met with puzzled looks and confused responses. For these reasons, I do not treat these constructions here.

[1]Shibatani (2008), for quite different reasons, analyzes these constructions as as nominalizations, which he distinguishes from relative clauses.

6.1 Noun modifying clause constructions

In western Indonesian languages, relative clause constructions are typically said to have the following three properties:

(i) the relative clause follows the noun it is modifying and is introduced by a relativizer (e.g., *yang* REL in Standard Indonesian),

(ii) the position out of which head noun is 'extracted' within the relative clause (i.e., the so-called 'gap') is restricted to the 'subject' position (i.e., S, A_{AV}, P_{PV}), and

(iii) the construction optionally occurs without the head noun (i.e., a headless relative clause) (cf. Ewing & Cumming 1998).

These properties are exemplified in Standard Indonesian in (227)–(230) below. In the examples below, the so-called 'gap' in the relative clause is represented by '___', and the relative clause itself is bracketed within square brackets '[ ]'.

(227) Relative clause with S 'gap' in Standard Indonesian

Orang	*yang*	[___	*ber-kumpul*	*di*	*depan*	*pintu*]	*harus*	*pindah.*
person	REL		MID-gather	LOC	front	door	must	move

'The people that are gathered in front of the door must move.'

(Slightly adapted from Sneddon 1996: 286)

(228) Relative clause with A_{AV} 'gap' in Standard Indonesian

Orang	*yang*	[___	*mem-bangun*	*rumah*]	*tidak*	*begitu*	*tua.*
person	REL		AV-build	house	NEG	like	old

'The person that built the house isn't that old.'

(Slightly adapted from Sneddon 1996: 287)

(229) Relative clause with P_{PV} 'gap' in Standard Indonesian

a. *Rumah yang* [___ *di-bangun Pak Dani*] *tidak begitu besar.*
house REL PV-build TITLE D. NEG like big

'The house that Mr. Dani build isn't that big.'
(Slightly adapted from Sneddon 1996: 287)

b. *Rumah yang* [___ *kita bangun*] *tidak begitu besar.*
house REL 1PL.INCL [PV]build NEG like big

'The house that we built isn't that big.' (Slightly adapted from Sneddon 1996: 287)

The examples in (227)–(229) demonstrate the restriction that only 'subjects' in Standard Indonesian may be relativized, claimed to be a widespread property of Austronesian languages (Keenan & Comrie 1977). In (227), the S argument within the relative clause is omitted and co-refers to the head noun *orang* 'person'. In (228), the A_{AV} argument within the relative clause is omitted and co-refers to the head noun *orang* 'person'. Finally, in (229), the P_{PV} argument within the relative clause is omitted and co-refers to the head noun *rumah* 'house' in both (a) and (b) examples. The example in (229a) has a third person A_{PV} argument and is prefixed with *di-* PV, while the example in (229b) has a first person A_{PV} argument without any prefix on the verb. These examples show that the voice system in Standard Indonesian accommodates this subject-only restriction on relativization. Finally, in (230), there is no head noun preceding the relativizer *yang* REL; headless relative clauses usually take the meaning 'the one who...' or 'the thing that...'.

(230) Headless relative clause in Standard Indonesian
Yang [___ *mem-bawa senapan*] *men-(t)embaki ikan yang sekarat.*
REL AV-carry rifle AV-shoot fish REL in.agony

'Those who had rifles shot the fish that were in agony.' (Ewing 1991: 82)

The properties of relative clauses in (i)–(iii) and corresponding examples in Standard Indonesian in (227)–(230) have been widely accepted, especially in establishing the subject grammatical relation (Chung 1976, Sneddon 1996, Musgrave 2001, Vamarasi 1999, Arka 2005, Riesberg 2014). How-

ever, there have been a number of more recent studies that have questioned whether all aspects of the analysis of relative clauses in Standard Indonesian above can be extended to colloquial varieties of Indonesian; some even question that the analysis holds true for Standard Indonesian.

For example, Cole & Hermon (2005) argue that Standard Indonesian does not strictly obey the restriction on subject-only relativization, based on elicited examples.[2] Tjung (2006), following Cole & Hermon (2005), shows that the subject-only restriction is not strictly ungrammatical in Jakarta Indonesian, but there is a strong preference to relativize the subject. In a corpus study of both written Standard Indonesian and face-to-face and computer-mediated conversation in colloquial Indonesian, Ewing & Cumming (1998) found that the subject-only restriction held up in the corpus. However, they also found that the vast majority of relative clauses in colloquial Indonesian contain intransitive predicates. This means that the probability for a non-subject argument to be relativized is diminished.

Englebretson (2008) makes no explicit claims about the subject-only constraint, but shows that relative clauses—or *yang* constructions in his terminology—are more diverse in colloquial Indonesian than has been previously described. He shows that *yang* constructions range from (headed) relative clauses that modify a head noun phrase on the one end of a continuum to headless 'referring' expressions on the other end (with headless 'cleft' expressions somewhere in the middle). In Englebretson's terminology, 'referring' expressions are headless relative clauses that occur as arguments of the predicate, while 'cleft' expressions are also headless relative clauses that occur as clefts in equational sentences. Englebretson (2008) found that the majority of *yang* constructions in his corpus were headless relative clauses (83.1%) and, of the headless relative clauses, 'referring' expressions made up the majority of the cases (61.1%). He proposes that these polyfunctional forms of the *yang* construction should not be labeled as relative clauses at all and, furthermore, should not be placed in discrete categories. Ewing & Cumming (1998) also found that there was an overabun-

[2]It could be the case that the subject-only constraint is, in fact, a defining feature of prescriptive Standard Indonesian as is suggested by Ewing & Cumming (1998: 79). However, Cole & Hermon (2005) do not address this issue.

dance of headless relative clauses in colloquial Indonesian (in face-to-face and computer-mediated conversation), but this rarely occurred in written Standard Indonesian.

Even though the abundance of headless relative clauses and the lack of a subject-only constraint are remarkable features of relative clause constructions in varieties of colloquial Indonesian, Besemah evinces even more divergent features. Besemah does not appear to have a relative clause construction at all. Instead, constructions that are functionally equivalent to relative clause constructions are best analyzed as noun modifying clause constructions, following the analyses of Matsumoto (1997) and Comrie (1998) for Japanese and other languages. Essentially, when a clause modifies a noun in Besemah, there is no relativizer or linker like Standard Indonesian *yang* REL; the modifying clause directly follows the noun it is modifying. The structure of noun modifying clause constructions is simply NOUN + MODIFYING CLAUSE.

These noun modifying clause constructions fall into two basic categories based on the type of noun that is being modified. The first category includes a noun modifying clause construction with an independent, semantically richer noun, while the second category includes noun modifying clause constructions with one of two dependent, semantically bleached 'light' nouns, *ende/ne* N.LI and *endik/nik* N.LI, which are often translated as 'the one' or 'the thing'. The prior are labeled 'heavy-headed' noun modifying clause constructions, while the latter are labeled 'light-headed' noun modifying clause constructions. Epps (2012) draws a similar distinction between 'free' domain nominals and 'bound' domain nominals for Hup, and Takara (2012) distinguishes between 'heavy' and 'light' nouns for Japanese. Since the focus of this chapter is on grammatical relations, the next two subsections describe the 'heavy-headed' noun modifying clause construction (Section 6.1.1) and 'light-headed' noun modifying clause construction (Section 6.1.2). Each of these subsections demonstrates that the unrealized argument within the modifying clause that co-refers to the head noun is *not* restricted to primary arguments. In fact, all argument positions within the modifying clause are available to be coreferential with the head noun, except A_{PV}, which leads to an alignment pattern that is similar to co-referential arguments in Section 5.4, but different from both word order in Section

5.2 and quantifiability in Section 5.3. While a complete analysis of noun modifying clause constructions is not feasible here, the final subsection (Section 6.1.4) briefly presents evidence in support of a noun modifying clause construction analysis. The goal of this section is not to provide exhaustive evidence for noun modifying clause constructions in Besemah, but to show that there is no evidence for a primary argument grammatical relation based on the noun modifying clause constructions.

6.1.1 The 'heavy-headed' noun modifying clause construction

In Besemah, heavy-headed noun modifying clause constructions consist of an 'independent' noun (i.e., a noun that has the ability to occur without any other element) and a modifying clause, as in the examples in (231) – (234) below. The modifying clause, in many cases, looks like a relative clause. For example, the argument within the modifying clause that serves as the head noun is not typically realized. However, Section 6.1.4 provides evidence for why it would be a mistake to analyze this as a 'gap'. To distinguish this analysis from the relative clause analysis in Standard Indonesian, I employ the '∅' symbol instead of the '___'.

The example in (231) demonstrates a case where the unrealized S argument of the verb *tebalik* 'flip over' in the modifying clause is coreferential with the head noun *jeme* 'person'.

(231) Heavy-headed noun modifying clause construction with S

ng-inak	***jeme***	[∅	*te-balik*	*tadi*	]	*diwik*	*gawih.*
AV-see	people		NVOL-flip	earlier		self	FP
		S					

'I (lit. self) saw the people [who crashed], right .'

(BJM01-004, 00:02:01.035–00:02:03.497, Speaker: Hairil)

In (232), the A_{AV} argument of the agentive voice marked verb *mutigh* 'pick' within the modifying clause is coreferential with the head noun *jeme* 'people'.

(232) Heavy-headed noun modifying clause construction with A_{AV}

dang die alap-alap madak=(ny)e,
IPFV 3 RDP-good before=3

'When it (i.e., the water spinach) was good before,'

dik bedie ***jeme*** [∅ *m-(p)utigh-e.*]
NEG not.exist people AV-pick-3
A

'there weren't anyone [who picked it.]'

(BJM01-002, 00:29:06.520–00:29:08.390, Speaker: Munaya)

Finally, in (233), the P_{PV} argument of the patientive voice marked verb *diantati* 'bring' is coreferential with the head noun *jeme* 'people'.

(233) Heavy-headed noun modifying clause construction with P_{PV}

MUNAYA: *tape=nye ghadu?*
what=3 heal

'who (lit. what) was healed?'

SARKANI: *adak* ***jeme*** [∅ *di-antat-i* *li bentine tadi.*]
EXCL people PV-bring-LOC.APPL by woman earlier
P A

'ah the people [who were brought (food) by women earlier.]'

(BJM01-002, 00:15:29.280–00:15:31.490)

Thus far, in terms of grammatical relations, the heavy-headed noun modifying clause construction in Besemah behaves similarly to relative clauses in western Indonesian languages; the head noun is coreferential with the unrealized primary argument in the modifying clause. The only difference, then, is that Besemah does not require a relativizer, like Standard Indonesian *yang* REL. However, even though there were no examples identified in the corpus, it is possible for the head noun to be coreferential with the P_{AV} argument within the modifying clause. Consider the elicited example in (234).

(234) Heavy-headed noun modifying clause construction with P_{AV}

teghung	[*mang*	*Sarkani*	*m-beli*	∅	*tu*	] *la*	*di-gulai-ka=nye.*
eggplant	uncle	S.	AV-buy		DET	PFV	PV-cook-CAUS/APPL=3
	A			P			

'The eggplant that uncle Sarkani bought was cooked by her.' (Elicited, Speaker: Hendi)

In this example, the head noun *teghung* 'eggplant' co-refers to the unrealized P_{AV} argument of the agentive voice marked verb *mbeli* 'buy' within the modifying clause. It was not possible to elicit an acceptable example, like the one in (235), where the head noun co-refers to the A_{PV} argument in the modifying clause.

(235) Heavy-headed noun modifying clause construction with A_{PV}

**jeme*	[*teghung*	*beli*	∅	*tu*	] *la*	*ng-gulai-ka=nye.*
person	eggplant	[PV]buy		DEM.DIST	PFV	AV-cook-CAUS/APPL=3
	P		A			

INTENDED: 'The person who bought the eggplant cooked it.' (Elicited, Speaker: Hendi)

In summary, heavy-headed noun modifying clause constructions show a pattern whereby all unrealized arguments of the modifying clause may co-refer to the head noun, except for A_{PV} arguments. This pattern already differs from the subject-only restriction that has been described for many western Indonesian languages (cf. Riesberg 2014: 31-36), providing further support that Besemah does not have a 'subject' grammatical relation. It should be noted, however, that there appears to be a strong preference in discourse for primary arguments to be coreferential with the head noun.

6.1.2 The 'light-headed' noun modifying construction

The light-headed noun modifying clause construction in Besemah consists of a 'light' noun followed by a modifying clause. In Besemah, there are two light nouns that appear in noun modifying clause

constructions, including: *ende/ne* and *endik/nik*.[3] As in the examples of the heavy-headed noun modifying constructions above, the light-headed noun modifying clause construction is a light noun followed by a modifying clause. The light noun, however, is semantically bleached and often refers to a topical referent in the discourse; it is often translated as 'the one' in the examples in this section. Again, the referent of the light noun is often coreferential with the unrealized argument in the modifying clause. The unrealized argument within the modifying clause can be S, as in (236), A_{AV} in (237), or P_{PV} in (238).

(236) The 'light-headed' noun modifying clause construction with *ne* N.LI

gi *ade* *due* *ijat* *mak* *ini* *aghi,*
PERS exist CLS now DEM.PROX day

'there are still two nowadays,'

ne [∅ *belum* *masak,*]
N.LI NPERS ripe

'the ones (i.e., the durian) [that are not yet ripe,]'

(BJM01-010, 00:13:53.398–00:13:55.481, Speaker: Aripin)

In (236), the unrealized S argument of the intransitive predicate *masak* 'ripe' within the modifying clause is unrealized and coreferential with the light noun *ne* N.LI. The light-headed noun modifying clause construction *ne belum masak* 'the ones that are not yet ripe' refers to durian fruit, which is the current topic in the conversation.

[3]The light nouns *ende/ne* and *endik/nik* each come in two forms, a disyllabic form with a syllabic nasal voiced stop sequence in [n̩di] and [n̩dɪʔ], respectively and a monosyllabic form [ni] and [nɪʔ], respectively. These forms of *ende/ne* and *endik/nik* are phonological variants. It is also arguably the case that *ende/ne* and *endik/nik* are also phonological variants of each other, but there is not enough evidence for such a proposal at this point. These forms appear to be syntactically, semantically, and functionally the same. They only seem to differ in their sociolinguistic distribution, namely younger speakers prefer *endik/nik* N.LI and older speakers prefer *ende/ne* N.LI.

(237) The 'light-headed' noun modifying clause construction with *ne* N.LI

dide bedie ne [∅ *ng-apik-i=nye,*]
NEG not.exist N.LI AV-attract-LOC.APPL=3
A =P

'there isn't (any)one [who can attract them,]'

(BJM01-002, 00:01:33.415–00:01:34.705, Speaker: Munaya)

In (237), the unrealized A_{AV} argument of the agentive voice marked verb *ngapiki* 'attract' within the modifying clause is coreferential with the light noun *ne* N.LI.

(238) The 'light-headed' noun modifying clause construction with *ne* N.LI

a. *tuape ne* [∅ *kite cakagh tu*] *sukagh.*
what N.LI 1PL.EXCL [PV]search DEM.DIST difficult
P A

'because the one (i.e., the snake) that we were looking for is difficult (to find).'

(BJM01-002, 00:01:33.415–00:01:34.705, Speaker: Asril)

b. *gi aku sughang di sini,*
PERS 1SG alone LOC here

'It was still me here,'

nik [∅ *pantau=(ny)e li endung Erda tu.*]
N.LI [PV]call=3 by mother E. DEM.DIST
P =A

'the one that was called by Erda's mom.'

(BJM01-008, 00:06:49.490–00:06:51.990, Speaker: Kudar)

c. *ghulih emp- lime karung ini ni,*
get HES five sack DEM.DIST DEM.DIST

'(The people in that village) got five sacks.'

nik [∅ *di-ampagh-ka=nye*] *mak ini aghi.*
N.LI PV-dry-CAUS/APPL=3 NOW DEM.DIST day
P =A

'(of) the ones they are drying nowadays.'

(BJM01-011, 00:16:17.241–00:16:20.262, Speaker: Rili)

In the examples in (238), the unrealized P_{PV} arguments of the patientive voice marked verbs within the modifying clauses are coreferential with the light noun. In (238a), the patientive voice marked verb within the modifying clause is unprefixed with a first person A_{PV} secondary argument *kite* 1PL.EXCL. Again, the unrealized P_{PV} argument within this modifying clause is coreferential with the light noun *ne* N.LI. In (238b), the patientive voice verb within the modifying clause is unprefixed with a third person A_{PV} secondary argument *=nye* 3. The unrealized P_{PV} argument within the modifying clause is coreferential with the light noun *nik* N.LI. In (238c), the patientive voice verb within the modifying clause is prefixed with *di-* PV. Again, the unrealized P_{PV} argument within the modifying clause is coreferential with the light noun *nik* N.LI.

As in the case of the heavy-headed noun modifying clause constructions, it is possible for the light noun to co-refer to the unrealized P_{AV} argument within the modifying clause, as in (239). However, while no examples with this structure were found in the corpus when the head noun phrase was heavy, there are indeed numerous examples in the corpus where P_{AV} within the modifying clause co-refers to the light noun.

(239) The 'light-headed' noun modifying clause construction with *ne* N.LI

luluk mutur anu dang itu eh?
like motorcycle umm IPFV DEM.DIST FP

'like the whachamacallit motorcycle that time, right?'

nik [*kite* *n-(t)untun* ∅.]
N.LI 1PL.INCL AV-watch
P

'the one (i.e., the motorcycle) that we watched.'

(BJM01-004, 00:42:31.075–00:42:33.905, Speaker: Rafles)

In the example above, the agentive voice verb *nuntun* 'watch' within the modifying clause has one unrealized argument, the P_{AV} argument. This unrealized P_{AV} argument is co-referential with the light noun *nik* N.LI. Thus far, the patterns that were shown for heavy-headed noun modifying con-

structions hold true for light-headed noun modifying constructions: the unrealized argument within the modifying clause may be S, A_{AV}, P_{PV}, or P_{AV}. However, there does appear to be one marginal example where the A_{PV} argument within the modifying clause co-refers to the light noun (see (247) below).

From these examples, one may question how different these light-headed noun modifying clause constructions are from headless relative clauses in Standard Indonesian, as in (230) above. While *endik/nik* and *ende/ne* often translate as the Standard Indonesian relativizer *yang* REL, they are considered light nouns for two reasons. First, while colloquial varieties of Indonesian have a high frequency of headless relative clauses, Besemah light-headed noun modifying clause constructions do not occur with any other noun. That is, heavy nouns are in complementary distribution with light nouns in noun modifying clause constructions. Second, light nouns in Besemah behave like nouns; the only difference is that light nouns do not occur on their own. Light nouns must occur with some other element, at the very least a demonstrative. In Section 4.1.1, nouns were shown to be head-initial, followed by modifiers, demonstratives, and possessors. These properties of nouns are also true of light nouns in Besemah. Compare the following examples of each nominal property with prototypical, independent nouns in the (a) examples to analogous constructions with light nouns *ende/ne* N.LI or *endik/nik* N.LI in the (b) examples. Nouns are followed by modifiers in (240), demonstratives in (241), and possessors in (242).

(240) Noun + modifier with heavy and light nouns

a. *ng-asuh* [***kupik*** *besak* *bunguk,*]$_{NP}$
AV-babysit baby big fat

'(He) babysat a big fat baby,'

(BJM01-011, 00:58:33.862–00:58:35.500, Speaker: Dewi)

b. [***nik*** *kecik-kecik* *tu*]$_{NP}$ *di-lebung=(ny)e,*
N.LI RDP-small DEM.DIST PV-ripen=3

'they ripened the small ones,'

(BJM01-011, 00:49:52.840–00:49:55.166, Speaker: Jamisah)

(241) Noun + determiner with heavy and light nouns

a. *Die ng-umung-ka* [***ubat*** *itu*]$_{NP}$ *kan.*
3 AV-talk-CAUSE medicine that right

'He talked about [that medicine] right,'

(BJM01-002, 00:11:26.820–00:11:28.180, Speaker: Sarkani)

b. *anye* [*nik itu*]$_{NP}$ *lambat eh?*
but N.LI DEM.DIST slow FP

'but that one (i.e., the motorcycle) is slow, right?'

(BJM01-004, 00:42:06.797–00:42:08.051, Speaker: Hendi)

(242) Noun + possessor with heavy and light nouns

a. *bange nian,*
stupid very

[***bapang*** *kabah*]$_{NP}$ *ni* *jiku,*
father 2SG DEM.PROX QUOT.1SG

'[Your dad] is really stupid I thought,'

(BJM01-011, 00:56:11.810–00:56:13.982, Speaker: Dewi)

b. [***ne*** *kami tu*]$_{NP}$ *nak di-penuh-i=lah nga* *cuklat,*
N.LI 1PL.EXCL DEM.DIST want PV-fill-LOC.APPL=FOC with

'the one that is ours (i.e., coffee field) should be filled with cocoa,'

(BJM01-010, 00:14:59.084–00:15:00.690, Speaker: Damsi)

6.1.3 Summary of grammatical relations in noun modifying clause constructions

Thus far, this section has shown that both light-headed and heavy-headed noun modifying clause constructions behave in much the same way. The unrealized arguments within the modifying clause that can be co-referential with the head noun are not restricted to primary arguments, S, A_{AV}, P_{PV}, but may also include P_{AV}. The A_{PV} argument, however, appears to behave differently. Therefore, the

noun modifying clause constructions in Besemah evince the following alignment pattern in Figure 6.1 below. This pattern is the same as the pattern for co-referential arguments in Section 5.4, but differs from both word order in Section 5.2 and quantifiability in Section 5.3.

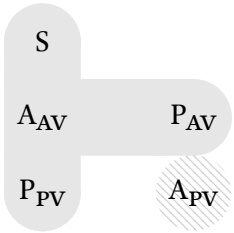


Figure 6.1: Noun-modifying clause alignment

The next subsection is a post-script that delves more deeply into the status of these noun modifying clause constructions, providing some evidence for why they should not be analyzed as relative clauses. However, the thrust of this subsection has already shown that noun modifying clause constructions do provide evidence for a primary argument grammatical relation.

6.1.4 Preliminary evidence for noun modifying clause constructions

As Mastumoto (1997) and Comrie (1998) have pointed out for Japanese, the real trouble with the 'gap' analysis in languages like Japanese and Besemah is that it is difficult, perhaps impossible, to discern whether the 'gap' is a result of a syntactic process like relativization or if it is simply an unrealized argument. For Matsumoto (1997) and Comrie (1998), there are two pieces of compelling evidence that these unrealized arguments cannot be analyzed as a syntactic 'gap' in an apparent relative clause construction. First, Comrie (1998) shows that there are only pragmatic constraints—and not syntactic (e.g., accessibility or island) constraints—on the unrealized or 'gapped' argument within the noun modifying clause in Japanese. Second, Matsumoto (1997) showed that the syntactic structure of noun modifying clause constructions is not only used to express relative clause interpretations, but also sentential complement interpretations (e.g., the fact-S construction in English) and

other interpretations. This subsection briefly considers each piece of evidence: the constraints on (un)realized arguments and the various interpretations of noun modifying clause constructions. The purpose of this subsection is to show that noun modifying clause constructions in Besemah do not appear to be relative clauses.

Recall from Section 4.2 that arguments of the verb in main clauses are commonly unrealized in Besemah. So, the example in (243) with an agentive voice marked verb and two unrealized arguments is a perfectly natural clause.

(243) Main clause with unrealized arguments

∅	*la*	*m-buat*	∅
	PFV	AV-make	
A			P

'(he) already built (the house).' (BJM01-001, 00:23:07.220–00:23:08.040, Speaker: Sira)

The question then becomes, what do we make of unrealized arguments within modifying clauses of the heavy-headed noun modifying construction, as in (244), and the light-headed noun modifying construction, as in (245)?

In the examples of heavy-headed noun modifying clause constructions in (244), both arguments of the agentive voice transitive verbs within the modifying clauses are unrealized. However, in (244a), the head noun *jeme* 'people' co-refers to the A_{AV} argument within the modifying clause, whereas, in (244b), the head noun *teghung* 'eggplant' co-refers to the unrealized P_{AV} argument within the modifying clause.

(244) Heavy-headed noun modifying clause with unrealized arguments

a.

kulu-kiligh	*n-cakagh*	(*1.13*)	***jeme***	[∅	*nak*	*n-*(*t*)*ulung*	∅.]
upstream-downstream	AV-search		people		want	AV-help	
				A			P

'back and forth, (they) looked for someone [who wanted to help.]'

(BJM01-003, 00:09:02.660 – 00:09:06.030, Speaker: Sutarso)

b. ***teghung*** [∅ *m-beli* ∅ *tu*] *la* *di-gulai-ka=nye.*
eggplant AV-buy DEM.DIST PFV PV-make-CAUS/APPL=3
A P

'The eggplant that (he) bought was cooked by her,' (Elicited, Speaker: Hendi)

The same pattern occurs with light-headed noun modifying clause constructions in the examples in (245). Again, both arguments of the agentive voice marked verb within the modifying clause are unrealized. In (245a), the light noun *ende* N.LI co-refers to the A_{AV} argument within the modifying clause. Whereas, in (245b), the light noun *ende* N.LI co-refers to the P_{AV} argument within the modifying clause.

(245) Light-headed noun modifying clause with unrealized arguments

a. *base* ***ende*** [∅ *la* *m-buat* ∅ *di* *sini* *ni,*]
TOP N.LI PFV AV-make LOC here DEM.PROX
A P

'as for the ones (i.e., the people) [who built (houses) here,]'

(BJM01-001, 00:22:32.745–00:22:34.825, Speaker: Juriah)

b. ***ende*** [∅ *la* *m-(p)utigh* ∅ *tu,*]
N.LI PFV AV-pick DEM.DIST
A P

'the ones (i.e, the cocoa) that (I) picked,'

se-batang *buah=(ny)e* *lime* *belas* *ijat.*
one-stick fruit=3 five teen seed

'one branch had 15 pieces.' (BJM01-010, 00:13:48.295–00:13:52.055, Speaker: Aripin)

The fact that either of the unrealized A_{AV} or P_{AV} arguments within the modifying clause may be coreferential with the head noun raises questions about the syntactic status of the unrealized argument. Furthermore, there are also light-headed noun modifying constructions where the light noun co-refers to the *realized* argument within the modifying clause, as in (246) and (247) below.

(246) Light-headed noun modifying clause with realized arguments

anye ame ***ne*** [*ujik* *galak* *n-*(*t*)*agih* ∅ *ni,*]
but TOP N.LI motorcycle.taxi want AV-bill DEM.PROX
A P

'but as for the motorcycle taxi drivers that like to ask for (the fare),'

dide galak aku n-(*n*)*aik-i=nye,*
NEG want 1SG AV-rise-APPL=3

'I don't want to get on it,'

(BJM01-011, 00:23:43.877–00:23:48.371, Speaker: Jamisah)

In the first line of the example in (246), the modifying clause contains an agentive voice marked verb *nagih* 'bill' with only the A_{AV} argument *ujik* 'motorcycle taxi' realized. The P_{AV} argument, 'the fare', is unrealized. However, the light noun *ne* N.LI co-refers to the realized A_{AV} argument. If we were to analyze this construction as a relative clause, the fact that the realized argument co-refers to the light noun is surprising here. A similar case is found in the second line of the example in (247) below.

(247) Light-headed noun modifying clause with realized arguments

HENDI: ***nik*** [∅ *bunguk daging bange-*(*gh*)*an.*]
N.LI fat flesh stupid-NMLZ

'the one (i.e., the security guard) [that is fat and stupid.]'

BUWOH: *ui* ***nik*** [∅ *di-pinggir-ka=nye* *gale* *tadi.*]
EXCL N.LI PV-edge-CAUS/APPL=3 all earlier
P =A

'oh the one (i.e., the security guard) [that pushed everyone to the side.] '

(BJM01-004, 00:34:33.439–00:35:44.052)

The first line in the example in (247) is a light-headed noun modifying clause construction that refers to a security guard that both speakers had encountered at a motorcycle race earlier that day. In the second line, the speaker is agreeing with the first line by providing the same referent (i.e., the

security guard) with additional information in the modifying clause. The unrealized P_{PV} argument of the patientive voice marked verb *dipinggirka* 'pushed' in the modifying clause refers to the people who were pushed to the side and not the security guard who is pushing people to the side, which is represented by the third person enclitic *=nye* 3. This example is again a case where the realized argument co-refers to the light noun *nik* N.LI. Furthermore, this example appears to be the only case where the A_{PV} argument within the modifying clause is coreferential with the head noun.

The examples above suggest that the unrealized argument within the modifying clause is not a syntactically determined 'gap', but an unrealized argument that is determined by discourse/pragmatic factors. While this short discussion does not provide as strong of evidence as Comrie (1998) does for Japanese, it does cast doubt upon a relative clause analysis of noun modifying clause constructions in Besemah. The second piece of evidence comes from the fact that noun modifying clauses have various interpretations other than the relative clause interpretation.

For Japanese, Matsumoto (1997) has shown that noun modifying clause constructions are not only used to express relative clause interpretations, but also sentential complement interpretations and other interpretations. This provides further evidence that noun modifying clause constructions should not be simply analyzed as relative clauses. In Besemah, the same types of interpretations found in Japanese noun modifying clause constructions are found in Besemah with a similar basic structure: NOUN + MODIFYING CLAUSE. In the examples in (231) – (234) above, the relative clause interpretation of noun modifying clause constructions has been thoroughly demonstrated. However, in the example in (248), the noun *cerite* 'story' is followed by a modifying clause taking a sentential complement interpretation, similar to the fact-S construction in English.

(248) Sentential complement interpretation

jiku	*tuape*	***cerite***[	*kamu*	*rapat*	*situ*	] *jiku.*
say.1SG	what	story	2PL	meeting	there	say.1SG

'I said, what is the story [(about) you meeting there], I said.'

(BJM01-002, 00:29:06.520–00:29:08.390, Speaker: Munaya)

In (248), the head noun *cerite* 'story' is followed by the modifying clause that consists of an intransitive verb *rapat* 'meet' and its single argument *kamu* 2PL. According to Matsumoto et al. (in press), the reason that these constructions are considered to be of the sentential complement type is that 'the semantics of the head noun allows its content to be described in the [modifying] clause' (8).

In the examples in (249), the head noun again is followed by a modifying clause with all of its arguments, but takes various other interpretations.

(249) Other interpretations

a. *ade nian* ***suaghe*** [*jeme rami,*]
exist really voice people raucous,

'there really are the voices [(of) people busily bathing,]'

(BJM01-002, 00:18:13.697–00:18:15.407, Speaker: Asril)

b. ***badah*** [*jeme m-besak-i aku.*]
place people AV-big-LOC.APPL 1SG

'the place [(where) people raised me.]'

(BJM01-012, 00:16:08.080–00:16:09.310, Speaker: Karim)

c. *galak die n-jimat-i* ***engkas*** [*jeme m-basuh piring tu,*]
want 3 AV-eat.scraps-LOC.APPL remainder people AV-wash dish that

'they (i.e., the snakes) want to eat the scraps [(from) people washing the dishes,]'

(BJM01-002, 00:23:42.848–00:23:45.638, Speaker: Munaya)

While these constructions are syntactically the same as the example with the sentential complement interpretation in (248) above, these other interpretations differ in that 'the [modifying] clause does not represent the content of what is designated by the head noun' (Matsumoto et al. in press: Appendix 1). The head noun in the examples in (249) with other interpretations is considered 'relational' by Matsumoto et al. (in press), in that 'the event or state relative to the head noun is described in the [modifying] clause' (Appendix 1). More simply, these other interpretations of noun modifying clause constructions are resolved pragmatically, resulting in various meanings, which is demonstrated by the words in parentheses in the English free translations (e.g., 'of' in (248a), 'where'

in (248b), and 'from' in (248c)).

It is also possible to get these interpretations even when the arguments within the modifying clause are unrealized as in the last line in the example in (250), which is analogous to (249c) above.

(250) Other interpretations with unrealized arguments

mati.
die

'(the plants) died.'

...

me-racun,
AV-poison

'(you) sprayed weed killer (on the plants)'

engkas ∅ *me-racun* ∅ *ni=lah*
remainder AV-poison DEM.DIST=FOC

'(the plants) are the result (lit. remainder) of (you) spraying (them).'
(BJM01-010, 00:20:48.003–00:20:53.990, Speaker: Burhimin)

Interestingly, these other interpretations are also possible with the light-headed noun modifying clause construction. In the example in (251) below, each line has a light-headed noun modifying clause construction, which is headed by the light noun *nik* N.LI. Within each of the modifying clauses, all arguments of the bare intransitive verb *main* 'play' and the bare transitive verb *kene* 'strike' are present. However, the light noun is not coreferential with any of the arguments within the modifying clause. Rather, the *nik* N.LI refers to the time that the event described in the modifying clause occurred. This example appears to be analogous to the other interpretations in heavy-headed noun modifying clause constructions in the examples in (249).

(251) Other interpretations with light noun head

nik [*kite* *main* *di* *Sumur,*]
N.LI 1PL.INCL play LOC S.

'(the time) [we were playing in Sumur,]'

nik [*aku* *kene* *cemis* *mate.*]
N.LI 1SG strike smash eyes

'(the time) [that I got hit with a volleyball spike in the eyes.]'

(BJM01-004, 00:26:38.589–00:26:41.858, Speaker: Rafles)

Note that in the examples in (249) and (249) what is being translated as relativizing the adjunct argument (i.e., using 'where' and 'when') has the same structure: NOUN + MODIFYING CLAUSE. Thus, there is no need to analyze these constructions any differently than the other noun modifying clause constructions.

In summary, the discussion in this section provides preliminary support that the constructions in Besemah that are functionally equivalent to relative clauses in other western Indonesian languages should not be analyzed as relative clauses here. The motivation for this analysis is based on evidence that (i) the unrealized arguments within modifying clauses appear not to be syntactically constrained and (ii) the same syntactic structure of NOUN + MODIFYING CLAUSE not only results in a relative clause interpretation, but in sentential complement interpretations and other interpretation, analogous to similar analyses by Matsumoto (1997) and Comrie (1998) for Japanese and other languages.

6.2 Control and raising constructions

Since the early days of generative grammar, many linguists have made a distinction between constructions whereby the 'omitted' argument of a complement clause is said to be either 'controlled' by an argument in the matrix clause or 'raised' into the matrix clause. The distinction between these 'control' constructions and 'raising' constructions is completely dependent upon the verb in the ma-

trix clause. That is, in English, there are so-called control verbs (e.g., try, plan, hope) and so-called raising verbs (e.g., seem, appear, likely). Control and raising constructions are said to differ based on several pieces of evidence (cf. Kroeger 2004, Carnie 2013). The most convincing evidence comes from the fact that raising verbs have the ability to take expletive 'dummy' subjects (i.e., *it*), while control constructions cannot take such expletive subjects.

A number of studies on western Indonesian languages have maintained this distinction between raising and control constructions by using a set of verbs that translate from English raising and control verbs (e.g., Arka 2003, Riesberg 2014). In Besemah, however, I see no evidence for making such a distinction. Most crucially, I do not find any verbs that appear to enter complement clause constructions that are equivalent to English raising verbs (e.g., seem, appear). These meanings are typically expressed by adverbial expressions (see Section 4.1.1). The difference between control and raising verbs is that control verbs 'select' the argument in question, while raising verbs do *not* select the argument in question. For the languages of western Indonesia, it is difficult to provide clear evidence of a distinction between control and raising of 'subjects' without the presence of an expletive subject pronoun like English *it* (e.g., the raising constructions, 'it seems that the tree has been cut down' versus 'the trees seems to have been cut down'). For P arguments (or 'objects'), they are either part of the argument structure of the matrix clause for control verbs, which is why an example like 'I told the trees to be cut down' is considered ungrammatical in English, or they are not part of the argument structure of the matrix clause for raising verbs (e.g., 'I ordered the tree to be cut down'). Most of these studies on western Indonesian languages simply assume the contrast between control and raising based on translations from English control and raising verbs (see Arka 2003 for some discussion on raising verbs in Balinese). For these reasons, I make no such distinction between control and raising constructions in Besemah. Instead, I simply use control construction as a cover term for any apparent control or raising constructions in this section.

Furthermore, there are a number of issues surrounding complement clauses that are rarely addressed in the languages of western Indonesia (see Englebretson 2003 as a notable exception). In

these apparent control constructions, there are various analytic possibilities: (i) the first clause (i.e., apparent matrix clause) is independent of the second clause (i.e., apparent complement clause), (ii) the second clause is an argument of the first clause, or (iii) what most assume, there is a dependency relationship between the two, such that the first clause is the matrix clause and the second clause is the subordinate complement clause. In languages like English, there is formal evidence that is presented in support of the non-finite complement clause analysis in (iii), which is difficult to show in the analyses of western Indonesian languages.

The discussion of these control constructions in Besemah below is quite tentative for many of the reasons discussed above. There are very few examples of control constructions in the corpus and, even then, the relationship between the two clauses is usually unclear. Therefore, this section briefly presents two possible control constructions that are found in the corpus involving the verbs *galak* 'want' and *endak* 'want' in Section 6.2.1 and *ajung* 'order' in Section 6.2.2. Each section discusses how these constructions do not provide clear evidence for a primary argument grammatical relation, although there may be some evidence for primary arguments in *ajung* 'order' control constructions.

6.2.1 Control construction with *galak* 'want' and *endak* 'want'

One of the most commonly cited control verbs in the matrix clause of control constructions is the verb that translates as 'want'. Consider the examples from Balinese in (252)–(254) from Arka (2003) below.[4] In these examples, the verb in the matrix clause is *edot* 'want'. In each case, this verb is said to be followed by a subordinate complement clause delimited by square brackets '[]' with an 'omitted' argument represented by '___'. According to Arka (2003), the single argument of the matrix verb (i.e., the controller) is coreferential with the omitted argument (i.e., the controllee) in the subordinate complement clause.

In the example in (252), the omitted S argument of the bare intransitive verb *teka* 'come' in the complement clause co-refers to the omitted S argument of *edot* 'want' in the matrix clause. The de-

[4]These same examples from Arka (2003) are also discussed in Riesberg (2014: 37-38).

scription above each example—following Mithun (2016)—captures this control relationship. The argument is specified as either 'controller' or 'controllee', followed by its macro-role. The argument within parentheses specifies that the argument is 'omitted' in the complement clause, while the argument without parentheses specifies that it is not omitted in the matrix clause. The two are joined with an equal sign '=' to signal that they are coreferential. Thus, Controller S = (Controllee S), means that the controller S argument in the matrix clause is coreferential with the 'omitted' controllee S argument in the complement clause.

(252) Controller S = (Controllee S) in Balinese *edot* 'want'

Ia	*edot*	[___	*teka*].
3	want		come
S		S	

'He wants to come,'

(Arka 2003: 19)

In (253), the complement clause has an agentive voice marked verb *nyakitin* 'hurt' with an omitted pre-verbal A_{AV} argument, which is coreferential with the S argument *cai* 2 in the matrix clause.

(253) Controller S = (Controllee A_{AV}) in Balinese *edot* 'want'

Cai	*edot*	[___	*ny-(s)akit-in*	*bapa*]*?*
2	want		AV-hurt-CAUS/APPL	father
S		A		P

'Do you want to hurt me (lit. father)?'

(Arka 2003: 19)

In (254), the complement clause now has a patientive voice marked verb *sakitin* 'hurt' with an omitted pre-verbal P_{PV} argument, which is coreferential with the S argument *cai* 2 in matrix clause.

(254) Controller S = (Controllee P_{PV}) in Balinese *edot* 'want'

Cai	*edot*	[___	*sakit-in*	*bapa*]*?*
2	want		[PV]hurt-CAUS/APPL	father
S		P		A

'Do you want me (lit. father) to hurt you?'

(Arka 2003: 19)

In each of the three examples above, the omitted argument within the complement clause that is coreferential with the single argument in the matrix clause is the primary argument (i.e., the subject for Arka (2003)). However, the examples in (255) and (256) demonstrate that, in Balinese, if the omitted argument within the complement clause is P_{AV}, as in (255), or A_{PV}, as in (256), it cannot be coreferential with (or controlled by) the single argument in the matrix clause. For Arka (2003), these control constructions provide further evidence for a subject grammatical relation in Balinese.

(255) Controller S = (Controllee P_{AV}) in Balinese *edot* 'want'

*Bapa	*sing*	*edot*	[*cai*	*ny-(s)akit-in*	___]*?*
father	NEG	want	2	AV-hurt-CAUS/APPL	
S			A		P

'I (lit. father) do not want you to hurt me.'

(Arka 2003: 19)

(256) Controller S = (Controllee A_{PV}) in Balinese *edot* 'want'

*Bapa	*sing*	*edot*	[*cai*	*sakit-in*	___]*?*
father	NEG	want	2	[PV]hurt-CAUS/APPL	
S			P		A

'I (lit. father) do not want to hurt you.'

(Arka 2003: 19)

On the surface, apparent control constructions in Besemah with the verbs *galak* 'want' and *endak* 'want' behave similarly to the examples in (252)–(254) in Balinese above. Consider the examples with *endak* 'want' in (257)–(259) below. Note that *nak* 'want' is a phonological variant of *endak* 'want'.

In (257), the single argument *die* 3 (i.e., the snake) of *nak* 'want' co-refers the single unrealized argument of the middle voice marked verb *bejalan* 'go' in the apparent complement clause.

(257) Controller S = (Controllee S) in Besemah *endak* 'want'

mungkin die nak [__ be-jalan biase.]
probably 3 want MID-go normal
S

'probably, it (i.e., the snake) wanted to go normally,'

anye ng-(k)antuk kene sing.
but AV-hit strike corrugated.metal

'but (it) ran into the fence.'

(BJM01-002, 00:22:47.399 – 00:22:48.823, Speaker: Asril)

In (258), the single argument *aku* 1SG of *endak* 'want' co-refers to the unrealized A_{AV} argument of the agentive voice marked verb *ngumungka* 'talk about'.

(258) Controller S = (Controllee A_{AV}) in Besemah *endak* 'want'

aku endak [__ ng-umung-ka=nye,]
1SG want AV-say-CAUS/APPL=3
A A P

'I wanted to talk about it,' (BJM01-002, 00:12:00.598 – 00:12:01.862, Speaker: Sarkani)

In the example in (259), the single argument *kamu* '2pl' of *endak* 'want' in the first line co-refers to the unrealized P_{PV} argument of the patientive marked verb *dienjuk* 'give' in the apparent complement clause in the second line.

(259) Controller S = (Controllee P_{PV}) in Besemah *endak* 'want'

kamu ni reti=nye kate=nye,
2PL DEM.PROX mean=3 QUOT=3
P

'you, she means, she says,'

...

→ *endak* [___ *di-enjuk* *jeme.*]
want PV-give people
P A

'(you) want people to give you (something).'
(BJM01-015, 00:25:06.130 – 00:25:11.984, Speaker: Sawia)

Thus far, the structure that Arka (2003) proposes for Balinese is borne out in Besemah whereby the argument of *endak* 'want' within the apparent matrix clause co-refers to the primary argument within the apparent complement clause. Furthermore, there are no instances in the corpus where the argument of the verb *endak* 'want' is coreferential with an unrealized A_{PV} or P_{AV} argument. While I do not have 'grammaticality judgements' for these constructions, this description at least suggests that Besemah behaves similarly to Balinese. However, a number of linguists have noted a phenomenon—called 'funny' control by Gil (2002)—that casts doubt upon this type of analysis. 'Funny' control (sometimes called crossed control) has been used to describe control constructions that have ambiguous readings between a situation where the controller is the primary argument and one where the controller is the secondary argument (cf. Gil 2002, Polinsky & Potsdam 2008, Nomoto & Wahab 2012). Funny control is apparently widespread throughout the languages of western Indonesia (Polinsky & Potsdom 2008). Consider the example from Nomoto & Wahab (2012) from Standard (Malaysian) Malay.

(260) Funny control in Standard Malay *mahu* 'want'
Pencuri *itu* *mahu* [___ *di-tangkap* *polis*].
thief DEM.DIST want PV-arrest police
S P A

'The thief wants to be arrested by the police.' (Normal control reading)
'The police want to arrest the thief' (Funny control reading)
(Nomoto & Wahab 2012: 371)

With the 'normal control reading', this example looks much like the examples of Balinese in (254) and Besemah in (259); the single argument *pencuri itu* 'the thief' of the verb *mahu* 'want' is coreferential with the P_{PV} argument of the patientive marked verb *ditangkap* 'arrest' within the complement

clause. However, with the 'funny control reading', the A_{PV} argument *polis* 'police'—the more pragmatically plausible referent—is interpreted as the wanter, despite the fact that it is *not* the syntactic argument of *mahu* 'want'. The funny control reading results in what could be described as a mismatch between what appears to be the syntactic controller (i.e., *pencuri itu* 'the thief' in (260)) and the semantic controller (i.e., *polis* 'police' in (260)).

The 'funny' control construction, if present in the language, raises a number of questions concerning the relationship between the argument in the apparent matrix clause and the unrealized argument in the apparent complement clause. For example, is the verb 'want' in these languages really a control verb, or is it simply an auxiliary verb? At the very least, the presence of the funny control construction casts doubt upon the type of control analysis that Arka (2003) provides for Balinese. It should be noted that there appear to be two restrictions on funny control constructions. First, in the languages that have been found to have funny control, funny control constructions appear only to occur in the patientive voice. There are no clear examples of funny control in agentive voice constructions (cf. Gil 2002 for a possible exception). Second, the A_{PV} argument of the patientive voice marked verb must be animate. Besemah, indeed, has funny control constructions with the verb *endak* 'want' in (261) and with the verb *galak* 'want' in (262).

(261) Controller S = (Syntactic Controllee P_{PV})/Semantic Controllee A_{PV} with *endak* 'want'

buah	*(0.6)*	*pertame=nye*	*tu*	*ku=ambik*	*sijat*	*ne*	*masak,*
fruit		first=3	DEM.DIST	1SG=[PV]take	one.CLS P	N.LI	ripe

'I took one of the first fruits, one that was ripe,'

(1.9)

di-ambik=(ny)e	*li*	*bapang*	*Migi,*
PV-take=3	by	father	M.

'Migi's father (i.e., my son) took (it),'

(1.4)

→ (*sijat ne masak*) *nak* ___ *di-ambang-ka=nye,*
one.CLS N.LI ripe want PV-seedling-CAUS/APPL=3
P =A

'he wanted to plant (it) (lit. make it into a seedling),'

dik bedie tumbuh kate=nye,
NEG not.exist grow QUOT=3

'(but) there wasn't (any of them that) grew he said'

(BJM01-010, 00:20:04.980–00:20:14.980, Speaker: Aripin)

In the example in (261), the funny control construction occurs in the third line, marked by the arrow. The primary argument is unrealized, but is mentioned in the first line *sijat ne masak* 'one (piece of fruit) that is ripe'. If this argument were present in the funny control construction in line three, it would occur before the verb *nak* 'want' (Hendi, p.c.). For clarity, I have placed the primary argument in parenthesis in this position. In essence, this construction presumably has the same syntactic structure as the control construction in (259) above. However, while the primary argument occurs before the verb *nak* 'want', the 'wanter' is actually interpreted to be the A_{PV} argument *=nye* 3 encliticized to the verb *diambangka* 'plant' within the apparent complement clause.

(262) Controller S = (Syntactic Controllee P_{PV})/Semantic Controllee A_{PV} with *galak* 'want'

1 MUNAYA: *banyak jeme ghadu,*
many people heal

'many people healed,'

2 *kate jeme ngaghi Kudri tu eh.*
word people with K. DEM.DIST right.

'people say, by Kudri right.'

3 SARKANI: *hmm.*
hmm

'hmm.'
(1.3)

4 →	(*Kudri*)	*galak*	___	*di-gaghi*	*jeme*	*eh?*
	K.	want		PV-visit	people	FP
	P				A	

'people want to visit (Kudri), right?'

(BJM01-002, 00:07:52.463–00:07:53.445)

In the example in (262), we see the same structure, but with the verb *galak* 'want'. The funny control construction is in the fourth line, again marked with the arrow. The primary argument, the name of a healer *Kudri* '(proper name)', is mentioned in the second line. Again, if the primary argument were present in the clause, it would occur before the verb *galak* 'want' (Hendi, p.c.). For convenience, the primary argument is placed in this position within parentheses. Like the example with *nak* 'want' in (261) above, the syntactic structure of the example with *galak* 'want' in (262) mirrors the 'normal' control construction in (259) earlier in this section. However, the primary argument *Kudri* '(proper name)' is not the 'wanter'; the A_{PV} argument *jeme* 'people' is the 'wanter' here. These examples raise questions as to whether these so-called control verbs *endak* 'want' and *galak* 'want' are really control verbs at all.

An interesting wrinkle in this analysis comes from the fact that there are different meanings that arise with the two verbs meaning 'want', *galak* and *endak*. The verb *galak* can mean something like 'often' or even 'like to', while the verb *endak* can be a future tense marker or a modal that marks obligation (see Section 4.5). One possibility, then, is that in funny control constructions, these so-called control verbs take one of the other meanings, aside from 'want'. In fact, the example of *galak* 'want' in (262) is like many of the examples in the corpus, which are ambiguous. For example, the free translation of the final line in the funny control example in (262) could be 'people often visit (Kudri).' or 'people like to visit (Kudri).' However, the funny control example with the verb *endak* 'want' in (261) is not ambiguous; the meaning of the verb here is 'want'. Furthermore, it appears to be the case that the different meanings can and do arise in 'normal' control constructions, as in the examples in (263) where *galak* means 'want' in (263a) or *galak* means 'often' or 'like to' in (263b).

(263) Controller S = (Controllee A_{AV}) in Besemah *galak* 'want'

a.
die	*galak*	___	*ng-anu-ka*	*pingging*	*tulah*
1SG	want		AV-umm-CAUS/APPL	butt	DEM.DIST=FOC
A				P	

'he wants to whatchamacallit (i.e., kick) (his) butt.'

(BJM01-004, 00:25:45.417–00:25:47.310, Speaker: Dian)

b.
aku	*galak*	___	*ng-(k)inak-i*	*putuh=(ny)e*	*tu*	*eh.*
1SG	want		AV-see-LOC.APPL	photo=3	DEM.DIST	FP
A				P		

'I often/like to look at those photos.'

(BJM01-004, 00:38:33.070–00:38:34.510, Speaker: Hendi)

In the end, apparent control constructions with the verbs *endak* 'want' and *galak* 'want' do not provide clear evidence of a primary argument grammatical relation because these constructions are not clearly control constructions. While the analysis of the so-called funny control construction is far from clear, it poses enough questions that it is difficult to make any conclusions about grammatical relations from the constructions involving *endak* 'want' and *galak* 'want'.

6.2.2 Control with *ajung* 'order'

Another ostensible control construction that is relatively robust in the Besemah corpus involves the verb *ajung* 'order', which can also be translated as 'let, allow, ask'. Similar types of control constructions have been discussed in Balinese (Arka 2003: 20-21) with the verb *tunden* 'ask' and in Standard Indonesian with the verb *suruh* 'order' (Riesberg 2014: 42-43). To illustrate these control constructions, consider the examples of *suruh* 'order' from Standard Indonesian in (264)–(265) below.

(264) Controller P_{AV} = (Controllee A_{AV}) in Standard Indonesian with *suruh* 'order'

Winarno	*meny-(s)uruh*	*dokter*	[(*untuk*)	___	*mem-(p)eriksa*	*istri=nya.*]
W.	AV-order	doctor	for		AV-check	wife=3SG
A		P		A		P

'Winarno ordered/asked the doctor to examine his wife.'

(Slightly revised version from Riesberg 2014: 42)

In the example in (264), the controller is the P_{AV} argument *dokter* 'doctor' of the agentive voice marked verb *menyuruh* 'order' in the matrix clause. In the complement clause, the 'omitted' A_{AV} argument is the controllee, which co-refers to the P_{AV} argument *dokter* 'doctor' in the matrix clause.

(265) Controller P_{AV} = (Controllee P_{PV}) in Standard Indonesian with *suruh* 'order'

a. *Winarno* *meny-*(*s*)*uruh* *istri=nya* [(*untuk*) ___ *di-*(*p*)*eriksa=nya.*]
W. AV-order wife=3SG for PV-check=3
A P P =A

'Winarno ordered/asked his wife to be examined by him.'

(Slightly revised version from Riesberg 2014: 43)

b. *Winarno* *meny-*(*s*)*uruh* *istri=nya* [(*untuk*) ___ *saya* *periksa.*]
W. AV-order wife=3SG for 1SG [PV]check
A P P A

'Winarno ordered/asked his wife to be examined by me.'

(Slightly revised version from Riesberg 2014: 43)

In the examples in (265), the controller is the P_{AV} argument *istrinya* 'his wife' of the agentive voice marked verb *menyuruh* 'order' in the matrix clause. The controllee is the 'omitted' P_{PV} argument of the patientive voice verb (*di*)*periksa* 'check' in the complement clause. The only difference between the examples in (265a) and (265b) is the person of the A_{PV} argument; in (265a), A_{PV} is third person singular *=nya* 3SG, and in (265b), A_{PV} is first person singular *saya* 1SG. According to Riesberg (2014), the examples in (264)–(265) above show that it is the subject argument of the complement clause that can be omitted and can co-refer to the P_{AV} argument of the matrix clause.[5] For Riesberg (2014) and Arka (2003), this type of control construction provides evidence for a subject grammatical relation.

In Besemah, there are strikingly similar patterns found with the verb *ajung* 'order' in the corpus. Consider the examples in (266) and (267).

[5]Riesberg (2014) does not provide any examples where the 'omitted' argument within the complement clause is S.

(266) Shared P_{AV} = (S) with *ajung* 'order'

a. *aku* *ni* *kate=nye,*
1SG DEM.PROX QUOT=3
A

'I, he said,'

nak *ng-ajung* *kamu* [___ *tandang* *ke* *iligh*] *kate=nye.*
want AV-order 2PL sleep.over ALL down.river QUOT=3
P S

'asked you to spend the night on the downriver side, he said.'

(BJM01-013, 00:15:09.890–00:15:13.250, Speaker: Karim)

b. *nak* *ng-ajung=(ny)e* [___ *be-jalan.*]
want AV-order=3 MID-walk
=P S

'(the parents) wanted to let them (i.e., the kids) walk.'

(BJM01-001, 00:01:26.759–00:01:27.860, Speaker: Juria)

In the examples in (266), the verb *ajung* 'order' is in the agentive voice in the apparent matrix clause, while the verb in the apparent complement clause (i.e., *tandang* 'sleep.over' in (266a) and *be-jalan* 'walk' in (266b)) is intransitive. In (266a), the argument *kamu* 2PL, could be analyzed as either the realization of the P_{AV} argument of *ngajung* 'order' (in the matrix clause) or the S argument of the verb *tandang* 'sleep.over' (in the complement clause). While the syntactic status of this 'shared' argument is not entirely clear, the example in (266b) may shed some light on the issue. In (266b), whether the verb *ajung* 'order' should be considered is a raising verb or control verb, the argument *=nye* 3 is syntactically the P_{AV} argument, since it encliticizes to the verb, as any P_{AV} argument does (see Section 4.2). These examples, then, could be analyzed much like the Standard Indonesian examples in (264)–(265); the P_{AV} argument of *ngajung* 'order' (i.e., *kamu* 2PL in (266a) and *=nye* 3 in (266b)) is the controller and the unrealized S argument in the complement clause is the controllee.[6]

[6]I recognize that it is possible that this 'shared' argument could in some cases be realized in the complement clause as the S argument and in other cases be realized as the P_{AV} in the matrix clause. For the purposes here, I describe this shared argument as being in the matrix clause, but this is not crucial to the analysis at this point.

(267) Controller P_{AV} = (Controllee A_{AV}) with *ajung* 'order'

ngape	*kakak*	*Ripki*	*nak*	*ng-ajung*	*die*	[___	*n-(t)anye-ka=nye.*]
why	older.sibling	R.	want	AV-order	3		AV-ask-CAUS/APPL=3
	A				P	A	

'why did Ripki's dad order her to ask for it.'

(BJM01-007, 00:16:55.390–00:16:57.760, Speaker: Emi)

In (267), the P_{AV} argument *die* 3 of the verb *ngajung* 'order' is the controller, while the unrealized A_{AV} argument of the verb *nanyeka* 'ask for' in the apparent complement clause is the controllee. Thus far, these *ajung* 'order' constructions in Besemah appear to be similar to the Standard Indonesian examples above. However, in the corpus, there are no instances where *ngajung* 'order' is followed by a verb in the patientive voice, analogous to the Standard Indonesian examples in (265). Unfortunately, I also do not have elicited examples of such a construction. Therefore, it remains to be seen whether or not the *ajung* 'order' control construction provides further support for the primary argument grammatical relation. It is noteworthy that there also are no examples where the P_{AV} argument of *ngajung* 'order' co-refers to an unrealized P_{AV} argument in the apparent complement clause.

There are also a number of examples in the corpus where the verb *ajung* 'order' occurs in the patientive voice, as in the examples in (268)–(269). When *ajung* 'order' is in the patientive voice, the P_{PV} argument is the controller. In the examples in (268), *ajung* 'order' is in the patientive voice and is followed by an intransitive verb. In both examples, the primary argument is not realized. For the sake of clarity, the argument is placed in parentheses where it would occur if it were present (Hendi, p.c.). In (268a), the P_{PV} argument (*setar*) 'kickstand' of the patientive voice marked verb *diajung* 'order' is the controller and co-refers to the unrealized S argument of the middle voice marked intransitive verb *beghasap* 'smoke'. In (268b), the P_{PV} argument (*die*) '3' of the unprefixed patientive voice verb *ajung* 'order' co-refers to the unrealized S argument of the bare intransitive verb *masuk* 'enter'.

(268) Controller P_{PV} = (Controllee S) with *ajung* 'order'

a. (*setar*) *di-ajung* [___ *begh-asap.*]
kickstand PV-order MID-smoke
P S

'(the kickstand) was allowed to smoke (i.e., the kickstand was let down while the motorcycle was going, so that it was smoking.),'

(BJM01-004, 00:56:09.142–00:56:10.550, Speaker: Hendi)

b. (*die*) *ku=ajung* [___ *masuk,*]
3 1SG=[PV]order enter
P A S

'I invited (him) to enter,' (BJM01-011, 00:41:04.050–00:41:04.623, Speaker: Rili)

There are also examples where *ajung* 'order' is in the patientive voice and is followed by a verb in the agentive voice, as in the examples in (269) below. In these examples, the P_{PV} argument of *ajung* 'order' co-refers to the A_{AV} argument of the following verb. In (269a), the P_{PV} argument *aku* 1SG of the patientive voice marked verb *diajung* 'order' is the controller and the unrealized A_{AV} argument of the agentive voice marked verb *nanyeka* 'ask for' is the controllee. In (269b), the P_{PV} argument *die* 3 of the patientive voice marked verb *diajung* 'order', which appears after the predicate complex (see Section 5.2) in the final line of the example, is the controller, and the unrealized A_{AV} argument of the following agentive voice marked verb *ncakagh* 'search' is the controllee.

(269) Controller P_{PV} = (Controllee A_{AV}) with *ajung* 'order'

a. *aku di-ajung* [___ *n-(t)anye-ka=nye* *nga* *kabah.*]
1SG PV-order AV-ask-CAUS/APPL=3 with 2SG
P A =P

'I was ordered to ask for it (i.e., the book) from you.'

(BJM01-008, 00:04:48.135–00:04:49.490, Speaker: Emi)

b. *engkas=(ny)e* *di-ajung=(ny)e* *nga* *bapang* *Gitah,*
although=3 PV-order=3 with father G.
=A A

'even though Gitah's father asked,'

n-cakagh *buluh,*
AV-search bamboo
P

die *tu.*
3 DEM.DIST
A

'him to look for bamboo.' (BJM01-011, 00:40:50.012–00:40:53.220, Speaker: Rili)

Again, there are no examples in the corpus where the patientive voice marked verb *ajung* 'order' is followed by another patientive voice marked verb. I also do not have elicited examples of these types of constructions. Therefore, there are clear patterns in the corpus such that P_{AV} and P_{PV} argument in the matrix clause can serve as the controllers for S and A_{AV} controllee arguments in the complement clause. It remains to be seen if other arguments may serve as the controllee arguments in the complement clause.

Many issues surrounding control constructions in Besemah remain unresolved, making it difficult to conclude whether these constructions provide clear evidence for grammatical relations. In regards to the control constructions with the verb *ajung* 'order', the analysis is much more straightforward, but more data is needed to assess two questions. First, is the 'shared' argument in the P_{AV} position within the matrix clause, an argument of the complement clause, or variable between the two clauses? Second, is it possible for the controllee argument to be P_{PV}, as is the case in Balinese and Indonesian? In regards to the construction with the verbs *endak* 'want' and *galak* 'want', the situation is much less clear. With the possibility of 'funny' control readings, it is questionable that *endak* 'want' and *galak* 'want' are really even control predicates. Therefore, it is unclear at the moment if any grammatical relation in Besemah is supported, based on these control constructions.

6.3 Conclusion

This chapter showed that there is not any clear evidence for grammatical relations in constructions that operate across clause boundaries. Western Indonesian languages are said to typically evince a subject grammatical relation in relative clause constructions as well as control and raising constructions. Section 6.1 showed that noun modifying clause constructions in Besemah, which are functionally equivalent to relative clause constructions in western Indonesian languages, do not provide evidence for a primary argument grammatical relation. Furthermore, these constructions are shown to operate quite differently than relative clauses in Section 6.1.4. Section 6.2 showed that two types of control constructions involving the verbs *endak* 'want' and *galak* 'want' in Section 6.2.1 and the verb *ajung* 'order' in Section 6.2.2 are still inconclusive as to whether they provide support for a primary argument grammatical relation.

Part III

Symmetrical voice constructions in conversation

Part III investigates the nature of symmetrical voice constructions in conversation. The essential question it seeks to answer is: what factors lead a speaker to choose one voice over the other? In order to answer this question, the analysis is necessarily quantitative. Chapter 7 first provides an overview of the factors that have been proposed to lead to symmetrical voice with descriptive statistics followed by a quantitative analysis that looks at all factors together in a single statistical model.

Chapter 7

Voice selection in conversation

Voice selection in the symmetrical voice languages of western Indonesia has received far less attention than the syntax of symmetrical voice, as described in Part II of the dissertation. In previous studies that have investigated symmetrical voice in discourse, the focus largely has been on how the distribution of symmetrical voice constructions (i.e., agentive voice and patientive voice constructions) in mostly narrative discourse informs clause structure and constituency (e.g., Cumming 1991) or clause structure and grammatical relations (e.g., Hopper 1983). One notable exception is Pastika's (1999) treatment of voice selection in Balinese narrative where voice selection itself is the object of study. Details of this study are provided later in this section.[1]

These studies have primarily considered two properties when examining the distribution of symmetrical voice constructions in discourse: discourse transitivity (Hopper & Thompson 1980) and topicality (Givón 1983). For example, Cumming (1991)—based on insights from Rafferty (1982) and Hopper (1983)—proposes that voice selection in Classical Malay prose narrative 'is determined by characteristics of the event rather than of the participants' (133). Cumming develops a notion of

[1]The studies on voice selection mentioned in this section use different terminology to describe voice and macro-roles. For example, Cumming (1991) uses the term 'trigger' instead of voice and Pastika (1999) used the terms 'nasal transitive' for agentive voice and 'zero transitive' for patientive voice. Both studies additionally use the macro-role O instead of P. For the purpose of clarity, I simply translate their terminology into the terminology that I use in this dissertation.

'eventiveness' to encapsulate several phenomena related to the 'event'—in contrast to the participants—that account for the distribution of agentive voice and patientive voice constructions. For Cumming, 'eventiveness' comprises several notions from Hopper & Thompson's (1980) discourse transitivity (i.e., aspect, telicity, punctuality) in addition to notions like grounding—the distinction between *foregrounding* 'the language of the actual story line' and *backgrounding* 'the language of supportive material which does not itself narrate the main events' (Hopper 1979a: 213)—and sequencing, which is typically marked by temporal sequencing linker (see McCune 1979). Essentially, she proposes that patientive voice is highly eventive, meaning the patientive voice is used in clauses that describe foregrounded, telic, punctual, and sequenced events. Agentive voice, then, is not highly eventive; it is used in clauses that describe backgrounded, non-telic, ongoing states or repeated events.

On the other hand, Pastika (1999) looked at both topicality (i.e., Givón's (1983) notions of topic persistence and referential distance) and grounding (based on Hopper 1979a). Pastika (1999) proposes that voice selection is strongly associated with the topicality of the P arguments in Balinese narrative discourse; if P is highly topical, then patientive voice is likely to occur, if P is not highly topical, then agentive voice is likely to occur. Conversely, he found that the topicality of A was not strongly associated with either voice. Pastika's (1999) results for Balinese narrative partially agree with Cumming's (1991) assessment of Classical Malay in regards to the role of grounding (i.e, patientive voice is more likely to be foregrounded, while agentive voice is more likely to be backgrounded). However, Pastika demonstrates that there is an interaction between grounding and topicality. He finds that grounding by itself is not a factor for voice selection. However, when the P argument is highly topical and the clause is foregrounded, it is even more likely that the patientive voice is selected than if the P argument is highly topical and the clause is backgrounded. When the P argument is not highly topical, foregrounding and backgrounding are not important factors for voice selection. Thus, there is some discrepancy between Cumming (1991) for Classical Malay and Pastika (1999) for Balinese, which could of course be due to many factors, including differences between the languages themselves. For Cumming (1991), as it was for Hopper (1983), topicality of A and P are not factors for

voice selection (see Cumming 1991: 128-29), eventiveness (i.e., discourse transitivity, foregrounding, and sequencing) being the primary factor in voice selection. For Pastika (1999), topicality of P is the most important factor and foregrounding interacts with a highly topical P.

Most of these studies on voice selection have been conducted on narrative discourse. I am only aware of three studies that address voice selection in conversation: Wouk (1989) on Jakarta Indonesian, Wouk (1999) on Sasak, and Ewing (2005) on Cirebon Javanese. On the one hand, both studies by Wouk did not find any striking correlations between voice and either topicality or discourse transitivity—see especially discussion in Wouk (1999: 104). Importantly, Wouk (1999) points out that it is challenging to use the same factors that have been proposed for narrative discourse in studying voice selection in conversation, such as discourse transitivity, grounding, and sequencing. It is simply too difficult to code every example of symmetrical voice in conversational data for these factors (i.e., it is difficult, if not impossible, to decide that a given clause in conversation is foregrounded or backgrounded). On the other hand, Ewing (2005) found that voice selection in Cirebon Javanese depends upon the information flow configurations of P arguments. When P is *given* and *tracked* in conversation, the patientive voice occurs. When P is *non-referential*, the agentive voice occurs.

In this chapter, I take a different approach to voice selection than the previous studies cited above. First, I approach voice selection by asking a simple question: *at any given point in a conversation, what factors lead a speaker to choose one symmetrical voice over the other?* Unlike the majority of previous studies mentioned above, I do not seek to directly tie voice selection properties to a particular analysis of syntactic alignment (i.e., ergative-absolutive or nominative-accusative), a particular construction (i.e., patientive voice as passive or ergative) or clause structure.

Second, given the minimal discussion of voice selection in conversation, this study exclusively focuses on informal, face-to-face interaction between two or more speakers. Current research in usage-based approaches to language have noted the importance for understanding grammatical structure of looking at this type of interactional data (Ochs et al. 1996, Selting & Couper-Kuhlen 2001, Levinson 2006).

Third, this study uses recent statistical techniques (i.e., multifactorial, mixed-effects regression modeling) that allow me to capture the many different factors at play in voice selection within a single statistical model (see Section 7.2 for details). Previous studies on voice selection have only provided descriptive statistics of each factor individually, so the multifactorial analysis here is a major step forward.

Finally, this study takes into account several factors that have not been previously discussed in the literature on voice selection. In addition to several factors that have been mentioned in the literature—including formal and semantic properties of verbs, clauses, and arguments (Section 7.1.1)—a number of factors that have not been discussed in the previous literature are considered, including: information flow (Chafe 1976, 1987, 1994; Section 7.3.2), collostruction strength of the root with either agentive voice or patientive voice (Stefanowitsch & Gries 2003, 2005; Gries & Stefanowitsch 2004; Section 7.1.3), and syntactic priming of voice (Gries 2005; Section 7.1.4).

This chapter is organized as follows. Section 7.1 describes the sub-corpus that was used for this study of voice selection. Additionally, this section describes the annotation of the data, including information flow properties, collostructional analysis, and syntactic priming. Section 7.2 then describes the methodology for statistical analysis. Section 7.3 presents the results of the statistical analysis, describing each of the statistically significant factors for voice selection in Besemah. Section 7.4 discusses several of the significant factors, focusing on information flow factors and the collostructional analysis. Section 7.5 concludes this chapter on voice selection in Besemah conversation.

7.1 The data and annotation

In order to investigate voice selection quantitatively, I chose the four recordings in Table 7.1 from the Besemah corpus detailed in Section 1.3. These recordings represent a broad range of speakers of different ages (18 – 60 years old) with a roughly equal number of male and female participants. Each conversation represents informal, face-to-face interaction among native speakers of Besemah.

Table 7.1: The sub-corpus of recordings investigated for voice selection

BJM01-004	5 young men talking about the motorcycle races (ages 18–35)
BJM01-007	3 women talking about farmer's co-op (ages 30–50)
BJM01-010	3 men discussing farming (ages 45–60)
BJM01-011	3 women discussing durian season/finding snails (ages 23–40)

In each of these conversations, roughly a 20 minute portion was selected and subsequently annotated above and beyond the rest of the corpus. Some of these annotations were conducted during fieldwork in consultation with a native speaker of Besemah who had helped transcribe these recordings; other annotations were done upon returning from fieldwork. During fieldwork, the annotation involved identifying symmetrical voice constructions and evoked arguments of the verb that were unrealized (see Section 4.2 on unrealized arguments and Ewing (2005: 83-91) on evoked referents). By evoked arguments, I mean to say that I consulted with a native speaker of Besemah to determine what argument would be placed in the position where the unrealized argument occurred. I then noted this argument in the sub-corpus by placing it in parentheses, but did not take its position into account when coding the data. Consider the example in (270) below as an illustration of how I annotated the sub-corpus concerning unrealized arguments.

(270) Evoked arguments in the sub-corpus of Besemah

1 BURHIMIN: *sambil* (*aku*) *n-*(*t*)*ambak* *sawi,*
while 1SG AV-plant mustard.greens
'while (I) was planting mustard greens,'

(1.2)

2 *di* *sawah.*
LOC rice.paddy
'in the rice paddy.'

(0.1)

3 ARIPIN: *hmm.*
hmm.

'hmm.'

(0.4)

4 BURHIMIN: (*mulan cuklat*) *ku=jemugh.*
seed cocoa 1SG=[PV]dry

'I dried (the cocoa seeds).'

5 *tige aghi.*
three day

'(for) three days.' (BJM01-010, 00:26:03.136–00:26:09.900)

In (270), the A argument *aku* 1SG was evoked in the first line, and the argument *mulan cuklat* 'cocoa seeds' in the fourth line was evoked. These unrealized arguments were still considered to be unrealized arguments in coding the formal features of arguments for the quantitative analysis (e.g., they were considered 'zero' arguments and received a '0' when coding argument length in Section 7.1.1). However, these evoked arguments were useful in (i) determining if the verb is considered a symmetrical voice verb (see next paragraph) and (ii) annotating for information flow properties (see Section 7.3.2).

The second step in the annotation process was identifying all symmetrical voice verbs in the sub-corpus. I define a symmetrical voice verb as a verb that is able to occur in both the agentive voice and patientive voice construction (see Section 3.2). By defining symmetrical voice verb in this way, I ensure that speakers could have selected either agentive voice or patientive voice for the verb in question. The presence of symmetrical voice morphology (e.g., (*me*)*N-* AV, *di-* PV) was certainly helpful in this process, but not always conclusive. For example, there are a number of verb roots that are intransitive and still take the agentive voice prefix (*me*)*N-* AV; these roots cannot occur with a P argument and cannot be in the patientive voice without a valency-increasing suffix (see Section 3.1.2). Furthermore, in a few cases, it was unclear whether an unprefixed patientive voice verb with

unrealized arguments was a transitive patientive voice verb or bare intransitive verb. These unclear cases were easily cleared up during fieldwork by asking a native speaker of Besemah about the syntactic nature of the verb. Once the symmetrical voice verb was identified, the verb, its argument and the clause within which it was found were coded for the factors that are considered in the quantitative analysis of voice selection, including the formal and semantic features of arguments, verbs, and clauses (Section 7.1.1), information flow (Section 7.3.2), collostructional analysis (Section 7.1.3), and syntactic priming (Section 7.1.4) below.

In all, there were 1,013 instances of symmetrical voice verbs identified in the sub-corpus. These instances were spread relatively evenly across the sub-corpus—ranging from 240 instances in the recording with the least number of occurrences of symmetrical voice constructions to 272 instances in the recording with the most occurrences of symmetrical voice constructions. From these numbers, there is a general preference for the agentive voice construction, which is demonstrated in Table 7.2 below.

Table 7.2: Total number of symmetrical voice constructions in the sub-corpus

AGENTIVE VOICE	PATIENTIVE VOICE	TOTAL
554 (55%)	459 (45%)	1,013

A number of these instances of symmetrical voice verbs, however, included clauses in noun modifying clause constructions (Section 6.1) and symmetrical voice verbs, typically *kate* 'say' and *rupuk* 'think', that appear to have clausal arguments, which is demonstrated in (271) below.

(271) Clausal P argument with *rupuk* 'think'

ku=enjuk-ka	*liling*	*baih*	*nga*	*die*	*ku=rupuk.*
1SG=[pv]give-CAUS/APPL	snail	just	with	3	1SG=[pv]think

'I'll give snails to her I thought.'

(BJM01-011, 00:09:03.719–00:09:06.350, Speaker: Jamisah)

In this example, the P argument of the verb *rupuk* 'think' appears to be the clause that precedes

it.[2] Because these instances of symmetrical voice cannot be annotated in the same way that the majority of symmetrical voice constructions are annotated, I exclude them here. Table 7.3 demonstrates how the original 1,013 instances of symmetrical voice constructions were trimmed to 899 instances of symmetrical voice constructions. Note that after trimming, the proportion of agentive voice and patientive voice stays roughly the same; the proportion of agentive voice increases by 1% and patientive voice decreases by 1%.

Table 7.3: Number of symmetrical voice constructions in the sub-corpus after trimming

	AGENTIVE VOICE	PATIENTIVE VOICE	TOTAL
	554 (55%)	459 (45%)	1,013
Noun modifying clause constructions	*-41*	*-18*	*-59*
Clausal arguments	*-10*	*-28*	*-38*
	499 (56%)	400 (44%)	899

The remainder of this section describes each of the variables considered in the quantitative analysis of voice selection, providing a short description and occasionally accompanying examples and basic descriptive statistics.

7.1.1 Formal and semantic properties of the arguments, predicates, and clauses

For each instance of a symmetrical voice verb in the sub-corpus, the verb itself, the clause within which the verb occurs, and the A and P arguments of the verb were coded for a number of formal and semantic properties that have been mentioned in the previous literature on voice selection (see Section 7 above). Each property—or variable in statistical terms—alongside the different possible values with which each property can be annotated—or levels in statistical terms—are presented in Table 7.4 below. The variable is listed on the left side of the table in small caps, while the levels of each variable are listed on the right side of the table in italics. The discussion below treats each of

[2]It is quite possible to analyze these constructions as something other than complement taking predicates, similar to Thompson's (2002) analysis of English 'complement taking predicates' as formulaic stance markers. The important point here is that these constructions behave so differently than the other symmetrical voice constructions that they cannot be coded in the same way.

these variables in turn, describing how each was coded, providing examples, and descriptive statistics. Note that the descriptive statistics provided in this section are meant to be descriptive and not explanatory; these statistics say nothing of statistical significance. The purpose of the descriptive statistics in this section is to show the raw numbers of each variable in isolation, providing a general idea of how each factor may affect voice selection, or at least is monofactorially correlated with voice selection. The explanatory statistics are provided in Section 7.2.

Table 7.4: Independent variables of formal features of the predicate and arguments

Variable	**Levels**
ANIMACY (A/P)	*animate, inanimate*
VALENCY-INCREASING SUFFIX	*yes, no*
SUBORDINATION	*subordinate clause, main clause*
CLAUSE TYPE (MOOD)	*declarative, interrogative, imperative*
LENGTH (A/P)	*# of characters* (*orthographic letters*)

Animacy Cumming (1991) found that animacy plays a role in voice selection in Classical Malay prose narratives such that if P is animate, then patientive voice is more likely to be selected. A arguments were exclusively animate in her corpus. The Besemah sub-corpus here reveals a similar preference for P arguments. Consider Figure 7.1, which is a bit more detailed than Cumming's (1991) figures for Classical Malay.

In Figure 7.1, each grouping of two bars represents the animacy of A and P arguments within the same clause. Thus, the first grouping represents a clause where both arguments are animate (i.e., A-animate:P-animate), the second grouping represents clauses where A is animate and P is inanimate (i.e., A-animate:P-inanimate), and so on for the third and fourth groupings. As indicated in the key in the upper righthand corner, the number of agentive voice constructions is represented by the gray column on the left of each grouping, while the number of patientive voice constructions is represented by the blue columns on the right of each grouping. As one might expect, clauses where A is animate and P is inanimate—the second grouping—are most common followed by clauses where

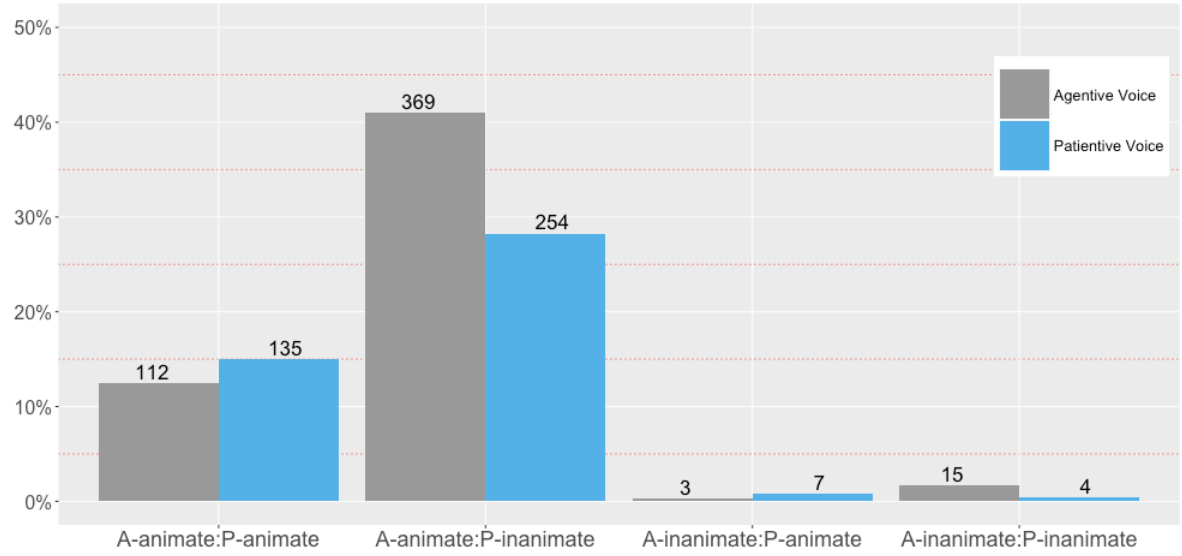


Figure 7.1: Animacy of A and P in agentive and patientive voice constructions

both A and P arguments are animate—the first grouping. Clauses with an inanimate A argument—the third and fourth groupings—are far less common, but do occur in the sub-corpus, as in (272) below.

(272) Inanimate A argument with *teguk* 'swallow'

(*aku*)	*teguk*=(*ny*)*e*	*li*	*tanah*	*tu.*
1SG	swallow=3	by	land	DEM.DIST

'the mud (lit. land) swallowed me up.'

(BJM01-011, 00:07:54.727–00:07:56.592, Speaker: Jamisah)

In this example in (272), A is *tanah* 'land', which is co-referentially marked with the enclitic *=nye* 3 on the verb and prepositional phrase headed by *li* 'by'. The P argument is *aku* 1SG. Figure 7.1, by and large, appears to fall in line with Cumming's (1991) findings in Classical Malay narrative discourse. When P is animate, then there is a preference for the patientive voice construction; the animacy of A arguments appears to be less of a factor, which is due to the fact that there are few inanimate A arguments in the Besemah sub-corpus.

Subordination Several studies cite subordination as a factor for voice selection (Hopper 1983, Cumming 1991, Pastika 1999). The consensus among these studies is that agentive voice is more likely to occur in subordinate clauses, while patientive voice is more likely to occur in main clauses. The general motivation for this finding is said to be that subordinate clauses present backgrounded information that is lower in discourse transitivity (Hopper 1983). Practically speaking, subordinate clauses, in this study, are considered to be clauses that begin with one of several subordinating conjunctions: *ame/amu* 'if, when', *antakkah* 'before', *sate* 'after', *sambil while*, among others. All other clauses were coded as main clauses. The examples in (273) and (274) illustrate instances of subordinate clause with the subordinate conjunction *sate* 'after' followed by a main clause. In (273), the agentive voice-marked verb *makan* 'eat' is in the subordinate clause in the first line. In (274), the patientive voice-marked verb *diputigh* 'pick' is in the subordinate clause in the first line.

(273) Subordination with subordinating conjunction *sate* 'after'

sate udim m-(m)akan=(ny)e tu,
after CMPL AV-eat=3 DEM.DIST

'after (I) finish eating it,'

lemak aku.
pleasant 1SG

'I (feel) pleasant.'

(BJM01-011, 00:09:54.164–00:09:55.860, Speaker: Jamisah)

(274) Subordination with subordinating conjunction *sate* 'after'

sate udim di-putigh,
after CMPL PV-pick

'after (the cocoa) is picked,'

...

langsung di-masuk-ka ke dalam,
directly PV-enter-CAUS/APPL ALL inside

'(the cocoa) is put into,'

dalam pelastik.
inside plastic.bag

'a plastic bag.'

(BJM01-010, 00:35:32.100 – 00:35:38.425, Speaker: Burhimin)

Figure 7.2 demonstrates that the vast majority of the instances of symmetrical voice constructions are found in main clauses. The number of instances of symmetrical voice constructions in subordinate clauses is less than 10% of the total instances of symmetrical voice constructions in the sub-corpus. However, there is still a clear preference for agentive voice in subordinate clauses. Figure 7.2 shows that there are more than three times as many instances of agentive voice than patientive voice in subordinate clauses.

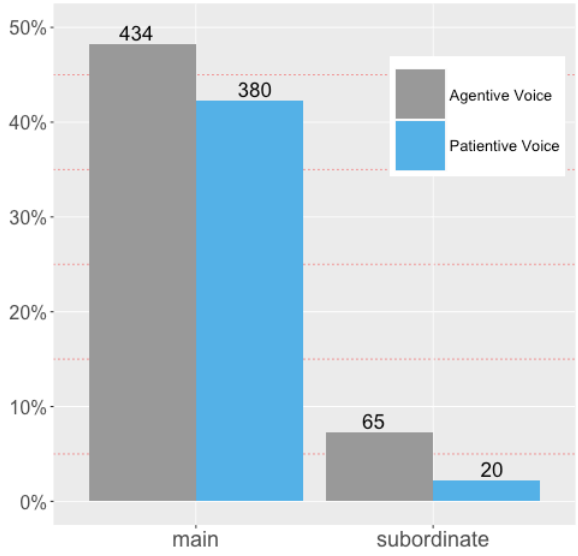


Figure 7.2: Subordinate vs. main clauses in agentive and patientive voice constructions

Clausal mood Clausal mood has also been a proposed factor for voice selection. In fact, in the Austronesian languages of western Indonesia, imperative constructions are described as primarily occurring in the patientive voice (e.g., Sneddon 1996 for Standard Indonesian, Arka 2003 for Ba-

linese). In Besemah, imperative clauses also commonly occur in the patientive voice, as in (275). However, there are still instances where imperative clauses occur in the agentive voice, as in (276).

(275) Imperative in the patientive voice with *capak* 'discard'

capak-i	*gale*	*die*	*ning.*
[PV]discard-LOC.APPL	all	3	grandmother

'throw them all away, grandma.' (BJM01-011, 00:10:57.935–00:10:59.647, Speaker: Dewi)

(276) Imperative in the agentive voice with *buat* 'make'

Yan	*m-buat*	*tih*	*sutik*	*Yan.*
Y.	AV-make	tea	one	Y.

'Yan, make one tea, Yan.' (BJM01-004, 00:29:53.450–00:29:54.494, Speaker: Hairil)

It is less clear that interrogative mood has an effect on voice selection. There are a number of languages that restrict fronted question words to primary arguments (see Arka (2003: 26-27) on fronted question words in Balinese). It is certainly true in Besemah that if P is a question word, then the speaker is likely to select the patientive voice. However, the majority of clauses with interrogative mood were yes-no questions in the sub-corpus. Figure 7.3 provides support that imperative clauses are likely to occur in the patientive voice; interrogative clauses do not show a clear preference for either agentive voice or patientive voice.

Valency-increasing morphology While I am not aware of any study on voice selection that has directly considered the role of valency-increasing morphology in voice selection, it is certainly reasonable that the presence of valency-increasing morphology would signal higher discourse transitivity. Thus, based on the analysis of discourse transitivity in previous studies, one would expect that verbs with a causative or applicative suffix are more likely to occur in the patientive voice. In Besemah, I coded examples where the locative applicative suffix *-i* LOC.APPL or the causative/applicative suffix *-ka* are suffixed to the verb (see Section 3.1.2). Figure 7.4 shows that there is indeed a preference for patientive voice when either the suffixes *-i* LOC.APPL or *-ka* CAUS/APPL are suffixed to the verb.

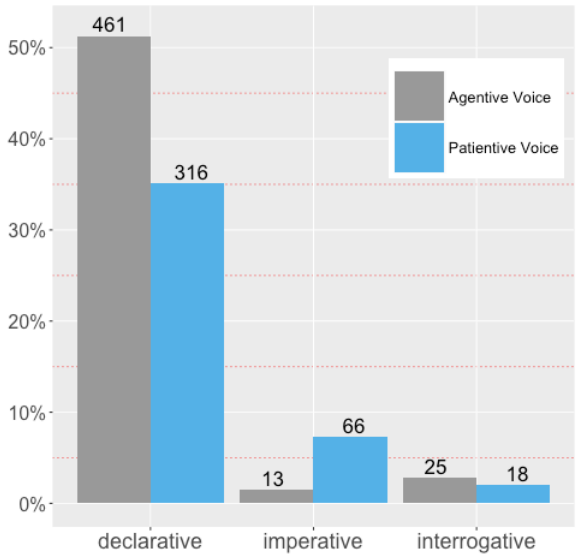


Figure 7.3: Clausal mood in agentive and patientive voice constructions

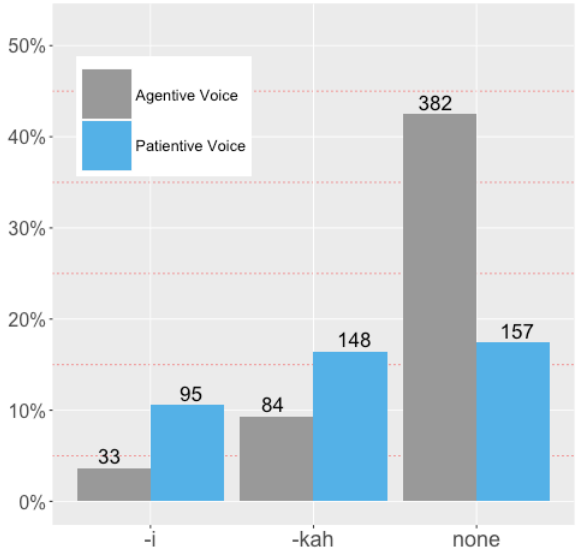


Figure 7.4: Valency-increasing morphology in agentive and patientive voice constructions

Argument length The length of A and P arguments has also not been considered in previous studies of voice selection. However, it is has been well-attested that A and P arguments under certain

conditions (e.g., if the argument represents 'given' information) or in particular positions within a construction (e.g., the subject position in English) are more attenuated (e.g., zero or pronominal forms) (cf. Givón 1983).[3] The length of A and P arguments (i.e., the number of characters in the argument) had a skewed distribution. Therefore, these numbers underwent a log transformation to avoid such skewing. Figure 7.5 is a boxplot that demonstrates the difference of P and A within a single symmetrical voice construction (i.e., length of P - length of A for each construction). If A is shorter than P in any given construction, then the number will be positive. If A is shorter than P in any given construction, then the number will be negative.

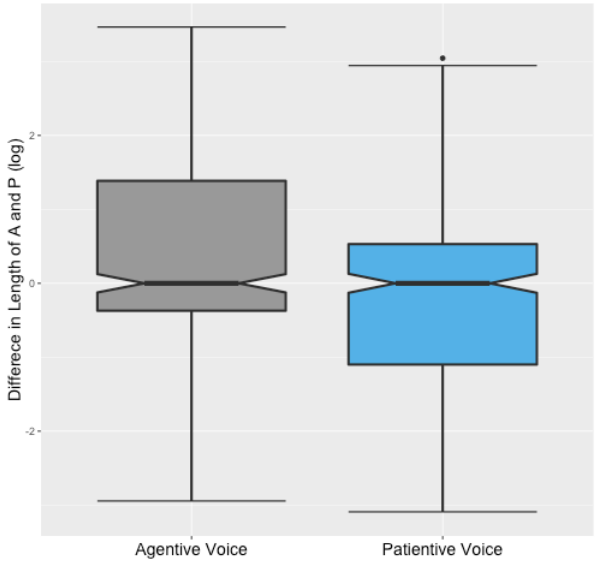


Figure 7.5: Length of A and P arguments in agentive and patientive voice constructions

The boxplot can be understood as follows. First, the median (represented by the horizontal line) for both agentive voice and patientive voice is zero with the same 95% confidence intervals (represented by the notches around the line), which is likely due to the fact that the majority of symmetrical voice constructions in the sub-corpus involved two unrealized arguments. There is a difference in

[3]The motivation for choosing argument length over a variable like argument form (i.e., one that looks at noun phrase, pronoun, zero) is for statistical reasons. The majority of the variables in this analysis of voice selection are categorical, and too many categorical variables can cause convergence errors (see Section 7.2).

means (represented by the black diamonds), such that agentive voice shows a positive mean (i.e., A is shorter than P) and patientive voice has a very slight negative mean (i.e., P is shorter than A). Probably the most telling difference between agentive voice and patientive voice is the larger upper quartile in the agentive voice (i.e., more instances where A is shorter than P) and the larger lower quartile in the patientive voice (i.e., more instances where P is shorter than A). Based on this descriptive boxplot above, it appears that A_{AV} and P_{PV} (i.e., primary arguments) are generally more attenuated (see Section 7.4.2 below).

7.1.2 Information flow

Information flow is a concept primarily developed by Chafe (1976, 1987, 1994) that 'refers to cognitive and social aspects of the way people package ideational content as they talk' (Thompson 1997: 65). Information flow can be conceived of as several interrelated concepts that describe 'the cognitive status or various changes in status that are negotiated between speaker and listener in their ideas of objects, states, and events as a conversation proceeds' (Thompson 1997: 65). Du Bois & Thompson (1991) describe information flow in terms of five dimensions as they apply to noun phrases that include the following:

(i) *identifiability*: a referent is *identifiable* if a speaker assumes the hearer can identify it; if the speaker assumes the hearer cannot identify the referent, it is considered *non-identifiable* (cf. Chafe 1994: 93–107, Lambrecht 1994: 77–92).

(ii) *identifiability pathway*: 'the route by which a referent is deemed by a speaker to be [i]dentifiable to a hearer' (Du Bois & Thompson 1991: 6). These include 'pathways' like anaphoric reference, propositional reference, the physical setting of the conversation, among many other possible pathways (cf. Ewing 2005: 133–144).

(iii) *activation state*: there have been traditionally two levels of activation state: 'given' and 'new' (cf. Lambrecht 1994: 93–104). Chafe (1987) further divides activation state into three levels:

active, *semi-active*, and *inactive*. Du Bois & Thompson (1991) describe these levels as follows: '[a]n active concept is one that is currently in a person's focus of consciousness. A semiactive concept is one that is in a person's peripheral consciousness. An inactive concept is one that is currently in a person's long term memory, neither focally nor peripherally active' (9).

(iv) *discourse referentiality*: the primary division in discourse referentiality is between *tracking* and *non-tracking* referents, each referring to the role of the noun phrase in the conversation (Du Bois 1980). A *tracking* referent is one that is employed for listeners to track through the conversation. A *non-tracking* referent is one that has some other function, other than tracking. That is, noun phrases can function in many different ways (i.e., to orient, predicate, or classify).

(v) *generalizability*: the distinction in generalizability is between a *generalizing* and *particularizing* referent. Generalizability has to do with whether a referent 'refers to an entity whose members are considered to be interchangeable' (Du Bois & Thompson 1991: 18). A *particularizing* referent refers to 'specific individuals or instances of a category or group' (Ewing 2005: 144). A *generalizing* referent refers to 'a class of referents or indiscriminately to any member of that class' (Ewing 2005: 144).

These dimensions of information flow—in part or whole—have been used to make sense of various grammatical phenomena, such as word order (Mithun 1987), clause structure (Ewing 2005), grammatical relations (Du Bois et al. 2003), and the core-oblique distinction (Thompson 1997).

In this study of voice selection, three of the five dimensions of information flow above from Du Bois & Thompson (1991) are considered for both A and P arguments. The three variables are presented in Table 7.5 below. The reason for not including *identifiability* and *identifiability pathway* lies in the difficulty of coding such examples, which is addressed later on in this section.

The general hypothesis is that the information flow properties of A and P arguments are distributed differently in symmetrical voice constructions (cf. Ewing 2005: Ch. 4). Consider a hypothetical example: if the activation state of a P argument is new, it is significantly more likely to occur

Table 7.5: Independent variables of information flow based on Du Bois & Thompson (1991)

Variable	Levels
ACTIVATION STATE (A/P)	*given, new*
GENERALITY (A/P)	*particularizing, generalizing*
DISCOURSE REFERENTIAL FUNCTION (A/P)	*tracking, non-tracking*

in either the primary argument position of patientive voice or the secondary argument position of the agentive voice. The null hypothesis in this case states that it is *not* significantly more likely for the P argument that is new to occur in agentive voice or patientive voice. In what follows, I describe how each of these information flow properties is annotated in the sub-corpus, except for identifiability and identifiability pathway, which were not included in this study. In the sub-corpus of Besemah, there are indeed clear examples where arguments are identifiable, as in (277a) or non-identifiable, as in (277b). However, as noted above, it proved to be too difficult to code identifiability in unrealized arguments. In many cases, it was extremely unclear if the unrealized argument was a referent that the speaker assumes the hearer can identify or not.

(277) Identifiability of P

a. *galak* *ng-ajak* *umak* *kabah* *tu*
want AV-invite mother 2SG DEM.DIST
P

'(I) wanted to invite your mother.'

(BJM01-011, 00:09:54.164–00:09:55.860, Speaker: Jamisah)

b. *die* *tu* *m-beli* *rukuk* *saje,*
3 DEM.DIST AV-buy cigarette always
A P

'he is always buying cigarettes,'

(BJM01-004, 00:21:09.355–00:21:10.245, Speaker: Emi)

Activation state Activation state (henceforth Activation) was coded for each A and P argument in the sub-corpus as either *given* or *new*. While Chafe (1994) draws a three-way distinction between

active, semi-active, and inactive, it was difficult in the coding process to draw the same three-way distinction. Therefore, A and P arguments were coded as either given or new. Consider the example in (278).

(278) Activation: *given* and *new* (BJM01-004, 00:33:04.260–00:33:14.534)

1	HENDI:	*waktu kami duduk di bawah ini,* *waktu* *kami* *duduk* *di* *bawah* when 1PL.EXCL sit LOC below *ini,* DEM.PROX	'when we sat below here,'
2		*di bawah,* *di* *bawah,* LOC below, (1.1)	'below,'
3	HAIRIL:	*depan* [*ghumah Jimi*]. *depan* *ghumah* *Jimi.* front house J.	'in front of Jimi's house.'
4	HENDI:	[*bunge ghumah Jim*]*i eh,* *bunge* *ghumah* *Jimi* *eh,* flowers house J. FP	'the flowers (at) Jimi's house,'
5		*die ade mubil Telagah.* *die* *ade* *mubil* *Telagah.* 3 exist car T.	'she had a Telagah car (to pick her up).'
6	→	*aku markirka mutur jiku,* *aku* *m-(p)arkir-ka* *mutur* *jiku,* 1SG AV-park-CAUS/APPL motorcycle QUOT.1SG	'I parked (my) motorcycle, I thought'
7	→	*kalu lantake mutur diwik ni.* *kalu* *lantak=(ny)e* *mutur* *diwik* probably [PV]crash=3 motorcycle self *ni.* DEM.DIST	'probably it (e.g., the Telagah car) will hit my motorcycle.'

In the first five lines of this example, the speaker, Hendi, is setting up the scene for the event he describes in the last two lines. In the sixth line, Hendi introduces the referent *mutur* 'motorcycle' for first time in the P_{AV} position. This referent was coded as new. In the final line of the example, Hendi

uses *mutur* 'motorcycle' again in the P_{PV} position. This referent was coded as given.

Figure 7.6 shows how given and new were distributed across the different symmetrical voice constructions. The vast majority of clauses involved cases where both A and P are given. In such constructions, there is a preference for the patientive voice. When P is new, the agentive voice is more likely. When A is new, the patientive voice is more likely. As would be excepted, there are very few examples where both A and P are new.

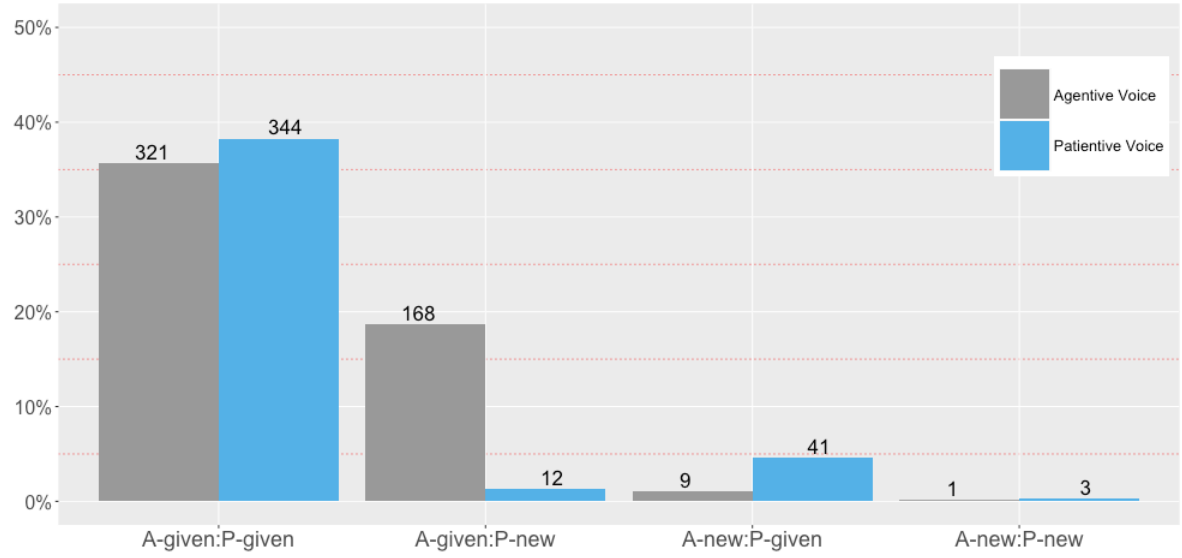


Figure 7.6: Activation of A and P in agentive and patientive voice constructions

Discourse referentiality The discourse referentiality of A and P arguments was coded as either *tracking* or *non-tracking*. A tracking argument is one that is employed by the speaker to allow the listener to follow the referent to which the speaker is referring. Typically, tracking arguments persist in the conversation. A non-tracking argument is one that employed for a number of other reasons, but crucially here are not intended to be tracked by the listeners. These non-tracking arguments typically do not persist in the conversation. Consider the extended example in (279). The topic of the conversation at this point is 'cocoa', so when the speaker uses the referent *mulan* 'seeds' in the

second line, it is understood that he is referring to 'cocoa seeds'. This P_{AV} argument in line two is coded as tracking; it persists in the conversation. Even when it is an unrealized argument in the final line, it is again coded as tracking. Conversely, the referent *sawi* 'mustard greens' in the sixth line does not persist in the conversation, but is part of a predicate complex that serves to orient the event in the final line. Therefore, this P_{AV} argument is coded as non-tracking.

(279) Discourse referentiality: *tracking* and *non-tracking* (BJM01-010, 00:25:52.107–00:26:08.320)

1	BURHIMIN:	*aku me- la,* 1SG HES PFV (0.7)	'I already,'
2	→	*ngambik mulan madake,* AV-take seed earlier=3.	'took (cocoa) seeds back then.'
3		*la ghulih mulan madak=(ny)e,* PFV get seed earlier=3	'(I) got seeds back then,'
4		*entah ghulih di mane anye aku* not.know get LOC where but 1SG (2.8) *tu.* DEM.DIST	'but I don't know where I got (them).'
5		*sepuluh labu.* ten CLS (2.9)	'ten pieces.'
6	→	*sambil n-(t)ambak sawi,* while AV-cover mustard.greens (1.2)	'while (I) was covering mustard greens,'
7		*di sawah.* LOC rice.paddy	'at the rice paddy.'
8	ARIPIN:	*hmm.* hmm (0.4)	'hmm'
9	BURHIMIN:→	*ku=jemugh.* 1SG=[PV]dry	'I dried (the cocoa seeds).'

Figure 7.7 shows how the discourse referentiality of A and P arguments are distributed across the different symmetrical voice constructions. In the majority of cases, both A and P were tracking, in which case the agentive voice and patientive voice were roughly equal. Remember that there is an overall preference for agentive voice (see Section 7.1 above). However, when A is tracking and P is non-tracking, agentive voice is strongly preferred. Furthermore, when A is non-tracking and P is tracking, patientive voice is strongly preferred. There are very few cases where both A and P are non-tracking.

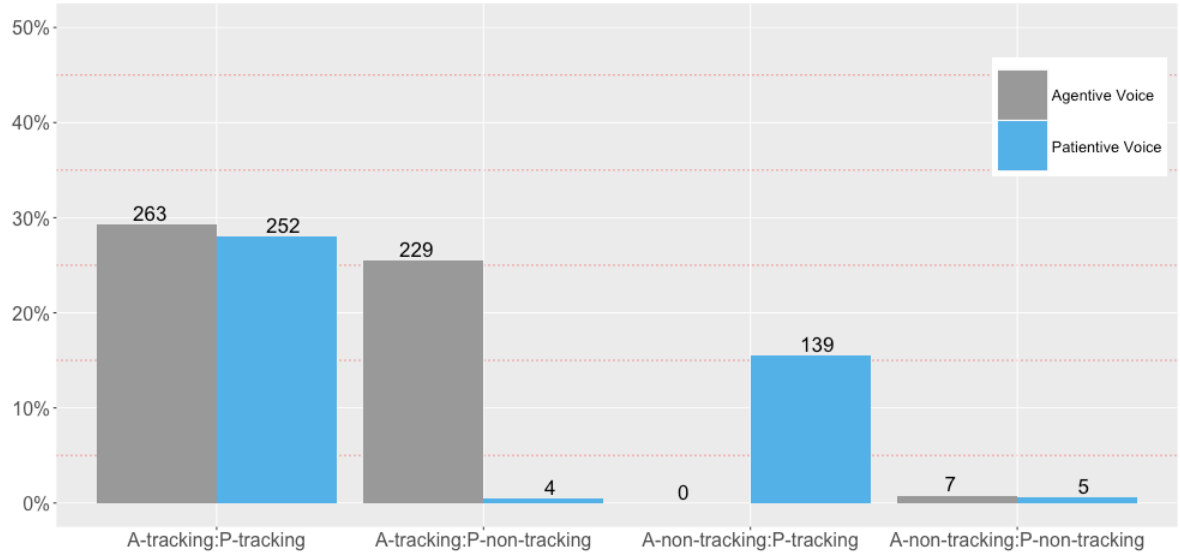


Figure 7.7: Discourse Referential Plot of A and P in agentive and patientive voice constructions

Generalizability The generalizability of A and P arguments was coded as *particularizing* or *generalizing*. A particularizing argument was one that referred to 'specific individuals or instances of a category or group' (Ewing 2005: 144), while a generalizing argument referred to 'a class of referents or indiscriminately to any member of that class' (Ewing 2005: 144). In the example in (280a), the P argument *putuh* 'photograph' refers to a specific set of photographs that the speaker took during a hiking trip. In the example in (280b), the P argument *sughang* 'someone' refers to any person who

would be willing to join them in their conversation that at the time was being recorded.

(280) Generalizability: *generalizing* and *particularizing*

a. *aku galak nginaki putuh=(ny)e tu eh?*
1SG want AV-see-LOC.APPL photo=3 DEM.DIST FP
A P

'I like to look at those photos, right?'

(BJM01-004, 00:38:33.070–00:38:34.510, Speaker: Hendi)

b. *ka n-cakagh sughang agi,*
FUT AV-search someone again
P

'(I) wanted to invite your mother.'

(BJM01-007, 00:20:40.340–00:20:42.650, Speaker: Emi)

Figure 7.8 presents how the generalizability of A and P arguments was distributed across the different symmetrical voice constructions. In the vast majority of symmetrical voice constructions, both A and P arguments were particularizing, in which case there was a preference for patientive voice. When A is particularizing and P is generalizing, the agentive voice is strongly preferred. When P is particularizing and A is generalizing, the patientive voice is strongly preferred. When both arguments are generalizing, the least frequent pattern in the sub-corpus, there is no clear preference.

7.1.3 Collostructional analysis

None of the previous studies on voice selection cited above have considered the possibility that particular verbal roots are more likely to occur in either agentive voice or patientive voice. In this study, I consider this possibility by utilizing collostructional analysis. Collostructional analysis refers to a family of corpus linguistic measures that assess the degree to which words (or lemmas) are attracted to or repulsed from certain constructions (e.g., Stefanowitsch & Gries 2003, 2005; Gries & Stefanowitsch 2004). The particular measure that I use here is the distinctive collexeme analysis (DCA), which measures the degree to which a word is attracted to one of two constructional options

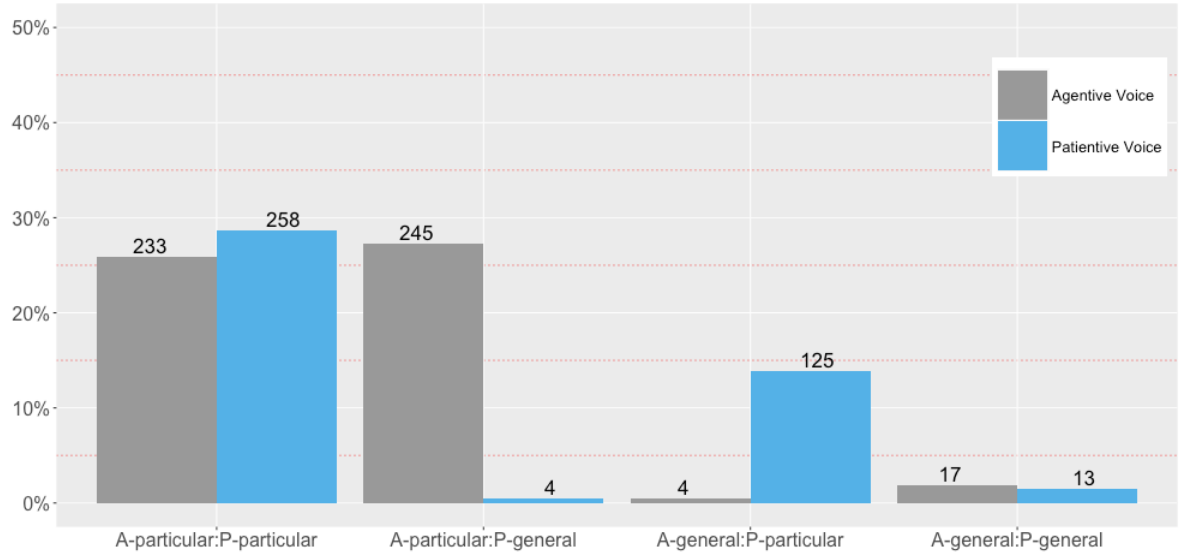


Figure 7.8: Generalizing of A and P in agentive and patientive voice constructions

(Gries & Stefanowitsch 2004). Using Gries' (2014) script on collostructional analysis developed for the *R* programming language (R Core Team 2015), I measured the degree to which a root is attracted to either the agentive voice or patientive voice. The DCA outputs (i) a score based on the Fisher exact test and (ii) the preferred construction (i.e., agentive voice or patientive voice). In order to include DCA as a single variable in the statistical model, I conflated the outputs by changing the score for roots that prefer patientive voice from a positive value to a negative value. I henceforth refer to this score from the DCA as *collostruction strength*. To illustrate how the collostruction strength was calculated, consider the roots *kinak* 'see' and *ajung* 'order'. On the one hand, *kinak* 'see' is strongly attracted to agentive voice; it occurred in agentive voice 24 times, but only occurred in patientive voice three times in the sub-corpus. On the other hand, *ajung* 'order' was strongly attracted to patientive voice constructions; it only occurred in agentive voice five times, but occurred in patientive voice 22 times in the sub-corpus. The collostruction strength for *kinak* 'see' is *3.7477*, while the collostruction strength—after being made negative—is *-4.1148*. The variable COLLOSTRUCTION STRENGTH is presented in Table 7.6 below. The results of the DCA are somewhat complex and are considered in

Sections 7.3.3 and 7.4.3.

Table 7.6: Collostruction strength based on Gries & Stefanowitsch (2004)

Variable	Levels
COLLOSTRUCTION STRENGTH	-*n* (patientive voice)
	+*n* (agentive voice)

7.1.4 Syntactic priming

Syntactic priming, the increased likelihood for a structure to be repeated after hearing the same structure as a prime, has been discussed at length in the context of English active and passive voice selection (Bock 1986). Studies of syntactic priming are typically conducted through carefully controlled experiments on well-studied languages, like English and Dutch; it has not been considered in the previous analyses of voice selection in the languages of western Indonesia. In a study of the English dative alternation, however, Gries (2005) presents a good model for how syntactic priming can be applied to a corpus. In this study, for each instance of a symmetrical voice construction, referred to here as the *target*, the voice of the previous occurrence of a symmetrical voice construction, referred to here as the *prime*, was coded as either agentive voice or patientive voice alongside the distance in intonation units between the target and the prime as well as whether the root and speaker in the target and the prime are also the same. These variables are presented in Table 7.7 below. Each of these variables has been shown to have an effect on syntactic priming (see Gries (2005: 238-239) for a succinct overview). We expect the effect of priming to be strengthened if the prime and target have a shorter distance, are produced by the same speaker, and have the same root. Like the collostruction strength, the results of priming are a bit complex and thus considered in Section 7.3.4.

Table 7.7: Independent variables of syntactic priming based on Gries (2005)

Variable	Levels
VOICE PRIME	*agentive voice, patientive voice*
PRIME DISTANCE	*# of intonation units between prime and target*
ROOT IDENTITY	*yes, no*
SPEAKER IDENTITY	*yes, no*

7.2 Statistical analysis

This section describes the process by which voice selection is assessed statistically. Recall that the purpose of this chapter is answer the question I posed at the beginning of the chapter: *at any given point in a conversation, what factors lead a speaker to choose one voice over the other?* In order to answer this question, I use a binominal logistic regression with the dependent variable being VOICE. This dependent variable has two levels *agentive voice* and *patientive voice*. The predictors (i.e., independent variables) include the 18 variables outlined in Section 7.1 and repeated altogether in Table 7.8.

Table 7.8: Independent variables of formal features of the predicate and arguments

Variable	Levels
LENGTH (A/P)	*# of characters*
ANIMACY (A/P)	*animate, inanimate*
VALENCY-INCREASING SUFFIX	*yes, no*
SUBORDINATION	*subordinate clause, main clause*
CLAUSAL MOOD	*declarative, interrogative, imperative*
ACTIVATION STATE (A/P)	*given, new*
GENERALITY (A/P)	*particularizing, generalizing*
DISCOURSE REFERENTIALITY (A/P)	*tracking, non-tracking*
COLLOSTRUCTION STRENGTH	*-n* (patientive voice), *+n* (agentive voice)
VOICE PRIME	*agentive voice, patientive voice*
PRIME DISTANCE	*# of intonation units between prime and target*
ROOT IDENTITY	*yes, no*
SPEAKER IDENTITY	*yes, no*

These independent variables are then fitted to a single statistical model to determine which pre-

dictors are statistically significant for voice selection (i.e., selecting either *agentive voice* or *patientive voice* in the dependent variable). Due to the already large number of predictors in Table 7.8, only a few targeted two-way interactions between predictors were considered. First, the interactions with the information flow predictors that were considered are between ACTIVATION on the one hand, and DISCOURSE REFERENTIALITY and GENERALITY on the the hand. Furthermore, these interactions were only considered between like macro-roles. Thus, I considered the following two-way interactions: (i) A ACTIVATION*A DISCOURSE REFERENTIALITY, (ii) P ACTIVATION*P DISCOURSE REFERENTIALITY, (iii) A ACTIVATION*A GENERALITY, and (iv) P ACTIVATION*P GENERALITY. The reason for including these interactions is that there was an apparent relationship between arguments with a *new* status, such that they behaved differently irrespective of their DISCOURSE REFERENTIALITY or GENERALITY status. I did *not* consider the interaction between different macro-roles (e.g., A ACTIVATION and P ACTIVATION) because there are unattested combinations, resulting in cells with the value of 0, which creates data sparsity errors in the model. The only other interactions that were considered are between the syntactic priming predictors. That is, I included two-way interactions between VOICE PRIME on the one hand and PRIME DISTANCE, ROOT IDENTITY, and SPEAKER IDENTITY on the other. Thus, I included the following two-way interactions: (i) VOICE PRIME* PRIME DISTANCE, (ii) VOICE PRIME*ROOT IDENTITY, (iii) VOICE PRIME*SPEAKER IDENTITY. In following current trends in statistical methodology in linguistics and elsewhere, this analysis of voice selection employs mixed-effects statistical modeling (cf. Baayen 2008: Ch. 7, Gries 2015 for an overview of these methods).

The model fitting (or selection) process generally follows the logic that is laid out in Zuur et al. (2009: Ch. 5). First, the random-effects structure of the model was determined, subsequently followed by the fixed-effects structure, all using *R* (Version 3.2.3; R Core Team 2015) with the package *lme4* (Version 1.1-10; Bates et al. 2015). Thus, I tried to fit the maximal model with all fixed-effects predictors as well as random intercepts and slopes for all of the same predictors and the control variable SPEAKER. Even though the number of interactions was limited (see paragraph above), the maximal model ran into convergence errors, in large part due to data sparsity in some cells. There-

fore, the simplest random effects structure with random intercepts for SPEAKER was fitted. Then, the fixed-effects in the maximal model were trimmed to the minimal adequate model, which could not undergo any further simplification, using likelihood-ratio tests. Finally, the quality of this model is assessed by means of the *C*-value, its classificatory accuracy, and R^2. The next section presents the results.

7.3 Results

The results of the overall minimal adequate model that came out of the model selection process indicate a good fit. The model reflects a highly significant correlation between the predictors and voice selection of agentive voice or patientive voice: likelihood-ratio chi-squared = 845.78, df = 17, p < 0.0001, R^2m = 0.8904 R^2c = 0.8977. The classification accuracy of the final model is quite high at 90%, and the more accurate *C*-value for the model is 0.97, which is well over the threshold of 0.8 that Harrell (2001: 248) set for good models. The significant predictors and interactions are presented in Table 7.9. As each of these significant predictors is difficult to interpret based on the numerical values in this table alone, they are interpreted visually in turn using the *effects* package (Version 3.0-5, Fox et al. 2015) in *R*: the formal and semantic properties of clauses, verbs, and arguments in Section 7.3.1, the information flow properties of A and P in Section 7.3.2, collostruction strength in Section 7.3.3, and syntactic priming in Section 7.3.4.

Table 7.9: Minimal adequate model for voice selection in Besemah

Predictor	Estimate/ coefficient	Std. Error	z	p
Intercept	0.0619	0.3767	0.164	0.8694
Subordination (main→subordinate)	-1.9809	0.5635	-3.515	0.0004 ***
Valency Increase (absent→present)	1.1465	0.2835	4.043	« 0.0001 ***
Clausal Mood (declarative→imperative)	1.8607	0.5065	3.674	0.0002 ***
Clausal Mood (declarative→interrogative)	-1.2950	0.5546	-2.335	0.0195 *
P Length (log)	-0.6968	0.1479	-4.711	« 0.0001 ***
A Activation (given→new)	1.5829	0.6986	2.266	0.0234 *
A Disc. Refer. (tracking→non-tracking)	5.6884	0.8605	6.610	« 0.0001 ***
P Discourse Referentiality (tracking→non-tracking)	-3.1122	0.6577	-4.732	« 0.0001 ***
P Generalizability : P Activation (given→new) (particularizing → generalizing)	2.1094	1.2582	1.676	0.09365 .
Collostruction Strength	-0.6073	0.0943	-6.441	« 0.0001 ***
Prime Voice (av→pv) : Distance	-0.6393	0.3360	-1.903	0.05705 .
Prime Voice (av→pv) : Root (different→same)	1.5428	0.8247	1.871	0.06138 .

7.3.1 Formal and semantic properties of clauses, verbs, and arguments

The first results show that the main effect of SUBORDINATION and CLAUSAL MOOD are significant. Consider the effects plots in Figures 7.9 and 7.10. In each plot, the levels of the main effect is on the *x-axis*. For Figure 7.9, this is *main* and *subordinate*. For Figure 7.10, this is *declarative*, *imperative*, and *interrogative*. The *y-axis* represents the predicted probability of patientive voice, ranging from 0.0 at the bottom to 1.0 at the top. Thus, a predicted probability closer to 1.0 signals that patientive voice is predicted, while a predicted probability closer 0.0 signals that agentive voice is predicted. The large point for each level of the predictor (connected by a line) represents the predicted probability and the red bars surrounding each point represent the confidence intervals.

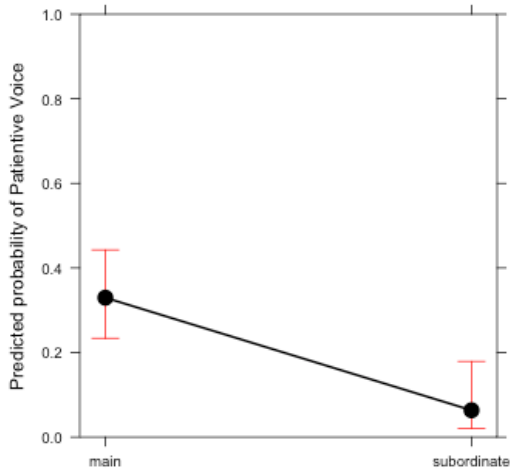


Figure 7.9: Effects plot of Main vs. Subordinate Clauses

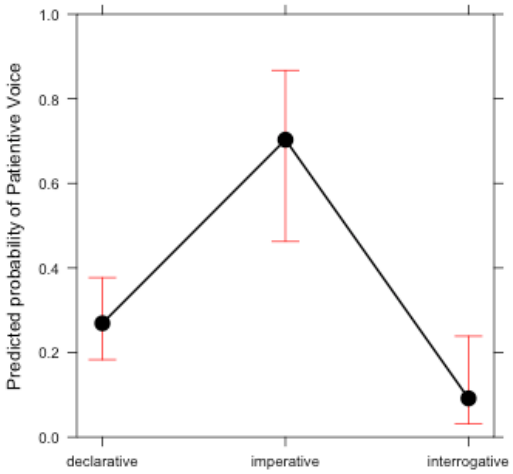


Figure 7.10: Effects plot of Clausal (Mood) Types

Figure 7.9 shows that there is a significantly higher predicted probability of patientive voice when the symmetrical voice construction occurs in a main clause compared to when a symmetrical voice construction occurs in a subordinate clause. In fact, when a symmetrical voice construction occurs in a subordinate clause, the predicted probability of patientive voice is less than 0.05. Said another way, when a symmetrical voice construction occurs in a subordinate clause, it is strongly predicated to be in the agentive voice.

Figure 7.10 shows that when a symmetrical voice construction is in an *imperative* clause, it has the highest predicated probably to occur in the patientive voice, followed by a a symmetrical voice construction in the *declarative* clause, which is, in turn, followed by a symmetrical voice construction in an *interrogative* clause. Thus, symmetrical voice constructions are likely to occur in the agentive voice, if they are in an *interrogative* clauses, but in the patientive voice if they are in an *imperative* clauses. Symmetrical voice constructions in *declarative* clauses fall somewhere in between with higher predicated probability to occur in the agentive voice.

There is a significant effect of the presence of one of the valency-increasing suffixes *-i* LOC.APPL or *-ka* CAUS/APPL. Figure 7.11 shows that the predicted probability of patientive voice significantly increases when a valency-increasing suffix is *present* in the symmetrical voice construction compared to when it is *absent*.

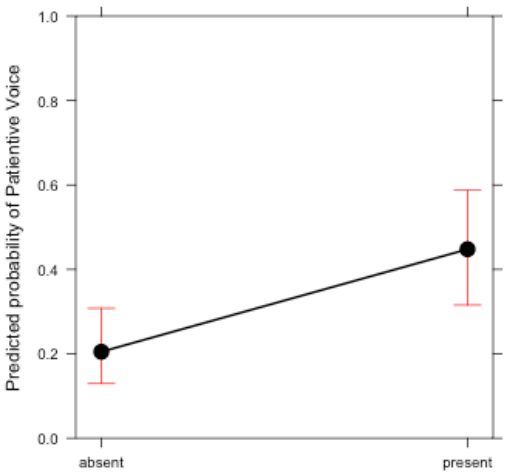


Figure 7.11: Effects plot of Valency-increasing Suffixes

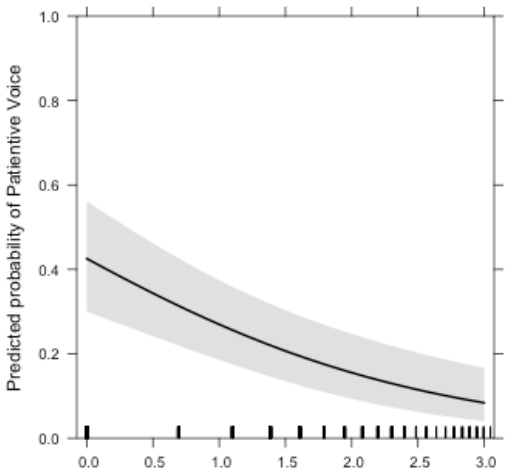


Figure 7.12: Effects plot of P Length (log)

There is also a significant effect of the length of the P argument in Figure 7.12. As P LENGTH is a numerical variable, this effects plot looks somewhat different. The length of P (logged) is on the *x-axis*, ranging from 0.0 to 3.0. The thick black line represents the predicted probability of patientive voice and the gray surrounding it is the confidence intervals. Figure 7.12 shows that as the length of P increases (logarithmically), the predicted probability of patientive voice decreases. Again, this could also be understood in a different way. As the length the of P increases, the predicted probability of agentive voice increases.

7.3.2 Information flow properties of A and P

The significant effects of information flow include A ACTIVATION, A DISCOURSE REFERENTIALITY, P DISCOURSE REFERENTIALITY, and the interaction P ACTIVATION : P GENERALITY. These results are

discussed in terms of A and P separately.

Information flow properties of A The only significant effects of information flow in A arguments are A ACTIVATION and A DISCOURSE REFERENTIALITY. The interaction between A ACTIVATION and the other information flow properties is not significant. The effect of activation is demonstrated in Figure 7.13. When A is *new* in symmetrical voice constructions, the predicted probability of patientive voice significantly increases, compared to when A is *given* in symmetrical voice constructions. However, it is noteworthy that the confidence interval for *new* is large, which is probably due to the fact that there are few instances of A arguments that are *new*.

The significant effect of discourse referentiality for A arguments is shown in Figure 7.14. The results for discourse referentiality are quite clear. When the A argument in a symmetrical voice construction is *non-tracking*, the predicted probability of patientive voice is very high. When A is *tracking*, the predicted probability of patientive voice is very low. Thus, it is clear that when A is *non-tracking*, the patientive voice is likely used, but when A is *tracking*, the agentive voice is likely used.

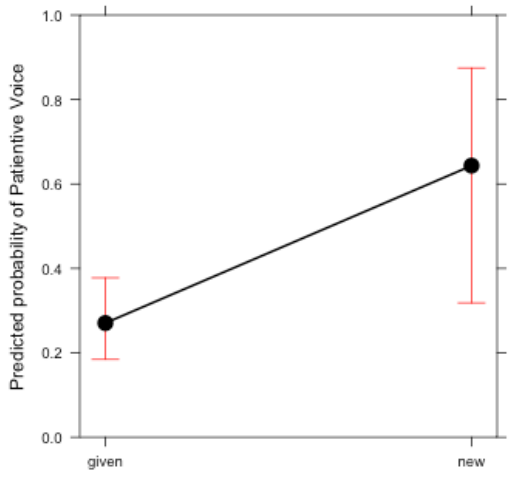


Figure 7.13: Effects plot of the Activation of A

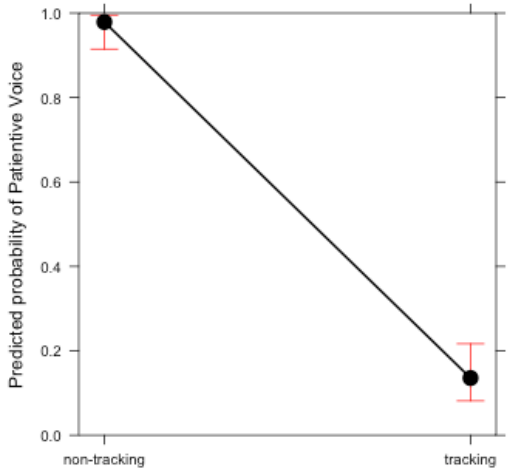


Figure 7.14: Effects plot of the Discourse Referentiality of A

Information flow properties of P The significant effects of information flow in P arguments include all three information flow properties under investigation: P ACTIVATION, P DISCOURSE REFERENTIALITY, and P GENERALITY. Furthermore, there is a significant interaction P ACTIVATION: P GENERALITY. Note that this interaction reaches significance for a one-tailed test. Since the hypothesis was that only P arguments that are *given* show an effect of GENERALIZABILITY, this interaction is kept in the model.

Figure 7.15 shows the significant effect of discourse referentiality of P. When P is *tracking* in symmetrical voice constructions, the predicted probability of patientive voice significantly increases. When P is *non-tracking* in symmetrical voice constructions, the predicated probability of patientive voice is very low, approaching 0. It is noteworthy that while there is an increase in the predicted probability of patientive voice when P is *tracking*, this probability actually falls between agentive voice and patientive voice, in the 0.5 range. This is further discussed in Section 7.4.2.

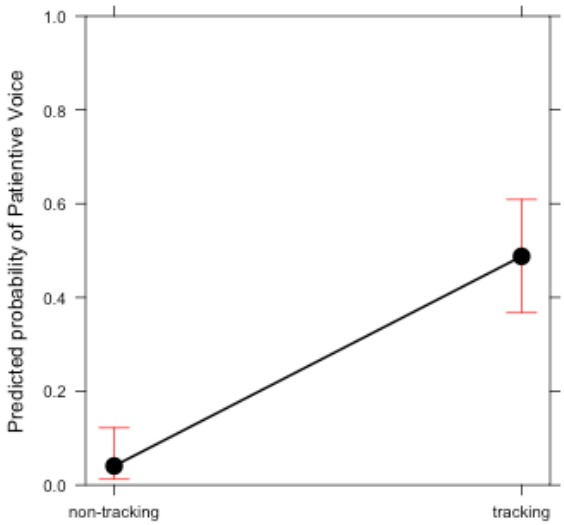


Figure 7.15: Effects plot of the Discourse Referentiality of P

Figure 7.16 shows the significant effect of the two-way interaction between activation and generalizability of P arguments. The left panel of Figure 7.16 represents cases where the variable P AC-

TIVATION is *given*, while the right panel represents cases where the variable P ACTIVATION is *new*. In the left panel, when the P GENERALIZABILITY is *generalizing*, the predicted probability of patientive voice is very low. However, when P GENERALIZABILITY is *particularizing*, the predicted probability of patientive voice significantly increases. In the right panel, there is little difference in P GENERALIZABILITY. Thus, when the P argument is *new*, the discourse referentiality of P makes little difference, the predicted probability of patientive voice remains low. However, when the P argument is *given*, P arguments that are *generalizing* are likely to occur in the agentive voice, while P arguments that are *particularizing* are more likely to occur in the patientive voice.

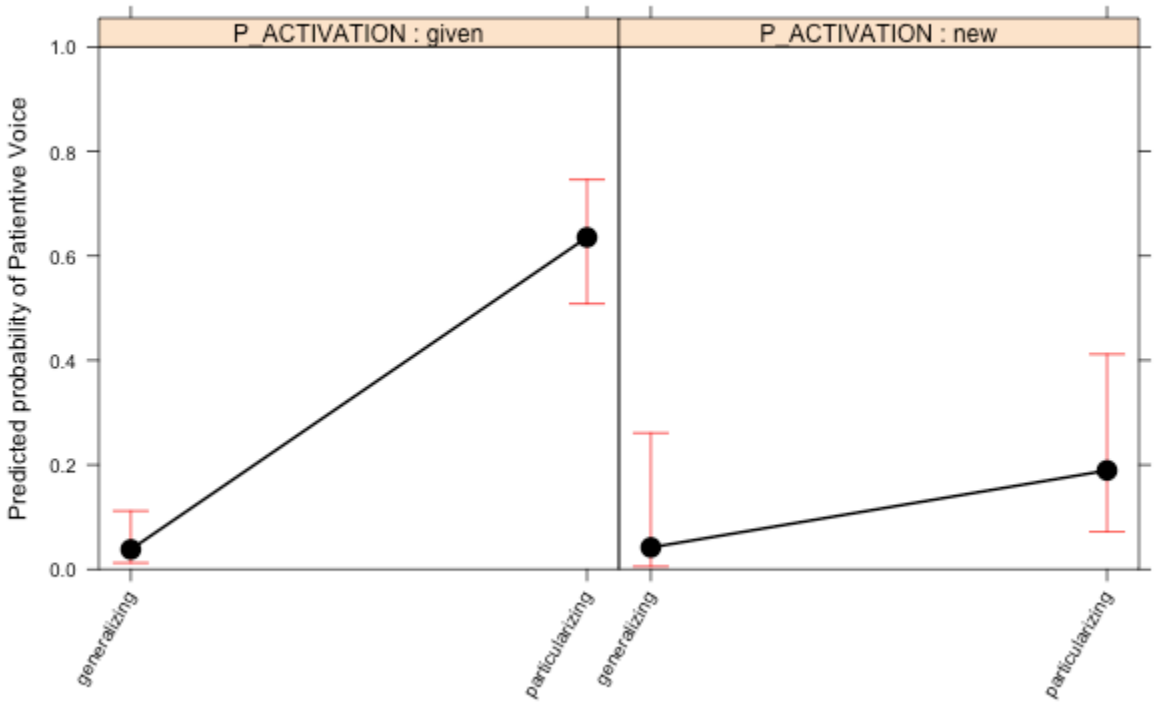


Figure 7.16: Effects plot of Activation interacting with Generalizability of P

7.3.3 Collostruction strength

The significant effect of collostruction strength is shown in Figure 7.17. Recall that the degree to which roots are attracted to agentive voice constructions is represented by more extreme positive values, while the degree to which roots are attracted to patientive voice is represented by more extreme negative values. Figure 7.17 shows that as the collostruction strength moves from a more extreme negative value to a a more extreme positive value, the predicated probability of patientive voice decreases. Examples of the collostruction strength of particular roots are discussed in Section 7.4.3.

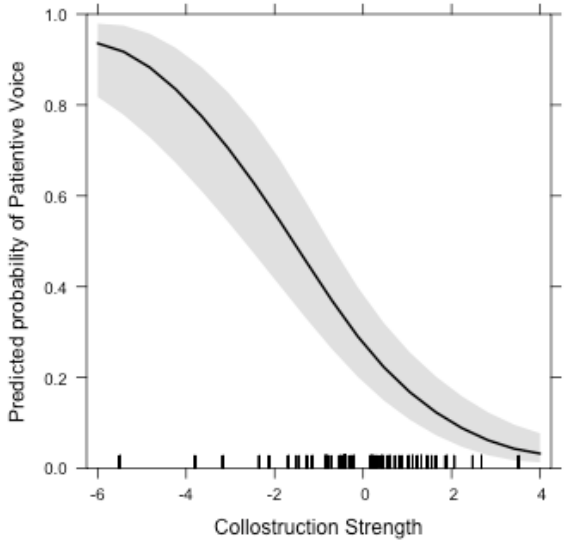


Figure 7.17: Effects plot of Collostruction Strength

7.3.4 Syntactic Priming

Finally, the significant effects of syntactic priming include two two-way interactions with the variable VOICE PRIME: (i) VOICE PRIME : PRIME DISTANCE and (ii) VOICE PRIME : ROOT IDENTITY. Both of these interactions reach significance for a one-tailed test. The hypotheses concerning priming

were: (i) the prime becomes weaker the further away it occurred from the target, and (ii) the prime is stronger if the prime and the target have the same root (see Section 7.1.4). Since these hypotheses are borne out in the interactions, they are kept in the model. The results show exactly what was expected from these hypotheses: (i) the shorter the distance between prime and target, the stronger the prime, and (ii) root identity boosts priming. The remainder of the discussion in this subsection explain these results in more detail.

The first interaction VOICE PRIME : PRIME DISTANCE is shown in Figure 7.18. Each panel represents the variable VOICE PRIME; the VOICE PRIME that is agentive voice (*av*) is on the left panel, the VOICE PRIME that is patientive voice (*pv*) is on the right panel. The (logged) distance from the target to the prime is on the *x-axis*. The left panel shows that when the prime is in the agentive voice, the predicted probability that the target is patientive voice increases as the distance between the prime and the target increases. The right panel shows that when the prime is in the patientive voice, the predicted probability that the target is in the patientive voice decreases as the distance between the prime and the target increases.

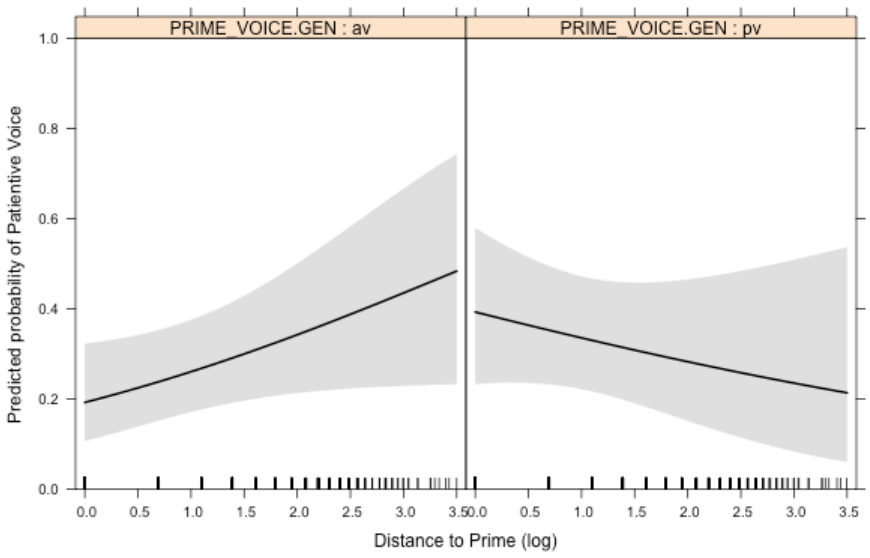


Figure 7.18: Effects plot of the Voice Prime interacting with Distance between Prime and Target

The second interaction VOICE PRIME : ROOT IDENTITY is shown in Figure 7.19. In this figure, each panel represents the variable ROOT IDENTITY. The panel on the left represents cases where the root in the prime symmetrical voice construction is different than the root in the target symmetrical voice construction. The panel on the right represents cases where the root in the prime symmetrical voice construction is the same as the root in the target symmetrical voice construction. The *x-axis* represents the variable VOICE PRIME: agentive voice (*av*) and patientive voice (*pv*). In the left panel, when the root in the prime and the target are different, the predicted probability of patientive voice is the same for agentive voice and patientive voice. However, in the right panel, when the root in the prime and target are the same, the predicted probability of patientive voice significantly increases when the prime is also patientive voice.

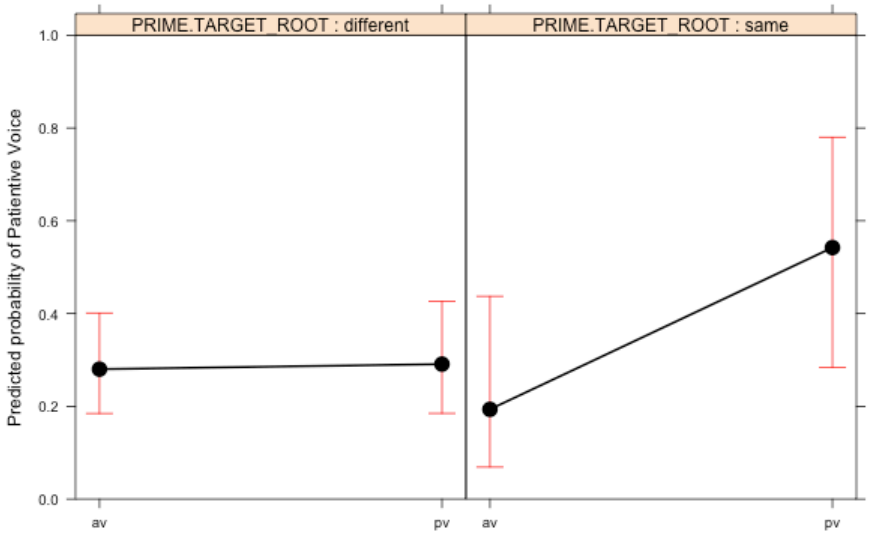


Figure 7.19: Effects plot of the Voice Prime interacting with Root Identity

7.4 Discussion

This section discusses the significant predictors presented in the previous section. Many of the factors that have been touched upon in previous research on voice selection in narrative discourse from other western Indonesian languages (Section 7.4.1) were shown to be significant, including the presence of valency-increasing suffixes on the symmetrical voice verb, the subordination status of the clause in which the symmetrical voice constructions appears, and the mood of the clause in which the symmetrical voice construction appears. The results section above confirms that these are also factors for voice selection in Besemah conversation. This section briefly discusses these factors in Section 7.4.1 below. Other factors, such as syntactic priming, have also been shown to be significant for voice selection in languages like English and Dutch (see Section 7.1.4). The results here confirm that syntactic priming is also a factor in Besemah voice selection. Syntactic priming is not discussed further here. Rather, the majority of this section focuses on the information flow properties that were found significant in Section 7.4.2 and elaborates on the effect of collostruction strength in Section 7.4.3.

7.4.1 Discourse transitivity and clausal mood

The results above confirm that, even in conversational data, agentive voice constructions are more likely to occur in subordinate clauses, based on Figure 7.9 above, and patientive voice constructions are more likely to occur in imperative clauses, based Figure 7.10 above. There is also an increased likelihood that a symmetrical voice construction occurs in the patientive voice, when one of two valency-increasing suffixes, *-ka* CAUS/APPL or *-i* LOC.APPL, is present, based on Figure 7.11 above. In many languages of western Indonesia, imperative clauses are in the patientive voice, so this finding falls in line with previous descriptions of these languages (see Section 7.1.1). It is, however, unclear why agentive voice is significantly more likely in interrogative clauses (see Figure 7.10).

The other two factors mentioned in the previous paragraph fall in line with the discourse tran-

sitivity and eventiveness analysis of voice selection in Classical Malay found in Hopper (1983) and Cumming (1991), discussed in the introduction to this chapter. That is, agentive voice is less discourse transitive and typically backgrounded, while patientive voice is typically foregrounded and more discourse transitive. Thus, under these analyses, agentive voice constructions are expected to be more likely to occur in subordinate clauses, and patientive voice constructions are expected to be more likely to occur with valency-increasing morphology. The results for Besemah conversation are similar to these analyses of narrative discourse in Classical Malay. However, what is unclear is the degree to which these factors play a role in voice selection. One might expect that subordination and the presence of valency-increasing suffixes have a larger effect in narrative discourse (cf. Thompson & Hopper 2001).

7.4.2 Information flow properties of A and P

The results in Section 7.3.2 demonstrate that the information flow properties of both A and P play a significant role in voice selection in Besemah conversation. For A and P arguments, both activation and discourse referentiality were significant predictors. The generalizability of A is not found to be a significant predictor. However, the generalizability of P entered into a significant interaction with the activation of P. Finally, the length of P arguments is also a significant predictor. While the length of P is not an information flow property, this variable is pertinent to the discussion here.

The information flow property of discourse referentiality demonstrates an important property for voice selection. It is clear that when the discourse referentiality of A is *non-tracking*, the patientive voice is highly likely, based on Figure 7.14 above. Likewise, when the discourse referentiality of P is *non-tracking*, the agentive voice is highly likely, based on Figure 7.15. Thus, *non-tracking* A or P arguments typically occur in secondary argument positions. In regards to voice selection, then, the *non-tracking* status of A or P is a significant factor for selecting agentive voice (if P is *non-tracking*) or patientive voice (if A is a *non-tracking*).

This generalization, however, is *not* bi-directional. There is a large number of secondary arguments that are *tracking* A or P arguments. For A arguments that are *tracking*, the agentive voice is very likely selected, based on Figure 7.14 above. However, for P arguments that are *tracking*, the picture is bit less clear. Figure 7.15 above shows that the predicted probability of either patientive voice or agentive voice is roughly equal, meaning that when P is *tracking*, it is equally likely to be the primary argument of a patientive voice construction or a secondary argument of an agentive voice construction. The reason for the asymmetry between A and P arguments that are *tracking* most likely comes about for a combination of two reasons. First, there is a larger number of A arguments that are *tracking* (i.e., 748 instances, which is 83% of A arguments) compared to P arguments that are *tracking* (i.e., 654 instances, 73% of P arguments). Second, there is a larger percentage of A arguments that are *tracking* in agentive voice constructions (i.e., 492 instances, 55% of all A arguments) than P arguments that are *tracking* in patientive voice constructions (i.e., 391 instances, 43% of all P arguments). Thus, there is a pattern whereby a P argument that is *tracking* is more evenly split between agentive voice and patientive voice. An A argument that is *tracking* is more skewed towards the agentive voice.

The activation of A and P arguments shows a similar pattern, but does not produce as extreme results as discourse referentiality. When A or P is *new*, they are most likely to occur in the secondary argument position. If A is *new*, the patientive voice is more likely to be selected based on Figure 7.13 above. If P is *new*, the agentive voice is more likely to be selected. When A is *given*, agentive voice is more likely to be selected. However, when P is *given*, only P arguments that are *particularizing*—under the variable GENERALIZABILITY—are likely to select patientive voice. Finally, Figure 7.12 showed that as the length of P increases the predicted probability of agentive voice also increases. The length of P might be indicative of the activation status of P arguments, such that when a P argument is *new*, it is longer and when it is *given*, it is shorter (cf. Givón 1983). In fact, when P is *given*, its mean length is only 2.6 characters long (with a median of 0 and a standard deviation of 4.3). When P is *new*, its mean is 7.1 characters long (with a median of 6 and a standard deviation of 6.4).

The findings for information flow are summarized in Table 7.10. If the information flow property is likely to select agentive voice it is placed under this column on the left side of the table. If the information flow property is likely to select patientive voice, then it is placed under the right side of the table. The few variables that do not clearly select either agentive voice or patientive voice are placed in the center.

Table 7.10: Summary of information flow factors for voice selection

AGENTIVE VOICE		PATIENTIVE VOICE
P is *new*		A is *new*
A is *given*		P is *given*
A is *non-tracking*		P is *non-tracking*
A is *tracking*	P is *tracking*	
P is *generalizing*		
(if *new*)	← P is *particularizing* →	(if *given*)

7.4.3 Collostruction strength

Interpreting the results of collostruction strength proves to be challenging. There were 329 different roots in the 899 symmetrical voice constructions considered in this analysis. In an effort to make this discussion more manageable, I consider the five roots that show strong attraction to patientive voice in Table 7.11 and five roots that show strong attraction to agentive voice in Table 7.12. Based on Gries (2014), each of the roots in these tables has a collostruction strength that reaches statistical significance.

Table 7.11: Five roots that are strongly attracted to patientive voice

		OBSERVED FREQUENCY (av)	OBSERVED FREQUENCY (pv)	COLLOSTRUCTION STRENGTH	*p*
capak	'discard'	1	23	7.082614	< 0.001
ajung	'order'	5	22	4.114865	< 0.001
jemugh	'dry'	0	5	1.761528	< 0.05
pantau	'call'	3	9	1.491093	< 0.05
tinggal	'stay'	0	4	1.408011	< 0.05

In Table 7.11, there appears to be a general tendency for the roots that are attracted to patientive voice to either (i) take an animate P argument, as in *ajung* 'order' and *pantau* 'call', or (ii) always occur with a valency-increasing suffix, as in *capak* 'discard' and *tinggal* 'stay'. However, this leaves the root *jemugh* 'dry' unexplained (see below).

Table 7.12: Five roots that are strongly attracted to agentive voice

		OBSERVED FREQUENCY (av)	OBSERVED FREQUENCY (pv)	COLLOSTRUCTION STRENGTH	*p*
putigh	'pick'	27	1	5.928641	< 0.001
kinak	'see'	24	3	3.747716	< 0.001
udut	'smoke'	11	0	2.839125	< 0.01
beli	'buy'	19	3	2.694103	< 0.01
ambik	'take'	26	9	1.805678	< 0.05

In Table 7.12, there appears to be a general tendency for the roots that are attracted to agentive voice to take inanimate P arguments, as is the case for each of these five roots. Furthermore, the root *udut* 'smoke' represents a number of roots that are strongly attracted to agentive voice constructions that typically have an unrealized secondary P_{AV} argument. While it is possible for these roots to occur in patientive voice, they rarely do. The P_{AV} argument is typically predictable based on the root, and is thus unrealized.

These general tendencies cannot wholly explain the distribution of these roots in symmetrical voice constructions. First, it does not seem fully justified to base the distribution of these roots on the animacy of P, since this was found not to be a statistically significant factor in the model in Section 7.3. Second, there are roots that do not clearly fit these characteristics. For whatever reason, *jemugh* 'dry' is attracted to the patientive voice; it neither occurs with a valency-increasing suffix nor does it take an animate P argument. Furthermore, it is not attested in the sub-corpus in imperative clauses.

For a more nuanced look at these tendencies, consider the case of *ambik* 'take'. In the sub-corpus, *ambik* 'take' primarily occurs in agentive voice (26 times), but also occurs in the patientive voice a considerable amount (9 times). Additionally, *ambik* 'take' always takes an inanimate P argument. It does on six occasions occur with a valency-increasing suffix; however, only one of these occurrences

is in the patientive voice, while the remaining five occurrences are in the agentive voice. There are three instances where *ambik* 'take' occurs in an imperative, all of which are in the patientive voice. The roots *ambik* 'take' and *jemugh* 'dry' illustrate that while certain factors, such as animacy of P or clausal mood, may contribute to a root's distribution in agentive voice or patientive voice, there are probably other possibly semantic factors of these roots that have yet to discovered, which play a role in their attraction to agentive voice or patientive voice.

7.5 Conclusion

While previous studies of voice selection in western Indonesian languages have focused on narrative data with descriptive statistics, this chapter presents findings from a statistical analysis of voice selection in Besemah conversation. The results of this study find that factors discussed in previous research related to discourse transitivity and clausal mood (Section 7.4.1) were also found in Besemah conversation. Information flow properties of A and P, including activation, discourse referentiality, and generalizability, were indeed significant factors in voice selection (Section 7.4.2). This finding, in some ways, presents a different perspective to the view that voice selection is primarily related to the properties of the event and not properties of the participants (Hopper 1983, Cumming 1991). Finally, collostruction strength is also a significant factor, which demonstrates that the verb root itself plays a role in voice selection (Section 7.4.3).

Chapter 8

Conclusion

This chapter briefly summarizes the analyses from Part II on the syntax of symmetrical voice constructions in Besemah in Section 8.1 and the findings from Part III on voice selection in Besemah conversation in Section 8.2.

8.1 Summary of the syntax of symmetrical voice in Besemah

In Part II of the dissertation, I investigate the syntactic nature of symmetrical voice and grammatical relations in Besemah. A total of seven 'diagnostic' constructions that have been used in a number of previous studies on the languages of western Indonesia were considered (e.g., Chung (1976a,b), Arka (2003), and Arka & Manning (2008), Riesberg (2014)). Of these seven constructions, there were two constructions—word order (Section 5.2) and quantifiability (Section 5.3)—-that provided evidence that S, A_{AV}, and P_{PV} have a primary argument grammatical relation and P_{AV} and A_{PV} have a secondary argument grammatical relation in Besemah. This pattern of alignment is demonstrated in Figure 8.1 below. While other western Austronesian languages have drawn on both of these 'diagnostic' constructions, quantifiability in Besemah proved to be particularly striking for two reasons. First, while a 'floated quantifier'—as opposed to the quantifier occurring within the noun phrase—

is somewhat exceptional in languages like Tagalog and Standard Indonesian, it is much more frequent in Besemah, occurring in 95% of cases of the universal quantifier (see Section 5.3). Second, the restriction on universal quantifiers in Besemah is much stronger than in Tagalog, which restricts quantifier float to 'subject' arguments: in Besemah, secondary arguments may *not* be quantified with the universal quantifier, whether this quantifier is 'floated' or within the noun phrase. I am not aware of any other language that has either of these two properties—where a 'floated quantifier' is more frequent and only primary arguments may be quantified—in constructions with the universal quantifier is 'floated' (see Whaley (2001) for a typology of quantifier float).

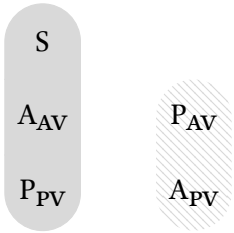


Figure 8.1: Alignment for word order and quantifiability

In other 'diagnostic' constructions, such as coreferential arguments (Section 5.4) and noun-modifying clause constructions (Section 6.1), there is a different alignment pattern, such that all arguments except A_{PV} pattern together. This pattern of alignment is demonstrated in Figure 8.2 below. Taken together with the nature of coreferential arguments (i.e., the fact that coreferential A_{PV} arguments are marked by prepositions), this alignment pattern raises some suspicions about the nature of A_{PV} arguments. One possibility is that this alignment pattern evinces a core-oblique distinction, such that coreferential A_{PV} arguments are really oblique arguments in passive constructions, as has been claimed for Acehnese by Legate (2012, 2014). However, in Section 5.4.1, I show an asymmetry between A_{PV} arguments marked by a preposition that are *not* co-referential (i.e., a more canonical passive construction) and A_{PV} arguments that are coreferential with an enclitic A_{PV} argument. It is clear that coreferential arguments are topical and persist throughout a stretch of discourse, while A_{PV} arguments that are only expressed in a prepositional agentive phrase are not topical and are

ephemeral in the discourse. Thus, despite the formal properties of coreferential A_{PV} arguments in a prepositional phrase, the coreferential argument behaves very differently than an A_{PV} argument in a passive construction.

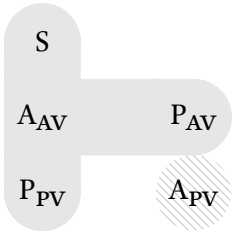


Figure 8.2: Alignment for co-referential arguments and noun-modifying clause constructions

Many of the other 'diagnostic' constructions do not provide evidence for any grammatical relation. For example, reflexive binding constructions (Section 5.5), which have been used as evidence for a secondary argument (or 'non-subject') grammatical relation, are restricted to the agentive voice in Besemah. In other cases, evidence for grammatical relations is more inconclusive. On the one hand, the 'funny control' constructions in Section 6.2.1 are not clearly control constructions at all. On the other hand, the control construction with *ajung* 'order' in Section 6.2.2 is more promising as evidence, but further investigation is needed to determine whether the restriction on the controllee is to semantic agents or primary arguments.

Finally, the syntactic study of symmetrical voice in Part II has shown that several 'diagnostic' constructions in Besemah differ in surprising ways from analogous constructions in other languages of western Indonesia. While the unique nature of quantifiability and the limited use of reflexive binding were already mentioned above, noun-modifying clause constructions show unexpected syntactic and semantic characteristics. As many western Indonesian languages are analyzed as having relative clauses, Section 6.1 showed that Besemah has a construction that is more on a par with noun modifying clause constructions in Japanese, which has a simple structure of noun followed by a modifying clause. Like Japanese noun modifying clause constructions, the relation between the head noun and the modifying clause in Besemah noun modifying clause constructions appears to

be one that is primarily constrained pragmatically compared to the strict syntactic restrictions on relative clauses in western Indonesian languages.

The syntax of symmetrical voice in Besemah in Part II illustrates the importance of combining data from a corpus of naturally-occurring connected speech with strong formal evidence from different 'diagnostic' constructions for defining grammatical relations. By relying on the corpus in this way, it possible to discover evidence for a grammatical relation that is not found in closely related languages (i.e., quantifiability) or evidence against using certain criteria for grammatical relations that are widespread across analyses of numerous related languages (i.e., relative clause versus noun modifying clause construction).

8.2 Summary of voice selection in Besemah conversation

In Part III of the dissertation, I investigate the nature of symmetrical voice constructions in conversation. The question that I that sought to answer was one of voice selection: *at any given point in a conversation, what factors lead a speaker to choose one symmetrical voice construction over the other?* In order to begin to answer this question, however, I departed from previous studies of symmetrical voice in the languages of western Indonesia by:

(i) examining voice selection in informal, face-to-face interaction in Besemah,

(ii) considering factors such as information flow, collostruction strength, and syntactic priming, none of which had been examined in regards to voice selection before, and

(iii) investigating voice selection using advanced statistics that are able to account for multiple factors together within a single statistical model with multivariate statistics and for inter-speaker variation with mixed-effects models.

The results of the statistical analysis were that several factors that had been discussed in previous research on voice selection—relating to discourse transitivity and clausal mood—were also

significant factors for voice selection in Besemah conversation (Section 7.4.1). When the verb in the symmetrical voice construction is suffixed with a valency-increasing suffix, it is presumably higher in discourse transitivity and thus more likely to occur in the patientive voice. Furthermore, when the symmetrical voice construction is in an imperative clause, it is also more likely to occur in the patientive voice.

The results also reveal that several information flow properties of A and P are also significant predictors in voice selection (Section 7.4.2). First, activation of both A and P were significant factors for voice selection. There is a preference for new arguments to occur in secondary argument positions. Thus, from a voice selection perspective, the following generalizations emerge: when A is new, the patientive voice is more likely to occur, and when P is new, the agentive voice is more likely to occur.

There are two additional factors that are related to the activation of P: (i) the information flow property of generalizability and (ii) the length of the P argument (i.e., the number of orthographic letters). When P is new, the generalizability of P is not a factor. That is, its status as generalizing or particularizing does not make a difference; the agentive voice is more likely to occur either way, if P is new. However, when P is given and generalizing, agentive voice is more likely to be selected. When P is given and particularizing, however, patientive voice is more likely to be selected. Furthermore, a number of studies (e.g., Givón 1983, Ariel 1990) have shown that there is a relationship between the form (e.g., noun phrase, pronoun, or zero) and information load, such that given, predictable referents with a lighter information load are more attenuated (e.g., pronoun or zero) and new, unpredictable referents with a higher information load are larger (e.g., full noun phrases). Thus, the fact that the longer the P argument is, the more likely it is to occur in the agentive voice fits with the likelihood that new P arguments (presumably with a higher information load) are more likely to occur in the agentive voice.

Second, the discourse referentiality of A and P arguments is also a significant factor for voice selection. A and P arguments with a non-tracking status typically occur as the secondary argument,

much like the new A and P arguments in the discussion in the paragraphs above. From a voice selection perspective, when A has non-tracking status, the patientive voice is highly likely to be selected, and when P has non-tracking status, the agentive voice is highly likely to be selected. For tracking arguments, the pattern is a bit different because—unlike non-tracking arguments—tracking arguments are more evenly distributed across argument positions in different symmetrical voice constructions. When A is tracking, the agentive voice is more likely to be selected, although the probability for selecting agentive voice is not as high as it is for non-tracking arguments. When P is tracking, there is an almost even split between agentive voice and patientive voice. This means that tracking P is as likely to occur in P_{PV} position as it is to occur in the P_{AV} position.

Finally, the collostruction strength of the root to a particular symmetrical voice construction is also a significant factor (Section 7.4.3). Collostruction strength demonstrates that the verb root itself plays a role in voice selection, a factor that has not been considered in previous studies of voice selection in the languages of western Indonesia. While there are likely semantic properties of the roots that account for strong attraction to either the agentive voice constructions or patientive voice constructions, these factors have yet to be uncovered.

The statistical analysis of voice selection in Besemah conversation reveals a more nuanced picture than has been previously suggested for narrative discourse in other languages of western Indonesia. There are a number of significant factors that lead speakers to select one voice over the other in real-time interactional contexts. This study, then, promotes a perspective of voice selection that is more complex and multifactorial in nature and crucially depends upon the participants in the clause among other factors.

References

Adelaar, K. A. (1992). *Proto-Malayic: a reconstruction of its phonology and parts of its lexicon and morphology*. Canberra: Pacific Linguistics.

Adelaar, K. A. (2005). Structural diversity in the Malayic subgroup. In K. A. Adelaar & N. P. Himmelmann (Eds.), *The Austronesian languages of Asia and Madagascar* (pp. 202–226). Routledge Family Language Series. New York: Routledge.

Adelaar, K. A. (2013). Voice variation in Austronesian languages of Indonesia: introduction. In K. A. Adelaar (Ed.), *Voice variation in Austronesian languages of Indonesia* (pp. 1–3). NUSA: Linguistic studies of languages in and around Indonesia 54.

Adelaar, K. A. & Prentice, D. J. (1996). Malay: its history, role and spread. In S. A. Wurm, P. Mühlhäusler, & D. T. Tryon (Eds.), *Atlas of languages of intercultural communication in the Pacific, Asia and the Americas* (pp. 6736–6793). Berlin: Mouton de Gruyter.

Aikhenvald, A. Y. (2002). Typological parameters for the study of clitics, with special reference to Tariana. In A. Y. Aikhenvald & R. M. W. Dixon (Eds.), *Word: a cross-linguistic typology* (pp. 42–78). Cambridge: Cambridge University Press Cambridge.

Ariel, M. (1990). *Accessing noun-phrase antecedents*. London: Routledge.

Arka, I. W. (2003). *Balinese morphosyntax: a lexical-functional approach*. Canberra: Pacific Linguistics.

Arka, I. W. (2008). Voice and the syntax of =a/-a verbs in Balinese. In P. K. Austin & S. Musgrave (Eds.), *Voice and grammatical relations in Austronesian languages* (pp. 70–89). Stanford: Center for the Study of Language.

Arka, I. W. & Manning, C. D. (2008). Voice and grammatical relations in Indonesian: a new perspective. In S. Musgrave & P. K. Austin (Eds.), *Voice and grammatical relations in Austronesian languages* (pp. 45–69). Stanford: Center for the Study of Language.

Arka, I. W. & Ross, M. (Eds.). (2005). *The many faces of Austronesian voice systems: some new empirical studies*. Canberra: Pacific Linguistics.

Arka, I. W. & Simpson, J. (2008). Objective voice and control into subject clauses in Balinese. In P. K. Austin & S. Musgrave (Eds.), *Voice and grammatical relations in Austronesian languages* (pp. 90–127). Stanford: Center for the Study of Language.

Austin, P. K. (2001). Verbs, valence, and voice in Balinese, Sasak, and Sumbawan. In P. K. Austin, B. J. Blake, & M. Florey (Eds.), *Explorations in valency in Austronesian languages* (pp. 47–71). Melbourne: La Trobe University.

Austin, P. K. (2013). Too many nasal verbs: dialect variation in the voice system of Sasak. In K. A. Adelaar (Ed.), *Voice variation in Austronesian languages of Indonesia* (pp. 29–46). NUSA: Linguistic studies of languages in and around Indonesia 54.

Austin, P. K. & Musgrave, S. (Eds.). (2008). *Voice and grammatical relations in Austronesian languages*. Stanford: Center for the Study of Language.

Baayen, R. H. (2008). *Analyzing linguistic data: a practical introduction to statistics using R*. Cambridge: Cambridge University Press.

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*(1), 1–48.

Bickel, B. (2010). Grammatical relations typology. In J. J. Song (Ed.), *The oxford handbook of language typology* (pp. 399–444). Oxford: Oxford University Press.

Blake, B. J. (1988). Tagalog and the Manila-Mt. Isa axis. In *La Trobe working papers in linguistics* (Vol. 1, pp. 77–90). Bundoora, Victoria: Linguistics Program, La Trobe University,

Blake, B. J. (1993). Ergativity in the Pacific. In *La Trobe working papers in linguistics* (Vol. 6, pp. 19–32). Bundoora, Victoria: Linguistics Program, La Trobe University,

Blust, R. (2004). Austronesian nasal substitution: a survey. *Oceanic Linguistics*, 73–148.

Blust, R. A. (1988). Malay historical linguistics: a progress report. In M. Thaini & Z. M. Zain (Eds.), *Rekonstruksi dan cabang-cabang Bahasa Melayu Induk* (pp. 1–33). Siri monograf sejarah Bahasa Melayu. Kuala Lumpur: Dewan Bahasa dan Pustaka.

Blust, R. A. (2009). *The Austronesian languages*. Canberra: Pacific Linguistics.

Bobaljik, J. (2003). Floating quantifiers: handle with care. In L. Cheng & R. Sybesma (Eds.), *The second glot international state-of-the-article book: the latest in linguistics* (pp. 107–148). Berlin: Mouton de Gruyter.

Bock, J. K. (1986). Syntactic persistence in language production. *Cognitive Psychology*, *18*(3), 355–387.

Brainard, S. (1994). Voice and ergativity in Karao. In T. Givón (Ed.), *Voice and inversion* (Vol. 28, pp. 365–402). Typological Studies in Language. Amsterdam: John Benjamins.

Brandes, J. L. A. (1884). *Bijdrage tot de vergelijkende klankleer der Westersche afdeeling van de Maleisch-Polynesische taalfamilie*. Utrecht: Van de Weijer.

Cartier, A. (1976). Une langue a double construction objective et ergative: l'Indonesien. *La Linguistique*, *12*, 99–130.

Cartier, A. (1979). De-voiced transitive verb sentences in formal Indonesian. In F. Plank (Ed.), *Ergativity: towards a theory of grammatical relations* (pp. 161–183). New York: Academic Press.

Ceña, R. M. (1979). Tagalog counterexamples to the accessibility hierarchy. *Studies in Philippine Linguistics*, *3*(1), 119–124.

Chafe, W. L. (1976). Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In C. N. LI (Ed.), *Subject and topic* (pp. 25–55). New York: Academic Press.

Chung, S. (1976a). An object-creating rule in Bahasa Indonesia. *Linguistic Inquiry*, *7*(1), 41–87.

Chung, S. (1976b). On the subject of two passives in Indonesian. In C. Li (Ed.), *Subject and topic* (pp. 59–98). New York: Academic Press.

Clynes, A. (1995). *Topics in the phonology and morphosyntax of Balinese based on the dialect of Singaraja, North Bali*. PhD Dissertation, The Australian National University.

Cole, P. & Hermon, G. (2005). Subject and non-subject relativization in Indonesian. *Journal of East Asian Linguistics*, *14*(1), 59–88.

Cole, P., Hermon, G. et al. (2015). Grammar of binding in the languages of the world: innate or learned? *Cognition*, *141*, 138–160.

Cole, P. & Son, M. J. (2004). The argument structure of verbs with the suffix -kan in Indonesian. *Oceanic Linguistics*, *43*(2), 339–364.

Collins, E. F. (2007). *Indonesia betrayed: how development fails*. Honolulu: University of Hawaii Press.

Collins, W. A. (1979). *Besemah concepts: a study of the culture of a people of South Sumatra*. PhD Dissertation, Unversity of California Berkeley.

Collins, W. A. (1998). *The guritan of Radin Suane: a study of the Besemah oral epic from South Sumatra*. Leiden: KITLV Press.

Comrie, B. (1978). Ergativity. In W. P. Lehmann (Ed.), *Syntactic typology: studies in the phenomenology of language* (pp. 329–394). Austin: University of Texas Press.

Comrie, B. (1989). *Language universals and linguistic typology: syntax and morphology* (2nd ed.). Chicago: University of Chicago Press.

Comrie, B. (1998). Rethinking the typology of relative clauses. *Language Design*, *1*, 59–85.

Cooreman, A. M., Fox, B., & Givón, T. (1984). The discourse definition of ergativity. *Studies in Language*, *8*(1), 1–34.

Cooreman, A. M., Fox, B., & Givón, T. (1988). The discourse definition of ergativity: a study of Chamorro and Tagalog texts. In R. McGinn (Ed.), *Studies in Austronesian linguistics* (pp. 387–425). Athens, Ohio: Ohio University Center for International Studies.

Croft, W. (2000). Parts of speech as language universals and as language-particular categories. In B. Comrie & P. M. Vogel (Eds.), *Approaches to the typology of word classes* (pp. 65–102). Empirical Approaches to Language Typology 23. Berlin: Mouton de Gruyter.

Croft, W. (2001). *Radical construction grammar: syntactic theory in typological perspective*. Oxford University Press.

Cumming, S. (1991). *Functional change: the case of malay constituent order*. Berlin: Mouton de Gruyter.

Cumming, S. & Wouk, F. (1987). Is there 'discourse ergativity' in Austronesian languages? *Lingua*, *71*(1), 271–296.

Dardjowidjojo, S. (1978). *Sentence patterns of Indonesian*. Honolulu: University of Hawaii Press.

Davies, W. D. (2008). Madurese reflexives with reference to Malay/Indonesian. *Lingua*, *118*(10), 1603–1616.

De Guzman, V. P. (1988). Ergative analysis for Philippine languages: an analysis. In R. McGinn (Ed.), *Studies in Austronesian linguistics* (pp. 323–345). Athens, Ohio: Ohio University Center for International Studies.

De Guzman, V. P. (1992). Morphological evidence for primacy of patient as subject in Tagalog. In M. Ross (Ed.), *Papers in Austronesian linguistics* (Vol. 2, pp. 87–96). Canberra: Pacific Linguistics.

Dixon, R. M. W. (2004). Adjective classes in typological perspective. In R. M. W. Dixon & A. Y. Aikhenvald (Eds.), *Adjective classes: a crosslinguistic typology* (pp. 1–49). Oxford: Oxford University Press.

Dixon, R. (1994). *Ergativity*. Cambridge: Cambridge University Press.

Dryer, M. S. (1997). Are grammatical relations universal? In J. L. Bybee, J. Haiman, & S. A. Thompson (Eds.), *Essays on language function and language type: dedicated to Talmy Givón* (pp. 115–143). Amsterdam: John Benjamins.

Du Bois, J. W. (1980). Beyond definteness: the trace of identity in discourse. In W. L. Chafe (Ed.), *The pear stories: cognition, cultural, and linguistic aspects of narrative production* (pp. 203–274). Norwood: Ablex.

Du Bois, J. W., Cumming, S., Schuetze-Coburn, S., & Paolino, D. (1992). *Discourse transcription*. Santa Barbara Papers in Linguistics 4. Santa Barbara: Department of Linguistics, University of California, Santa Barbara.

Du Bois, J. W., Kumpf, L. E., & Ashby, W. J. (Eds.). (2003). *Preferred argument structure: grammar as architecture for function*. Studies in Discourse and Grammar 14. Amsterdam: John Benjamins.

Du Bois, J. W. & Thompson, S. A. (1991). *Dimensions of a theory of information flow*. Unpublished Ms. University of California, Santa Barbara.

Du Bois, J., Schuetze-Coburn, S., Cumming, S., & Paolino, D. (1993). Outline of discourse transcription. In J. A. Edwards & M. D. Lampert (Eds.), *Talking data: transcription and coding in discourse research* (pp. 45–89). Hillsdale, NJ: Lawrence Erlbaum Associates.

Englebretson, R. (2003). *Searching for structure: the problem of complementation in colloquial Indonesian conversation*. Amsterdam: John Benjamins.

Englebretson, R. (2008). From subordinate clause to noun-phrase: *yang* constructions in colloquial Indonesian. In R. Laury (Ed.), *Crosslinguistic studies of clause combining: the multifunctionality of conjunctions* (pp. 1–34). Amsterdam: John Benjamins.

Epps, P. (2012). Between headed and headless relative clauses. *Relative Clauses in Languages of the Americas: A typological overview*, *102*, 191–211.

Evans, N. & Osada, T. (2005). Mundari: the myth of a language without word classes. *Linguistic Typology*, *9*(3), 351–390.

Ewing, M. C. (1991). The discourse function of relative clauses in Indonesian. In *Berkeley linguistic society* (Vol. 17, pp. 81–91).

Ewing, M. C. (2005a). Colloquial Indonesian. In K. A. Adelaar & N. P. Himmelmann (Eds.), *The Austronesian languages of Asia and Madagascar* (pp. 227–258). Routledge Family Language Series. New York: Routledge.

Ewing, M. C. (2005b). *Grammar and inference in conversation: identifying clause structure in spoken Javanese*. Amsterdam: John Benjamins.

Ewing, M. C. & Cumming, S. (1998). Relative clauses in Indonesian discourse: face to face and cyberspace interaction. In S. L. Chelliah & W. J. de Reuse (Eds.), *Papers from the Fifth Annual Meeting of the Southeast Asian Linguistics Society* (pp. 79–96). Tempe, AZ: Program for Southeast Asian Studies, Arizona State Unviersity.

Foley, W. A. (1998). Symmetrical voice systems and precategoriality in Philippine languages. In *Workshop on voice and grammatical relations in Austronesian languages*. LFG98 Conference. Brisbane.

Foley, W. A. (2008). The place of Philippine languages in a typology of voice systems. In P. K. Austin & S. Musgrave (Eds.), *Voice and grammatical relations in Austronesian languages* (pp. 22–44). Stanford: Center for the Study of Language.

Fox, J. (2003). Effect displays in R for generalised linear models. *Journal of Statistical Software*, *8*(15), 1–27.

Gil, D. (1994). The structure of Riau Indonesian. *Nordic Journal of Linguistics*, *17*(2), 179–200.

Gil, D. (2000). Reflexive anaphor or conjunctive operator: Riau Indonesian *sendiri*. In P. Cole, G. Hermon, & C. T. J. Huang (Eds.), *Long-distance reflexives* (Vol. 33, pp. 83–118). Syntax and Semantics. Leiden: Brill.

Gil, D. (2002). The prefixes *di-* and *N-* in Malay/Indonesian dialects. In F. Wouk & M. Ross (Eds.), *The history and typology of western Austronesian voice systems* (pp. 241–283). Canberra: Pacific Linguistics.

Givón, T. (1983). *Topic continuity in discourse: a quantitative cross-language study*. Amsterdam: John Benjamins.

Givón, T. (2001). *Syntax. An introduction* (2nd ed.). Amsterdam: John Benjamins.

Gordon, M., Ghushchyan, E., McDonnell, B., Rosenblum, D., & Shaw, P. A. (2012). Sonority and central vowels: a cross-linguistic phonetic study. In S. Parker (Ed.), *The sonority controversy* (pp. 219–256). Berlin: De Gruyter Mouton.

Gordon, R. G. (Ed.). (2005). *Ethnologue: Languages of the world* (15th ed.). Dallas, Texas: SIL International.

Gries, S. T. (2005). Syntactic priming: a corpus-based approach. *Journal of Psycholinguistic Research*, *34*(4), 365–399.

Gries, S. T. (2014). Coll.analysis 3.5. a script for R to compute collustructional analyses.

Gries, S. T. & Stefanowitsch, A. (2004). Extending collostructional analysis: a corpus-based perspective on 'alternations'. *International Journal of Corpus Linguistics*, *9*(1), 97–129.

Harrell, F. E. (2001). *Regression modeling strategies: with applications to linear models, logistic regression, and survival analysis*. Springer Series in Statistics. New York: Springer.

Hayes, B. (1989). Compensatory lengthening in moraic phonology. *Linguistic Inquiry*, *20*(2), 253–306.

Helfrich, O. L. (1893). Bijdrage tot de letterkunde van den Bĕsĕmaher en Sĕrawajer in de afdeeling Manna en P.O. Manna (Residentie Bengkoelen). *Tijdschrift voor Indische Taal-, Land- en Volkenkunde, Uitgegeven door het Bataviaasch Genootschap van Kunsten en Wetenschappen*, *37*, 65–97.

Helfrich, O. L. (1895a). Errata voorkomende in de "Bijdrage" Sĕrawajsche en Bĕsĕmahsche spreekworden, spreekwijzen en raadsels. *Bijdragen tot de Taal-, Land-en Volkenkunde*, *45*(1), 384–386.

Helfrich, O. L. (1895b). Sĕrawajsche en Bĕsĕmansche spreekwoorden, spreekwijzen en raadsels. *Bijdragen tot de Taal-, Land- en Volkenkunde*, *45*(1), 1–78.

Helfrich, O. L. (1904). *Bijdragen tot de kennis van het Midden Maleisch:* (*Bĕsĕmahsch en Sĕrawajsch dialect*). Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen. Batavia: Landsdrukkerij.

Helfrich, O. L. (1915). *Nadere aanvullingen en verbeteringen op de bijdragen tot de kennis van het Midden Maleisch* (*Bĕsĕmansch en Sĕrawajsch dialect*) *- Lampongsche dwerghertverhalen*. Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen. Batavia: Albrecht & Co.

Helfrich, O. L. (1921). *Supplement op de in deel LXI, 3e en 4e stuk der verhandelingen gepubliceerde nadere aanvullingen en verbeteringen op de bijdragen tot de kennis van het Midden Maleisch* (*Běsěmansch en Sěrawajsch*) (*verschenen in deel LIII der verhandelingen*). Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen. Batavia: Albrecht & Co.

Helfrich, O. L. (1927a). *Nadere bijdragen tot de kennis van het Midden Maleisch* (*Běsěmasch en Sěrawajsch dialect*). Verhandelingen van het Bataviaasch Genootschap van Kunsten en Wetenschappen. 's-Gravenhage: Nederlandsche Boeken Steendrukkerij V/H H. L. Smits.

Helfrich, O. L. (1927b). Uit de folklore van Zuid-Sumatra. *Bijdragen tot de Taal-, Land- en Volkenkunde*, *83*, 193–315.

Helfrich, O. L. (1933). *Bijdragen tot de kennis van het Midden Maleisch* (*Běsěmahsch en Sěrawajsch dialect*) *supplement op de "nadere bijdragen"* (*1927*). 's-Gravenhage: Martinus Nijhoff.

Himmelmann, N. P. (2002a). Voice in two northern Sulawesi languages. In *The history and typology of western Austronesian voice systems* (Vol. Wouk, Fay and Ross, Malcolm, pp. 123–142). Canberra: Pacific Linguistics.

Himmelmann, N. P. (1991). The Philippine challenge to universal grammar. In *Arbeitspapier, Institut für Sprachwissenschaft, Universität Köln* (Vol. 15, pp. 1–59). Köln: Allgemeine Sprachwissenschaft, Institut für Linguistik, Universität zu Köln.

Himmelmann, N. P. (2002b). Voice in western Austronesian: an update. In F. Wouk & M. Ross (Eds.), *The history and typology of western Austronesian voice systems* (pp. 7–16). Canberra: Pacific Linguistics.

Himmelmann, N. P. (2005). The Austronesian languages of Asia and Madagascar: typological characteristics. In K. A. Adelaar & N. P. Himmelmann (Eds.), *The Austronesian languages of Asia and Madagascar* (pp. 110–181). Routledge Family Language Series. New York: Routledge.

Himmelmann, N. P. (2008). Lexical categories and voice in Tagalog. In P. K. Austin & S. Musgrave (Eds.), *Voice and grammatical relations in Austronesian languages* (pp. 247–293). Stanford: Center for the Study of Language.

Hopper, P. J. (1979a). Aspect and foregrounding in discourse. In T. Givón (Ed.), *Discourse and syntax* (pp. 213–241). New York: Academic Press.

Hopper, P. J. (1979b). Some discourse sources of ergativity. *Hawaii Working Papers in Linguistics*, *11*, 137–153.

Hopper, P. J. (1983). Ergative, passive, and active in Malay narrative. In F. Klein-Andreu (Ed.), *Discourse perspectives on syntax* (pp. 67–88). New York: Academic Press.

Hopper, P. J. (1988). How ergative is Malay. In R. McGinn (Ed.), *Studies in Austronesian linguistics* (pp. 441–454). Athens, Ohio: Ohio University Center for International Studies.

Hopper, P. J. & Thompson, S. A. (1980). Transitivity in grammar and discourse. *Language*, *56*(2), 251–299.

Hopper, P. J. & Thompson, S. A. (1984). The discourse basis for lexical categories in universal grammar. *Language*, *60*(4), 703–752.

Huang, S. (2002). The pragmatics of focus in Tsou and Seediq. *Language and Linguistics*, *3*(4), 665–694.

Huang, S. & Tanangkingsing, M. (2011). A discourse explanation of the transitivity phenomena in Kavalan, Squliq, and Tsou. *Oceanic Linguistics*, *50*(1), 93–119.

Hudson, A. B. (1967). *The Barito isolects of Borneo: a classification based on comparative reconstruction and lexicostatistics*. Data Paper No. 68, Southeast Asia Program, Department of Asian Studies, Cornell University. Ithaca: Cornell University.

Jacobsen, W. H. (1979). Noun and verb in Nootkan. In *The victoria conference on northwestern languages*. British Columbia Provincial Museum Heritage Record 4. Victoria, B.C.: British Columbia Provincial Museum.

Keenan, E. L. (1976). Towards a universal definition of "subject". In C. N. LI (Ed.), *Subject and topic* (pp. 303–333). New York: Academic Press.

Keenan, E. L. & Comrie, B. (1977). Noun phrase accessibility and universal grammar. *Linguistic Inquiry*, *8*(1), 63–99.

Kemmer, S. (1993). *The middle voice*. John Benjamins Publishing.

Kroeger, P. (1993). *Phrase structure and grammatical relations in Tagalog*. Stanford: Center for the Study of Language.

Kroeger, P. (2004). *Analyzing syntax: a lexical-functional approach*. Cambridge: Cambridge University Press.

Lambrecht, K. (1994). *Information structure and sentence form: topic, focus, and the mental representations of discourse referents*. Cambridge: Cambridge University Press.

LaPolla, R. J. (1993). Arguments against 'subject' and 'direct object' as viable concepts in Chinese. *Bulletin of the Institute of History and Philology*, *63*(4), 759–813.

LaPolla, R. J. (2006). On grammatical relations as constraints on referent identification. In M. Shibatani, T. Tsunoda, & T. Kageyama (Eds.), *Voice and grammatical relations: festschrift for Masayoshi Shibatani* (pp. 139–151).

Legate, J. A. (2012). Subjects in Acehnese and the nature of the passive. *Language*, *88*(3), 495–525.

Levinson, S. C. (2006). On the human 'interactional engine'. In S. C. Levinson & N. J. Enfield (Eds.), *Roots of human sociality culture, cognition and interaction*. New York: Berg Publishers.

LI, C. N. & Thompson, S. A. (1981). *A functional reference grammar of Mandarin Chinese*. Berkeley: University of California Press.

Liao, H. C. (2004). *Transitivity and ergativity in Formosan and Philippine languages*. PhD Dissertation, University of Hawaii at Manoa.

Macdonald, R. R. & Darjowidjojo, S. (1967). *A student's reference grammar of modern formal Indonesian*. Washington, D.C.: Georgetown University Press.

Matsumoto, Y. (1997). *Noun-modifying constructions in Japanese: a frame-semantic approach*. Amsterdam: John Benjamins.

Matsumoto, Y., Comrie, B., & Sells, P. (Eds.). (in press). *Noun-modifying clause constructions in languages of Eurasia: rethinking theoretical and geographical boundaries*. Amsterdam: John Benjamins.

McCune, K. (1979). Passive function and the Indonesian passive. *Oceanic Linguistics*, *18*(2), 119–169.

McDonnell, B. (2008). A conservative vowel phoneme inventory of Sumatra: the case of Besemah. *Oceanic Linguistics*, *47*(2), 409–432.

McDonnell, B. (in prep). Roadblocks in the grammaticalization highway: when phonology gets in the way. In *Proceedings of the annual meeting of the berkeley linguistics society* (Vol. 39).

McDonnell, B. (to appear). Acoustic correlates of stress in Besemah. In T. McKinnon & Yanti (Eds.), *Nusa: linguistic studies of languages in and around Indonesia*.

McDowell, J. & Anderbeck, K. R. (2008). *Unity in diversity: Malayic varieties of Southern Sumatra*. SIL, Jakarta.

Mitani, Y. (1980). Languages of South Sumatra. In Y. Tsubouchi (Ed.), *South Sumatra: man and agriculture* (pp. 1–16). Kyoto: The Center for Southeast Asian Studies, Kyoto University.

Mithun, M. (1987). Is basic word order universal? In R. S. Tomlin (Ed.), *Coherence and grounding in discourse* (pp. 281–328). Typological Studies in Language 11. Amsterdam: John Benjamins.

Mithun, M. (1994). The implications of ergativity for a Philippine voice system. In B. A. Fox & P. J. Hopper (Eds.), *Voice: form and function* (pp. 247–277). Typological Studies in Language 27.

Mithun, M. (1999). *The languages of native North America*. Cambridge Language Surveys. Cambridge: Cambridge University Press.

Mithun, M. (2001). Understanding and explaining applicatives. In M. Andronis, C. Ball, H. Elston, & S. Neuvel (Eds.), *Proceedings of the thirty-seventh meeting of the Chicago Linguistic Society: functionalism and formalism in linguistic theory.* (Vol. 37, *2*, pp. 73–98).

Mithun, M. (2016). Grammatical relations in Hiligaynon. In A. Witzlack-Makarevich & B. Bickel (Eds.), *Grammatical relations in the languages of the world* (pp. 1–50). Amsterdam: John Benjamins.

Mithun, M. & Chafe, W. L. (1999). What are S, A, and O? *Studies in Language*, *23*(3), 569–596.

Musgrave, S. (2000). Pronouns and morphology: undergoer subject clauses in Indonesian. In *Yearbook of morphology 2000* (pp. 155–186). New York: Springer.

Musgrave, S. (2001). *Non-subject arguments in Indonesian*. PhD Dissertation, University of Melbourne.

Naylor, P. B. (1995). Subject, topic, and Tagalog syntax. In D. Bennett, T. Bynon, & G. B. Hewitt (Eds.), *Subject, voice and ergativity* (pp. 161–201). London: School of Oriental and African Studies.

Nomoto, H. & Wahab, K. A. (2012). Kena adversative passives in Malay, funny control, and covert voice alternation. *Oceanic Linguistics*, *51*(2), 360–386.

Ochs, E., Schegloff, E. A., & Thompson, S. A. (Eds.). (1996). *Interaction and grammar*. Studies in interactional sociolinguistics. Cambridge: Cambridge University Press.

Pastika, I. W. (1999). *Voice selection in Balinese narrative discourse*. PhD Dissertation, The Australian National University.

Payne, T. E. (1982). Role and reference related subject properties and ergativity in Yup'ik Eskimo and Tagalog. *Studies in Language*, *6*(1), 75–106.

Payne, T. E. (1994). The pragmatics of voice in a Philippine language: actor-focus and goal-focus in Cebuano narrative. In T. Givón (Ed.), *Voice and inversion* (pp. 317–64). Typological Studies in Language 28. Amsterdam: John Benjamins.

Payne, T. E. (1997). *Describing morphosyntax: a guide for field linguists*. Cambridge: Cambridge University Press.

Polinsky, M. & Potsdam, E. (2008). The syntax and semantics of wanting in Indonesian. *Lingua*, *118*(10), 1617–1639.

R Core Team. (2015). *R: a language and environment for statistical computing*. R Foundation for Statistical Computing. Vienna, Austria.

Rafferty, E. (1982). *Discourse structures of the Chinese Indonesian of Malang*. NUSA: Linguistic studies of languages in and around Indonesia 12. Jakarta: Badan Penyelenggara Seri Nusa.

Reid, L. A. & Liao, H. C. (2004). A brief syntactic typology of Philippine languages. *Language and Linguistics*, *5*(2), 433–490.

Riesberg, S. (2014). *Symmetrical voice and linking in western Austronesian languages*. Pacific Linguistics 646. Berlin: De Gruyter Mouton.

Ross, M. (2002). The history of western Austronesian voice and voice-marking. In F. Wouk & M. Ross (Eds.), *The history and typology of western Austronesian voice systems* (pp. 17–62). Canberra: Pacific Linguistics.

Rubino, C. (2013). Reduplication. In M. S. Dryer & M. Haspelmath (Eds.), *The world atlas of language structures online* (Chap. 27). Leipzig, Germany: Max Planck Institute for Evolutionary Anthropology.

Schachter, P. (1976). The subject in Philippine languages: topic, actor, actor-topic, or none of the above actor, actor-topic, or none of the above. In C. N. LI (Ed.), *Subject and topic* (pp. 491–518). New York: Academic Press.

Schachter, P. (1977). Reference-related and role-related properties of subjects. In P. Cole & J. M. Sadock (Eds.), *Grammatical relations* (pp. 279–306). Syntax and Semantics 8. New York: Academic Press.

Schachter, P. (1984). Semantic-role-based syntax in toba batak. *Studies in the Structure of Toba Batak*, *5*, 122–149.

Schachter, P. & Otanes, F. T. (1972). *Tagalog reference grammar*. Berkeley: University of California Press.

Selting, M. & Couper-Kuhlen, E. (Eds.). (2001). *Introducing interactional linguistics*. Studies in Discourse and Grammar. Amsterdam: John Benjamins.

Shibatani, M. (Ed.). (1988). *Passive and voice*. Typological Studies in Language 16. Amsterdam: John Benjamins.

Shibatani, M. (2008). Relativization in Sasak and Sumbawa, eastern Indonesia. *Language and Linguistics*, *9*(4), 865–916.

Sneddon, J. N. (1996). *Indonesian: a comprehensive grammar*. London: Routledge.

Sportiche, D. (1988). A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry*, *19*(3), 425–449.

Stefanowitsch, A. & Gries, S. T. (2003). Collostructions: investigating the interaction between words and constructions. *International Journal of Corpus Linguistics*, *8*(2), 209–243.

Stefanowitsch, A. & Gries, S. T. (2005). Covarying collexemes. *Corpus Linguistics and Linguistic Theory*, *1*(1), 1–43.

Tadmor, U. (2003). Final /a/ mutation: a borrowed areal feature in western Austronesian languages. In J. Lynch (Ed.), *Issues in Austronesian historical phonology* (pp. 15–35). Canberra: Pacific Linguistics.

Takara, N. (2012). The weight of head nouns in noun-modifying constructions in conversational Japanese. *Studies in Language*, *36*(1), 33–72.

Tchekhoff, C. (1978). *Aux fondements de la syntaxe: l'ergatif.* Paris: Presses Universitaires du France.

Tchekhoff, C. (1980). The economy of a voice-neutral verb. an example in Indonesian. In P. B. Naylor (Ed.), *Austronesian studies: papers from the Second Eastern Conference on Austronesian Languages* (pp. 71–81). Michigan Papers on South and Southeast Asia 15. Ann Arbor: University of Michigan, Center for South and Southeast Asian Studies.

Thompson, S. A. (1988). A discourse approach to the cross-linguistic category 'adjective'. In J. Hawkins (Ed.), *Explaining language universals* (pp. 167–185). Oxford: Basil Blackwell.

Thompson, S. A. (1997). Discourse motivations for the core-oblique distinction as a language universal. In A. Kamio (Ed.), *Directions in functional linguistics* (Vol. 36, pp. 59–82). Studies in Language Companion Series. Amsterdam: John Benjamins.

Thompson, S. A. & Hopper, P. J. (2001). Transitivity, clause structure, and argument structure: evidence from conversation. In J. L. Bybee & P. J. Hopper (Eds.), *Frequency and the emergence of linguistic structure* (pp. 27–60). Typological Studies in Language 45. Amsterdam: John Benjamins.

Tjung, Y. (2006). *The formation of relative clauses in Jakarta Indonesian: a subject-object asymmetry*. PhD Dissertation, University of Delaware.

Van Valin Jr, R. D. & LaPolla, R. J. (1997). *Syntax, structure, meaning and function*. Cambridge: Cambridge University Press.

Verhaar, J. W. (1983). Ergativity, accusativity, and hierarchy. In *Sophia linguistica: working papers in linguistics* (Vol. 11, pp. 1–23). Tokyo: The Graduate School of Languages and Linguistics, Linguistic Institute for International Communication, Sophia University.

Verhaar, J. W. (1984). Towards a description of contemporary Indonesian: preliminary studies part II. In *NUSA: linguistic studies of languages in and around Indonesia 19*.

Verhaar, J. W. (1988). Syntactic ergativity in Indonesian. In R. McGinn (Ed.), *Studies in Austronesian linguistics* (pp. 347–384). Monographs in International Studies, Southeast Asia Series. Athens, Ohio: Center for International Studies, Ohio University.

Voorhoeve, P. (1955). *Critical survey of studies on the languages of Sumatra*. Koninklijk Instituut voor Taal-, Land- en Volkenkunde Bibliography Series. The Hague, Netherlands: 's-Gravenhage - Martinus Nijhoff.

Wechsler, S. & Arka, I. W. (1998). Syntactic ergativity in Balinese: an argument structure based theory. *Natural Language & Linguistic Theory*, *16*(2), 387–442.

Whaley, L. (2001). A cross-linguistic examination of quantifier float constructions. Paper Presented at the Fourth Meeting of the Association for Linguistic Typology. Santa Barbara, CA.

Wolff, J. U. (1996). The development of the passive verb with pronominal prefix in Western Austronesian languages. In *Reconstruction, classification, description: Festschrift in honor of Isidore Dyen* (pp. 15–40). Hamburg: Abera Verlag.

Wouk, F. (1989). *The impact of discourse on grammar: verb morphology in spoken Jakarta Indonesian*. PhD Dissertation, University of California, Los Angeles.

Wouk, F. (1996). Voice in Indonesian discourse and its implications for theories of the development of ergativity. *Studies in Language*, *20*(2), 361–410.

Wouk, F. (1999). Sasak is different: a discourse perspective on voice. *Oceanic Linguistics*, *38*(1), 91–114.

Wouk, F. (2004). Nasal transitive prefixes in spoken Jakartan Indonesian. In *NUSA: linguistic studies of languages in and around Indonesia 53* (pp. 21–28).

Wouk, F. & Ross, M. (Eds.). (2002). *The history and typology of western Austronesian voice systems*. Canberra: Pacific Linguistics.

Zwicky, A. M. (1977). *On clitics*. Bloomington: Indiana University Linguistics Club.

Zwicky, A. M. (1985). Clitics and particles. *Language*, *61*(2), 283–305.