A Multi-Modal Study of Spatial Language in Hawu in Typological Perspective

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Abstract

This dissertation is a comprehensive study of the state of research on language and space in Malayo-Polynesian languages as well an in-depth study of the multimodal expression of space in Hawu (ISO 639-3 hvn), a language spoken in East Nusa Tenggara (NTT), Indonesia. The goals of this work are to 1) provide a typological overview of absolute spatial orientation and demonstrative systems in Malayo-Polynesian languages; 2) discuss the approaches to the study of spatial language and what this has revealed about why certain spatial systems have developed in the Pacific; 3) describe methods of spatial orientation in Hawu; 4) describe the grammar of pointing gestures produced by Hawu speakers; and 5) understand how pointing gestures that are produced by Hawu speakers may explain how speakers utilize both modalities when they communicate about space.

The typologies presented in the first two chapters reveal that speakers of Malayo-Polynesian languages use a variety of spatial orientation strategies that are motivated by features such as the genetic relationship to other languages, environment, landscape, culture, people’s individual interactions with the world around them, and a variety of other factors. These motivating features have resulted in absolute orientation strategies that are based in at least six environmental features including the land and sea, coastlines, elevation, rivers, wind patterns, and the path of the sun. Demonstrative systems are similarly diverse. They vary based on who may serve as the deictic center which may include just the speaker or both speaker and addressee. They may also solely encode distance on a horizontal axis or that on both horizontal and vertical axes. These typologies further reveal a distinct lack of gesture studies on Austronesian languages.

The work on Hawu is based on a corpus of approximately 24.5 hours of audiovisual data. This work shows that within the corpus, speakers rarely use absolute orientation. Hawu speakers primarily rely on a demonstrative system of ten terms for spatial orientation. The system is based on features such as distance from speaker, number, the speaker’s knowledge about the referent, and whether the referent is being individuated. The study of pointing supports this analysis and further shows that speakers are more likely to produce a point alongside a distal demonstrative. However, speakers more often employ speech and gesture opportunistically, thus relying on both modalities to effectively communicate about space.

Through this work, I hope to bring attention to the impressive amount of work that has been conducted on language and space in Malayo-Polynesian languages, but I also hope to highlight the areas that have thus far been overlooked. I further aim to bring attention to the revealing role that gesture may serve in language description and particularly in the analysis of language and space.
Acknowledgements

This dissertation is the result of many years of collaboration with colleagues around the world, and I wish to express my deepest thanks for their guidance. Much of this dissertation was written on the Mokupuni of O‘ahu, and I am extremely grateful to have had time explore the land, culture, and language of Hawai‘i through an Indigenous perspective. This context has been invaluable in my journey as a linguist.

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Abbreviations
<table>
<thead>
<tr>
<th>ADDR</th>
<th>near addressee</th>
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<tbody>
<tr>
<td>AGT</td>
<td>agent marker</td>
</tr>
<tr>
<td>CIS</td>
<td>cislocative, direction toward the speaker</td>
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<tr>
<td>CONT</td>
<td>continuous</td>
</tr>
<tr>
<td>EMP</td>
<td>emphatic</td>
</tr>
<tr>
<td>GNRL</td>
<td>general</td>
</tr>
<tr>
<td>HORT</td>
<td>hortative particle</td>
</tr>
<tr>
<td>INDV</td>
<td>individuating</td>
</tr>
<tr>
<td>INVIS</td>
<td>non-visible, invisible</td>
</tr>
<tr>
<td>KN</td>
<td>known</td>
</tr>
<tr>
<td>LG</td>
<td>ligature</td>
</tr>
<tr>
<td>MED</td>
<td>medial</td>
</tr>
<tr>
<td>MOD</td>
<td>modifier</td>
</tr>
<tr>
<td>NCMPI</td>
<td>incomplete</td>
</tr>
<tr>
<td>QUAL</td>
<td>qualifier</td>
</tr>
<tr>
<td>REP</td>
<td>repetitive</td>
</tr>
<tr>
<td>RLS</td>
<td>realis</td>
</tr>
<tr>
<td>SFC</td>
<td>specific</td>
</tr>
<tr>
<td>SPKR</td>
<td>near speaker</td>
</tr>
<tr>
<td>SOURCE</td>
<td>source</td>
</tr>
<tr>
<td>SUP</td>
<td>superlative</td>
</tr>
<tr>
<td>TAG</td>
<td>confirmational tag</td>
</tr>
<tr>
<td>TRANS</td>
<td>translocative, direction away from the speaker</td>
</tr>
<tr>
<td>UKN</td>
<td>unknown</td>
</tr>
<tr>
<td>UNSP</td>
<td>unspecified</td>
</tr>
<tr>
<td>VIS</td>
<td>visible</td>
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Table 1: Glossing conventions that are not in the Leipzig Glossing Rules (https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf)
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Chapter 1: Introduction

1.1 Introduction

This dissertation is intended to be a comprehensive study of the state of research on language and space in Malayo-Polynesian languages as well an in-depth study of the multimodal expression of space in Hawu (ISO 639-3 hvn), a language spoken in East Nusa Tenggara (NTT), Indonesia.

Through this work, I hope to bring attention to the impressive amount of research that has been conducted on language and space in Malayo-Polynesian languages. I also hope to highlight the areas that have thus far been overlooked. Researchers that work with space in Malayo-Polynesian languages are uniquely positioned in that the work on language and space is simultaneously both impressively comprehensive and severely lacking. If the less-explored areas are identified, researchers may be able to obtain a uniquely complete understanding of language and space in Malayo-Polynesian languages. I additionally describe spatial language in Hawu and how pointing is a valuable way to communicate about space. I hope that this will offer an additional lens or modality through which researchers can study space.

1.2 Context for this study

Before diving into this dissertation, I feel it is important to situate the context of this study. This dissertation occurs in two phases. In the first half, I work with secondary data and provide typological classifications and observations about language, space, and gesture. In the second half, I work with primary data and study how language, space, and gesture interact in Hawu. I feel that some background information is necessary to properly contextualize both of these approaches. First, I explain why spatial language is important for furthering an understanding of language and the human condition more broadly. Then I establish a nuanced perspective on using secondary data for typological analysis and how this may influence the the discussion within the first two chapters. Lastly, I provide some basic information about gesture and how it relates to linguistic study. After providing this theoretical information, I situate myself as a researcher in relation to the content of this dissertation, and finally, I provide a brief overview of the chapters to come.

1.2.1 The study of language and space

Space is a fundamental part of human perception, conception, experience, and responsive behavior in the world. As a universal feature of the human experience, it is hardly a surprise that often robust linguistic toolkits are provided within any given language to talk about space. These serve key functional roles such as framing orientation (Talmy 1983, Levinson 2001), giving directions (Bennardo 2014), organizing discourse within events of speech (Hanks 1990) or the speech event itself (Duranti & Goodwin 1992), grounding metaphor (Lakoff & Johnson 1980), and landscape and place-naming conventions (Burenhult & Levinson 2008, Cablitz 2008, Levinson 2008). Moreover, each language’s unique encoding of space ultimately shapes numerous other aspects of language-in-use such as discourse (Berez 2015),
the organization of temporal concepts (Núñez & Sweetser 2006), the manner in which people talk about
social relations (Ozanne-Rivierre 1997, Wassmann & Dasen 1998, Næss 2011), wayfinding and navigation
(Feinberg 1988, 2008), and the conceptualization of magnitude (Winter et al. 2015). Among others, these
have become fruitful frontiers for research endeavors.

Despite the integral role that space plays in everyday communication, it has only recently become
an object of study for linguists. Early language researchers rarely saw space as a necessary part of the
documentation of a language’s grammar. When engaged at all, spatial language appears to have served
as an analytical tool to help scholars better understand a language’s adpositional phrases, cases, clause
structure, lexicon, and so on. This contrasts with an approach that would take linguistic forms and
functions as tools for illuminating space itself or how it relates to the human experience in the world.
While, in many older grammars, adpositions and demonstratives are well-represented due to their central
nature in understanding grammatical structure (Seidenadel 1909, Benton 1971), they rarely, if ever, seem
to have generated further study. Some older grammars contain more-extensive documentation of spatial
particles, but they often reflect the author’s own linguistic biases or the imposition of a Eurocentric spatial
system (e.g., unreflective use of cardinal directions with north, south, east, west as putative universals)
in acts of glossing or translation. Notable early-mid twentieth century exceptions were the writings of
Sapir and Whorf, the birth parents of the theory of linguistic relativity (Whorf 1997, Lucy 1997). In their
acknowledgement that languages encode space differently, they anticipated more recent conversations
held since the spatial turn in the 1980s (Whorf 1997: 214).

Because spatial language varies typologically, one reason that the study of space in language has
flourished in recent decades may be connected to the recognition that the domain of space can become
 endangered even before the language does (Evans 2010), and the Austronesian languages offer a perfect
example as to how this is the case. There are over 1250 Austronesian languages (Hammarström et al. 2020),
but this number is all-too-quickly decreasing as social, ecological, and linguistic threats endanger many of
the region’s languages. As culture and ecology are driving factors to linguistic change (Bohnemeyer et al.
2014), and as spatial language is culturally and environmentally rooted and often below the threshold of
speaker awareness, it is among the most endangered domains in language.

As people shift to different languages, language-encoded ways of knowing the land are put at risk.
For instance, many Hawaiian place names have been replaced by place names of contrived combinations
of Hawaiian words or whose meanings are anchored in the nineteenth and twentieth century histories
of settler colonialism (e.g., street or places names reflecting missionaries, agents of U.S. government,
or military officers) and thus, no longer encode placial and genealogical history (Louis 2011). Such
replacements contribute to a loss of the record of how the land was used and who lived on it, and to
possibilities of lived experience and engagement.

Even in languages that are not endangered, the linguistic foundations of spatial cognition may be
changing. Researchers have noted a state of disconnection between older and younger generations as
ways of conceiving island spaces are not being passed down due to language contact and the introduction
of Western schooling and ideologies (Kape 2005). Wassmann (1993) observes that speakers conceptualize
their valley differently depending on whether they have received a Western education. Similarly, although
navigational techniques have seen a rebirth with the popularity of Hōkūle'a, as sailors in communities
throughout the Pacific adopt modern techniques, much of the detailed knowledge of the wind and celestial
systems has been lost (Hyslop 1999, Blust 2013). Space-time mapping is also changing due to Western
influence (Beller et al. 2005, Bender & Beller 2014), and Raapoto (2005) similarly questions the transmission
of conceptual temporal systems in Tahitian to younger generations.

Importantly, given this foundational role in individual and collective experience, the danger of the loss
of spatial and placial language or performative competence is clear as the languages and cultures of smaller
communities are challenged by governmental, economic, or other social forces motivating linguistic and
cultural unity. Only recently have LD&C researchers begun to regularly and methodically elicit and draw
attention to the various cultural, metaphorical, and personal impacts of spatial language. The corrosive and often traumatic legacies of settler colonial, mission, nation building, or globalization projects over centuries highlight the critical timeliness of language documentation and conservation of the spatial domain. The current disciplinary turn to space and place could only be more aptly timed, if it had taken place earlier.

1.2.2 The study of language and space in Malayo-Polynesian languages

Throughout this dissertation I focus solely on the Malayo-Polynesian languages, which have resulted in a vast literature on spatial language. However, the analyses presented throughout this dissertation are necessarily opportunistic in that they rely heavily on published data—including spatial grammars, language grammars, and dictionaries—which differ by author and region due to varying research traditions, approaches, and data collection methods. Further, there remains a paucity of available data on spatial orientation strategies. Because orientation systems are often embedded within local geography, in order to understand their function it is necessary to know not just the forms of the orientation terms but also their meaning across a range of geographic contexts and scales. Without this knowledge, it can be difficult or impossible to disambiguate meanings. In a region with a mountain range that lies to the north, a term which indicates direction toward the mountains could be equally well interpreted as 'landward' or 'uphill' or 'upriver' or simply cardinal 'north'. Only by asking what happens on the other side of the mountains can we distinguish these potential meanings. Yet, all too often sources lack this information.

Another issue stems from the research traditions that vary based on region. In some parts of the Pacific, such as Oceania, the study of language and space has simply received more attention. By Oceania, I mean the region where the languages of the Oceanic subbranch of the Austronesian language family are spoken. This includes the Austronesian languages of Papua New Guinea and all countries in the macro-areas of Melanesia, Micronesia, and Polynesia, excluding the two Philippine-type languages spoken in Micronesia–CHamoru and Palauan.

Linguists’ attention to space in Oceania can be traced back as far as the 19th and early 20th centuries. Grammars on several Polynesian languages include pre-contemporary attempts to describe the special role of spatial nouns and functional units in some Oceanic languages (Davies 1851, Janeau 1908, 1931). Then, in the mid-20th century, authors of grammars of Hawaiian, Woleaian, Mokilese, Kusaiean, and Pohnpeian treated locative nouns, prepositions, and directionals as major topics in understanding the relationships between the grammar of these languages and the lived cultures of their speakers (Lee 1975, Sohn 1975, Harrison 1976, Elbert & Pukui 1979, Rehg 1981). Not only were the grammatical manifestations of space addressed early, a plethora of anthropological literature on navigation and the language around it simultaneously emerged (Riesenber 1972, Gunn 1980, Goodenough & Thomas 1987).

The land-sea axis has long been assumed to be paramount to Austronesian orientation and navigation. And while this is supported by historical evidence (Proto-Austronesian reconstructed forms ‘daya ‘landward’ and ‘lahud ‘seaward’), it may, in part be motivated by this well-established tradition of research on language and space in Oceania. The cross-disciplinary endeavors into understanding Oceanic navigation and orientation revealed a widespread reliance on the land, sea, and winds for spatial orientation, a phenomenon that is grounded in culture, history, and the very act of peopling the vast Pacific. This research tradition coupled with a relative homogeneity in spatial orientation strategies compared to other areas, has perhaps given a false sense of uniformity to the entire language family. As a result, researchers working on language and space in the future should continue to seek to diversify the field to balance out the representation given to Oceanic languages.

While Oceania might suggest homogeneity in spatial orientation, East Nusantara reveals a vast diversity. Geographically, East Nusantara is framed by the Wallace Line to the west and Papua New Guinea to the east. Culturally, it is the area where Papuan and Austronesian peoples have co-existed for several thousand years. The languages of this region have thus been shaped by this long period of contact and
tend to be considered a cohesive linguistic area (Himmelmann 2005, Klammer et al. 2008, Schapper 2015). A tradition of study on language and space has recently developed in East Nusantara with several key works emerging in the last decade of the 20th century and the early 21st century. Some of the earlier spatial descriptions found in grammars include Mark Donohue’s work on Tukang Besi (Donohue 1999b), John Bowden’s description of Taba (Bowden 2001), and Jackson and Johann’s grammar on Iraratu (Jackson 2014). Detailed spatial descriptions can be found for Taba (Halmahera, Bowden 2014), Aralle-Tabulahan (Sulawesi, McKenzie 1997), Balantak (Sulawesi, Busenitz & Busenitz 1992), Alune (Maluku, Florey & Kelly 2002), and the languages of Halmahera (Holton 2017), among others.

This rich research base may in part be motivated by the diversity in spatial language and absolute orientation systems of East Nusantara which may themselves, be a result of the contact with non-Austronesian (Papuan) languages which have also received attention by linguists interested in language and space. Study of space in these non-Austronesian languages has focused on place reference (Williams 2016), toponyms and their relationship to culture (Holton 2011), and demonstratives and the grammatical encoding of elevation (Schapper & San Roque 2011). These studies on space in the non-Austronesian languages of East Nusantara reveal that many Austronesian languages have typically non-Austronesian features. Evidently, East Nusantara is an area full of promise for future spatial work. Its relatively robust research history has created a basis for comparison between languages, but the diversity revealed in spatial study suggests that there is much more to learn from the languages of this region.

The study of language and space in West Nusantara—what I loosely define as the region of Austronesian languages west of the Wallis line outside of the Philippines—is defined by a few prolific works that have shaped how Austronesianists approach spatial analysis. These include the description of Balinese spatial orientation by Wassmann & Dasen (1998) which gave a very detailed description of the mechanics of the Balinese spatial system and how it is grounded in both geography and culturally-rooted celestial and solar features. Another influential paper is the survey of Western Indonesian spatial systems by Alexander Adelaar (1997). This paper describes many of the common types of absolute systems throughout West Nusantara. A more recent focus on space in grammars on Gayo (Eades 2005), Kadorih (Inagaki 2014), and Nias Selatan (Brown 2001) has begun to vitalize this conversation. Still, the study of language and space has not been as much of a cornerstone to language research as it has been in Oceania or even more recently in East Nusantara. West Nusantara is a region that simultaneously sees homogeneity—as with the riverine systems of Borneo and the cardinal systems of Malay-type languages—while having representation from a wide variety of spatial systems. Thus, there is ample opportunity for future research to round out an understanding of language and space in West Nusantara.

Finally, while claims can be made that space has been an important area of study among the Malayo-Polynesian languages, the Philippines has been largely left out of this spatial renaissance. I hypothesize that this seems to be the case due to a few crucial reasons. First, many of the Philippine language grammars were written in the late 1800s and first half of the 20th century when linguists were generally more interested in the grammar of a language in isolation rather than how it may be connected to lived experience, and as a result, discussion of spatial language was largely left out of these grammars. This was also before widely-used nonlinguistic methods of eliciting space were developed, so when space was discussed, it was often with a European lens that led researchers to describe and define spatial orientation using terms that are more common in European languages such as ‘north’, ‘south’, ‘east’, ‘west’, ‘left’, ‘right’, etc. It appears that these trends have been perpetuated in contemporary grammars which continue to leave out a discussion of spatial orientation outside of prepositions and a brief description of demonstratives.

As a result, the literature in the Philippines on the surface may suggest that most Philippine languages make use of cardinal systems. However, this may be a direct result of how research (or the lack thereof) has been conducted over the decades. A true understanding of how orientation systems function in Philippine languages would require broad-scale and in-depth research of the several hundred languages. However,
this process has already begun with a recent paper published by Gallego (2018) who disentangles this past documentation and reveals the diversity that is waiting to be studied. As such, the Philippines is a region that is ripe for research on language and space. Nearly all of the Philippines’ several hundred languages would benefit from spatial work, and such research would be very valuable in rounding out the current understanding of spatial language in Malayo-Polynesian languages.

With these features of the secondary sources that informed my sample in mind, my discussion of the literature is necessarily biased to be more representative of the languages of Oceania and East Nusantara. It is my hope that bringing attention to this will add nuance to my discussion and also encourage researchers who work in the areas that are lacking to explore spatial language in more depth.

1.2.3 Gesture and space

Gesture also plays a major role in this dissertation, and in this chapter, I describe some fundamental features of gesture and its relationship to language and space. Gesture refers to the “visible action of any body part, when it is used as an utterance, or as part of an utterance” (Kendon 2004a). An utterance in gesture studies is multimodal, composed of both speech and gesture, though utterances may be solely spoken or solely gestured (Kendon 1980).

Different types of gestures can be related to speech in different ways. Emblematic gestures, such as the iconic Hawaiian shaka, can stand alone as utterances themselves. In contrast, speech-linked gestures—which occupy a grammatical slot in the sentence, such as in the utterance "And then he went [hand mimics swerving motions]"—are near-meaningless without the accompanying speech. Gestures’ relationship to speech have most famously been categorized in what McNeill (1992) calls Kendon’s continuum, which proceeds as such:

Gesticulation → Speech-linked gestures → Pantomimes → Emblems → Sign Languages

McNeill observes that gestures become less dependent on the co-produced speech with a higher degree of conventionalization. Although signs produced as part of a sign language system are not gestures as they are themselves linguistic forms, they occupy one end of the spectrum to represent the level of conventionalization and independence of language. On the other end of the spectrum, gesticulations are the least language-like. They are, usually unconsciously, produced alongside speech and rely on speech for meaning. Speech linked gestures are slightly more independent. Pantomimes and emblems also lie between these two extremes. In total, McNeill (1992, 2005) offers four continua which organize gestures based on their relationship to speech, their conventionality (or lexicalisation), their semiotic character, and the presence of linguistic properties (McNeill 2005). While the literature for all of the levels on the continuum overlaps to some extent, gesticulations and speech-linked gestures will be of interest in this dissertation.

The study of the role of gesture in communication reveals that gesture is an inseparable part of the language system (McNeill 1992, Kendon 2004a) to the extent that speaking itself is a variably multimodal phenomenon (Cienki & Müller 2008). As a largely unconscious contribution to speech (McNeill 1992, Iverson & Goldin-Meadow 1998, Núñez & Sweetser 2006), gestures can help speakers organize their thoughts and facilitate speech production (e.g. Kita 2000), but they are also designed with the addressee in mind (Özyürek 2002). Gestures can reveal people’s thoughts that are not verbalized (Goldin-Meadow 2003). They can manage a conversation by contributing pragmatic information (Kendon 2017), or they may enhance the meaning of the conversation with information not encoded in the speech stream (Bavelas et al. 1992). Gestures can even influence how information is conveyed through speech (Clark 2020). While these are not all of the functions of gesture, they do suggest that gesture should be considered a crucial part of linguistic analysis (Abner et al. 2015).
Gestures can be classified based on their function within the utterance. While different researchers assign different terms (see McNeill (1992) for an overview), throughout this dissertation, I use the terms that are commonly adopted in the literature. **Emblematic** gestures are conventionalized to the point that they themselves can stand alone as an utterance. This means that in the appropriate cultural context, the gesture has a clear meaning without accompanying speech (McNeill 1992, 2005). **Representational** gestures resemble some physical feature of the information within speech, such as the manner or direction of movement or the shape or size of an object (Iverson et al. 1994). **Pragmatic or interactional** gestures serve to manage the discourse. They can be used to mark topic switches, turn-taking, engagement, and a variety of other functions (Kendon 2017). **Beat** gestures align with prosodic features of speech, and do not necessarily convey meaning aside from indicating these prosodic cues (McNeill 2005). Finally, **deictic** gestures are gestures that target referents and locate them in relation to the speech event (McNeill 1992).

As part of a separate system that is integrated with language, gestures can have their own “grammar” (Bressem & Ladewig 2011, Bressem 2012). They have regularities in their meaning and structure (Ladewig 2012), and certain structures can directly relate to certain meanings (e.g. Cooperrider et al. 2018a). In order to analyze the grammar of gestures, they must be segmented into their component parts, which share many features with sign language phonology (Stokoe 1960, Klima & Bellugi 1979, Brentari 1998). These include hand shape, palm orientation, movement, and position (McNeill 1992). Hand shape refers to features of the hand including which fingers are extended, how they are extended, and whether fingers are touching. Palm orientation relates directly to which way the palm is facing. Some orientations include downwards, upwards, vertically, or laterally. Movement tends to be classified within three parameters: the kind of movement (straight, arcing, circular, etc.), the direction of the movement (towards the body, upwards, etc.), and the quality of the movement (speed, acceleration, etc.). Finally, position describes the gesture’s distance from the body and where it occurs in the space around the body (above head, center chest, etc.). Regularity in these features tends to align with regularity in gesture meaning or function (Kendon & Versante 2003, Wilkins 2003, Mesh 2021). For instance, palm-up gestures in languages around the world seem to all indicate an absence of knowledge (Cooperrider et al. 2018a) while higher pointing gestures tend to index farther referents (Wilkins 2003). I will repeatedly describe gestures based on these fundamental features throughout this dissertation.

In communication about space, gesture is particularly important; speakers use gesture nearly twice as frequently when talking about space (Alibali et al. 2001), and it has been suggested that the use of gesture may facilitate a speaker’s ability to talk and think about space (Alibali 2005). Some of the empirically studied contexts in which gesture is used in spatial communication include giving directions (Allen 2003), describing motion in space (Kita 2003b), or describing the layout of a room (Seyfeddinipur & Kita 2001). Because of gesture’s inherent connection to space, several theories have emerged in an attempt to explain their close relationship. Both Krauss et al. (2000) and Kita (2003b) posit that representational gestures—gestures that represent an object, person, action, etc.—derive from spatial representations of concepts (or spatio-motoric concepts as termed by Kita). McNeill (1992) takes a slightly different view suggesting that gestures simply reflect mental images which consist of both imagery and linguistic representations. While it is clear that gesture is important in effectively communicating spatial information (Alibali 2005), a growing body of work suggests gestures may also help speakers think about spatial information (Kita 2000) and convey spatial information when speakers cannot access the words (Göksun et al. 2015). This is evident from decreased performance when speakers cannot gesture while talking about spatial content (Rauscher et al. 1996) and an increased performance when speakers are encouraged to use gesture when navigating a spatial task (Chu & Kita 2011).

Pointing gestures are particularly relevant to the study of language and space. They have generated much of the study of gesture and space in the Pacific (see Chapter 3), and they will also be my focus as I study Hawu. Pointing is a deictic gesture that can be defined as a body movement that is specialized for indicating a referent (Kendon & Versante 2003: 109). Through the act of pointing, a vector is projected from
the body part toward the referent (Kita 2003b). Though unique to humans and one of the primordial forms of language (Povinelli et al. 2003, Butterworth 2003), pointing seems to be a learned phenomenon (Wilkins 1993); members of different communities may choose to employ different body parts or hand shapes for different reasons. In Ghana, pointing with the left hand is taboo, so speakers solely use the right hand to point (Kita 2001). Pointing with the left hand is also taboo in parts of Indonesia, and speakers similarly avoid gesturing with the left hand. In Sāmoa, pointing with the index finger is taboo, so speakers use other hand shapes or body parts to point (Mosel 2004). Speakers of the Tucano and Arawak communities in the Vaupes River basin (along the border between Brazil and Colombia) also use a variety of body cues to point including lips, head nods or tilts, and the index finger (Dixon 2003: 87). Lip pointing is particularly common in communities throughout the world. Lip pointing minimally involves the protrusion of one or both lips in the direction of a referent, but this action is nearly always accompanied by other actions which may include a chin raise or lift of the head, the direction of the gaze, and eyebrow lifting (Enfield 2001, Cooperrider & Núñez 2012). In some communities, such as the Barai of Papua New Guinea, lip pointing is ubiquitous (Wilkins (2003) citing personal communications with Mike Olson and Bill Foley). In many cultures, however, lip pointing coexists alongside index finger pointing, and they each may serve a slightly different function. Ewe speakers in Ghana use lip pointing when their hands are occupied or if they want to be more secretive about what they’re pointing to (from Wilkins (2003) and his reported personal communication with Essegbey and Ameka). Sometimes, lip pointing is a more informal way to point (Enfield 2001, Ortega-Santos 2016). In Papua, nose-pointing has also been described (Kendon 1980, Cooperrider & Núñez 2012), and some language groups, such as the Yupno people, tend to prefer to point with their lips and head as opposed to with their hands (Cooperrider et al. 2018b). Speakers of many languages, in fact, prefer to use non-manual pointing when trying to be more secretive or exclusive (Orie 2009).

Despite the evident links between gesture and spatial communication and despite Stephen Levinson’s recognition of this in his (2003) seminal work, the topic remains understudied (Alibali 2005), in particular among endangered languages. Even as this literature grows in underdocumented languages, the Austronesian languages are largely being overlooked. Researchers in Austronesia are some of the leaders in the discussion of language and space—their approaches explore the historical development of spatial language as well as the relationship between spatial language, culture, identity, multiplicity, and geography—but gestures have rarely been considered despite the evident links between spatial language and gesture.

1.3 The researcher

Finally, before I delve into the content of this dissertation I believe that it is important to discuss my background and perspectives in order to contextualize how my experiences have affected my work (following Sultana 2007, Holmes 2020). My research is fundamentally driven by a desire to understand how the natural and social environment of an interaction shapes and is shaped by language and gesture. This is embedded within a broader interest in increasing the documentation and description of the world’s languages by developing technologically advanced, collaborative, and empowering approaches to language documentation fieldwork.

On the surface, these research interests are entirely unrelated to my background; growing up in a suburb of Pittsburgh, Pennsylvania, I was not exposed to people whose ethnic, cultural, or linguistic backgrounds differed from my own monolingual English, white, middle-class upbringing. Even my education was restricted to American and Pennsylvanian history with some exposure to European cultures through the French and Spanish language classes that were offered in high school. However, the monotony of this sheltered childhood seemed to spark my curiosity in the world’s diverse languages and cultures.
I first became interested in linguistics when I was studying at Penn State University. It was there that I learned about the world’s linguistic diversity and the global threat of language endangerment. At that time, though, I struggled to realize that I could pursue study in these topics since my department was more focused on theoretical linguistics and multilingualism among speakers of European languages. As I expanded my network through this research, though, I began to meet people working in language documentation. Several years later, I re-entered the field of Linguistics as a graduate student at the University of Hawai‘i at Mānoa. I appreciated the department’s focus on language documentation training and the study of language within its broader context. I ultimately began working with the Hawu language in Indonesia because of the support I received from my mentors and through the personal connections that I made with Hawu speakers.

I understand that though my upbringing was sheltered, it also came with privilege that allowed me to pursue the education and opportunities that I have. I now have a career that is focused on engaging and collaborating with people who have different backgrounds from my own, so I try to continually recognize and reflect upon my position and the results of my actions. I have worked with the Hawu community for nearly four years now, but I understand that I do not have a native-like understanding of their language or their culture. I have had few opportunities to speak the language and immerse myself in the culture, and because this, I must be careful to avoid applying my own biases in data translation and analysis. I am further aware of the extractive nature of my research and the fact that though I am trained in linguistics, I may not know the best approach for language work with the Hawu community.

I aim to minimize these drawbacks by working closely with people within the speaker community and basing my research goals on their goals. In the work referenced in this dissertation, I have extensively collaborated with two Hawu speakers—Leonardo Lede Lay and Naomi Thomas Mare. They independently collected most of the data within this dissertation, and I highly value the active role that they played in the research process. They determined what kinds of data would be valuable to the Hawu community, and they were able to establish a more comfortable and natural recording environment. We found that when I was not in Sabu, the quality of the data immensely improved; recordings became longer, and the speech within them was more natural. I also treat transcription, annotation, and analysis of these data as a dynamic process. All members of the team provide input based on frequent discussions about language and culture. I hope that through making this work a collaborative effort, some of the drawbacks of my status as an outsider can be minimized. Instead we can draw on the diversity of our collective knowledge, skills, and expertises to pursue research that my collaborators find beneficial for their community.

I am grateful to have entered into the field of Linguistics at a time when the value of diverse voices is being increasingly recognized and when traditional methodologies are shifting to adopt community-driven methodologies (Czaykowska-Higgins 2009, Leonard 2017). Embracing these approaches was a core aspect of my education at the University of Hawai‘i, and I feel that as a researcher in this era who works with a language community that is somewhat removed from this discussion, I have a responsibility to take the initiative to establish community-engaged and non-extractive research methods that align with community concerns and goals. I am grateful to Naomi Thomas Mare and Leonardo Lede Lay who have guided me through this process and who have made this work possible. I hope through our continued collaboration that we can continually assure that the documentation of Hawu is conducted by Hawu people for Hawu people.

Finally, as I was writing this dissertation, the world was hit by a global coronavirus pandemic. Travel was restricted, and many countries closed their borders to foreigners as the world struggled to contain the virus. These restrictions lasted for the better part of two years, and even as I finish this dissertation, the future is still uncertain. This unexpected situation fundamentally changed the content of this dissertation. While I had originally intended to spend several months on Sabu island in order to understand the various aspects of spatial language and gesture in Hawu, this dissertation became more typological. Eventually, our research team was able to collect data remotely so that I could partially achieve my original goal, but
this system took several months to implement, and even after we began collecting data, we needed to be mindful of restrictions on gatherings due to the pandemic. While, as I mentioned, we saw the data improve in quality without my presence, I am also more removed from the data because I did not meet many of the speakers, and discussions between our team members were limited to Whatsapp. The pandemic also influenced my personal and academic lives. Schools moved to conduct all business online, and I was forced to move away from Hawai‘i, so this entire dissertation was written from my home Pennsylvania. Inevitably, it was difficult to write a dissertation on language in this isolated environment, but the pandemic also forced me and others working in this field to adopt new methodologies that may increase accessibility to language documentation research in the future.

1.4 Dissertation overview

The remainder of this dissertation after this introduction is structured as follows:

Chapter 2 contains a typological overview of the state of the literature on two major features of spatial language in Malayo-Polynesian languages: geocentric orientation systems and spatial deixis. Through this discussion I highlight some of the vast diversity of spatial language in Malayo-Polynesian languages. I describe the environmental features that motivate systems of absolute orientation which include the land and sea, coastlines, rivers, elevation, wind, and the sun—and I demonstrate how these features are coded within the linguistic system. I then describe systems of spatial deixis and categorize these into three major types of systems: distance-oriented, person-oriented, and elevational systems.

Chapter 3 provides a description of the various approaches that researchers have used to study spatial language in Malayo-Polynesian languages. Researchers have adopted non-spatial perspectives and frameworks to understand spatial phenomena by observing spatial language through culture, multiplicity, individual identity, history, gesture and sociotopography. All of these have offered unique insights into spatial language.

Chapter 4 details the documentary work that I have conducted on Hawu since 2019. I first introduce the Hawu language and people and review the current state of research on the language. I then describe my collaboration with Leonardo and Naomi and our methods for data collection, annotation, and archiving. I finally explain some notable features of how I present these data throughout the remainder of the dissertation.

Chapter 5 consists of an abridged grammar of Hawu and a description of its spatial language. This grammatical analysis is intended to offer a basic description of Hawu features in order to contextualize Hawu spatial language. I describe features Hawu’s phonology, morphology, word order, and grammatical properties. I then describe the several systems of spatial deixis within Hawu’s grammar as well as speakers’ use of other means of spatial orientation.

Chapter 6 is focused on pointing gestures in Hawu. I observe the ways in which pointing and demonstratives temporally and semantically align. I also study features of pointing—including the orientation of the vector, height, hand shape, and orientation—and how these relate to the meaning of the point.

Chapter 7 concludes this dissertation by offering connections between the many topics that have been addressed throughout. I summarize my findings and discuss their implications for the broader literature. Finally, I identify some areas for future work.
Chapter 2: The Study of Language and Space in Malayo-Polynesian Languages

2.1 Introduction

In Malayo-Polynesian languages space has been particularly important in shaping documentation and description as well as in contributing to the broader research of space and language throughout the world. Among many Pacific communities, spatial language plays an essential role in discourse and is tightly interwoven with cultural, social, and historical systems. Beyond spatial cognition, it influences village layouts, social hierarchies, land use, place naming, navigation, and much more. Because of the integral nature of space in all aspects of Pacific life, space has received attention from linguists, anthropologists, geographers, and beyond.

Throughout this dissertation, I approach Frames of Reference in the Levinsonian sense with three possible frames: relative, intrinsic, and absolute (Levinson 2003). I define ‘absolute’ systems as those that are anchored in the landscape and do not shift with a person’s orientation. When absolute systems are anchored in topographic or geocentric features, I refer to them as ‘geocentric’ systems. To European researchers who were only familiar with the largely egocentric orientation systems of European languages, the prevalent use of geocentric orientation systems in Austronesian languages is a particularly striking feature of Austronesian spatial systems. While relative and intrinsic frames may play varying roles in Austronesian languages, many languages even use absolute systems in very small-scale situations. For instance, van den Berg (1997: 213) hypothesizes that in the Muna language of South Sulawesi, left and right are only used to “describe lateral positions in the near vicinity of the speaker.” That is not to say that relative and intrinsic frames of reference are not in use in the Pacific. They are actually used quite prevalently depending on the language, but they have not received as much attention in the published literature as the absolute systems of the Pacific. Bennardo (2000) observes the use of relative, intrinsic, and absolute frame of reference in Tongan, and he finds that speakers are more likely to use relative and intrinsic FoRs in small-scale space such as describing a picture. In large-scale space, such as situating an object in a town, speakers may choose either relative or absolute, but it does appear that the larger the space, the more likely an absolute FoR is used. Regardless of the prevalence of the absolute FoR, Palmer (2002) observes that “referential systems operating within the absolute frame appear to be universal in Austronesian languages” (Palmer 2002: 111).

Another area of distinct variation that has received considerable attention over the decades is that of spatial deixis and demonstratives. Spatial deixis operates in a radial frame in which one or more members of a speech event serve as the deictic center in relation to a referent. Some authors have proposed deixis to be a fourth FoR (Danziger 2010, O’Meara & Báez 2011), because it represents an additional angular relationship between the figure, ground, and speaker. Austronesian languages have systems of spatial deixis that contain anywhere from two to seven spatial distinctions. They may be based on a variety of semantic parameters including distance from the deictic center (the speaker), distance from various speech events participants, and elevation. Non-spatial factors may also play a role including visibility, discourse
Absolute orientation in Austronesian languages

Throughout this chapter, I typologize absolute orientation and demonstrative systems in Malayo-Polynesian languages. I discuss the topographic and environmental motivations for absolute orientation (§2.2), and then I categorize demonstrative systems into three overarching systems (§5.7.1.1). This data is based on a language sample of 206 Malayo-Polynesian languages that were taken from published secondary sources including spatial grammars, language grammars, and dictionaries.

2.2 Absolute orientation in Austronesian languages

A long history of research has suggested that the most widespread geocentric directional system employed by speakers of Austronesian languages is that of a land-sea binary, meaning that speakers throughout the Pacific maintain an acute awareness of the position of the land and the sea (Palmer 2002, François 2004, 2015). The reason that this system is so prevalent may be because it can be traced to the Proto-Austronesian (PAn) terms *daya 'landward' and *lahud 'seaward', suggesting that Proto-Austronesian speakers used a land-sea orientation system (Adelaar 1997: 43, Blust 2013: 311).

Instantiations of this PAn axis can be found throughout the Austronesian family. Table 2.1 shows the various modern reflexes of PAn *daya and *lahud and in how many languages each reflex is reported to be found. In many languages, the terms have been reanalyzed to suit the modern directional system in use, such as a riverine, cardinal, or elevation system. This extension is quite natural. As speakers move away from an environment in which a land-sea distinction is prevalent or useful, rather than invent new words to talk about space, the words that already exist are adapted to refer to the most logical axis. As such, *daya usually means ‘upriver’ or ‘up(hill)’ in riverine and elevational systems. Meanwhile *lahud usually means ‘downriver’ or ‘down(hill)’. When extended to a cardinal use, the cardinal direction corresponding to each term reflects the historical location of the speaker community. For instance, Ilokano (ilo) is spoken primarily on the west coast of Luzon Island, where the seaward direction is to the west. Thus, Ilokano laud has grammaticized as ‘west’ and daya as ‘east’. In contrast, Madurese (mad) is spoken primarily along the south coast of Madura Island, where the seaward direction is to the south. Hence, Madurese laoʔ has grammaticized as ‘south’ and dhájá as ‘north’.

In other languages, the terms *daya and *lahud have lost their directional meaning and instead have simply become the nouns ‘land’ and ‘sea’, or the terms have been reanalyzed to describe related concepts. In several languages of the Philippines *daya refers to the sky or the heavens. The implications of *daya referring to a higher elevation (on most islands, particularly the mountainous islands of island Southeast Asia and the Pacific, the island interior is naturally higher than sea level) have been maintained, but the term’s ties to the land have been broken. Among the ‘other’ category, meanings of *daya range from ‘remote area’ and ‘back side’ to ‘the act of dragging a boat onto shore’. Meanings of *lahud range from ‘a clearing or open area’ to a exonym for the Malay people (etymologies are from the Austronesian Comparative Dictionary Blust & Trussel (2010)). Each of these terms maintain a conceptual link to the original ‘landward’ and ‘seaward’ meanings through either a geographic or cultural avenue.

However, while reflexes of *daya and *lahud occur all throughout the Austronesian family—indicating the diachronically pervasive nature of a landward-seaward orientation system—a recent survey of orientation systems in the Malayo-Polynesian languages outside Oceanic reveals a great diversity of geocentric systems, particularly within East Nusantara (Holton & Pappas 2022). The distribution of these are shown in Figure 2.1. Orientation systems have arisen that employ axes based on a variety of environmental features including rivers, coastlines, elevation, the path of the sun, and wind patterns.

In the remainder of this section, I will describe the geographic features on which these systems are based by briefly summarizing and expanding upon the typology established in (Holton & Pappas 2022). It should be noted that while each factor is separated and discussed separately, very few systems are
Absolute orientation in Austronesian languages

<table>
<thead>
<tr>
<th>*daya</th>
<th># of languages</th>
<th>*lahud</th>
<th># of languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>inland, landward</td>
<td>24</td>
<td>seaward</td>
<td>26</td>
</tr>
<tr>
<td>upriver, upstream</td>
<td>19</td>
<td>downriver, downstream</td>
<td>14</td>
</tr>
<tr>
<td>cardinal</td>
<td>8</td>
<td>cardinal</td>
<td>10</td>
</tr>
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<td>land</td>
<td>3</td>
<td>sea</td>
<td>24</td>
</tr>
<tr>
<td>highlands, interior</td>
<td>5</td>
<td>lowlands, coastal regions</td>
<td>4</td>
</tr>
<tr>
<td>sky, heaven</td>
<td>4</td>
<td>down, downhill</td>
<td>5</td>
</tr>
<tr>
<td>other</td>
<td>11</td>
<td>other</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 2.1: Reflexes of PAn *daya and *lahud (Blust & Trussel 2010)

Figure 2.1: The distribution of Malayo-Polynesian geocentric orientation systems. Land-sea-OC refers to systems in which a land-sea axis is indistinguishable from an elevational one (see §2.2.3 and §3.7.1 for more information). Malagasy (cardinal), Hawaiian (land-sea-Oc), and Marquesan (land-sea) are the only languages from the database that are not included in this map simply so that the areas with high linguistic diversity can be presented in more detail.

Based on a single environmental factor. More commonly, systems are comprised of a combination of several environmental features that make up a single hybrid system. The most common hybrid system is that of a land-sea system with an orthogonal coastal axis. But variations—including land-sea+cardinal, riverine+elevational, riverine+cardinal, among others—can be found throughout Austronesia. As a result, the resulting possibilities for hybrid systems of spatial orientation yield an enormous diversity of systems among Malayo-Polynesian languages.
2.2.1 Land-sea dichotomy

As orientation systems based on the distinction between land and sea have already been introduced, this section will be brief, focusing solely on the synchronic diversity of land-sea systems which are defined by an axis that runs perpendicular to the coast with one term meaning ‘landward’ or ‘towards the interior’ and one term meaning ‘seaward’ or ‘toward the sea’. The way in which this land-sea axis relates the geography of the island may vary by language, but it tends to fall into two subtypes; the axis may either be variable so that the axis always runs perpendicular to the coast, or it may be be fixed within the context of the island to align with an idealized coastline based on the shape of the island.

The first subtype is often referred to as a circular system, which tends to occur on smaller islands that are round. For instance, in the Manam (mva) system, shown in Figure 2.2 the land-sea axis always points perpendicular to the coast. Since Manam is a circular island with a single volcanic peak in its center, this means that while ‘landward’ always points to this single, central point, ‘seaward’ can point to the sea along an infinite number of axes radiating from the island center to the coastline.

![Figure 2.2: The land-sea system of Manam (Lichtenberk 1983: 572)](image)

In the second subtype, the land-sea system is fixed perpendicularly to an idealized coastline. This subtype is particularly common on long, thin islands. It differs from the circular systems in that there is presumably a point of convergence where the systems used on opposite sides of the island meet. In Longgu (lgu), a language spoken on the northeastern coast of Guadalcanal in the Solomon Islands, the land-sea orientation system has two fixed axes shown in Figure 2.3. The *toli-ala’a* axis running from the northwest point of the island to the southeast point indicates an idealized coastline for the entirety of Guadalcanal. The land-sea axis that is specific to the Longgu region is shown on the northeast coast of the island. It distinguishes *asi* ‘seaward’ versus *longa* ‘landward’ which runs along a regularized coastline for the Longgu-speaking area which does not align with that of the entire island nor does it change with the bends in the actual coastline.

The orthogonal axis to a land-sea axis may be an unoriented axis, such as that in Kedang where *oyo* may point both directions along the coast (Figure 2.4). However, it can also be rooted in other aspects of the environment and form part of a hybrid system. Balinese serves as a classic example of a hybrid system with
Absolute orientation in Austronesian languages

a land-sea axis intersected by a cardinal east-west axis. The land-sea axis of Balinese is lexified with terms reflecting 'daya' and 'lahud: kaja 'landward' and kelod 'seaward'. The mountain range on the north of the island serves as the central figure for the 'landward' axis. As the vast majority of the population is located in the south, kaja 'landward' takes on the meaning of 'north' and is fixed to point in a northward direction towards the northern mountains as shown in Figure 2.5. This is intersected by the orthogonal east-west cardinal axis. However, on the northeastern coast, these two axes should converge since the seaward direction lies roughly parallel to the east-west axis. However, as one moves along the east coast of Bali in an anticlockwise direction, the east-west axis is reinterpreted as a coastal one. The direction kangin 'east' shifts to follow the direction along the coast, i.e., to the left when facing the water (see Figure 2.6). The opposing term kauh 'west' indicates direction along the coast in the opposite direction, i.e., to the right when facing the water.

2.2.2 Coast

Orientation systems based on the coastline include an axis which is oriented parallel to the coast, distinguishing direction to the left from direction to the right when facing the water. Typically these systems are lexified with terms meaning 'up' and 'down', though which direction is 'up' varies across and within languages. That is, the direction to the left when facing the water may be 'up' in some locations but 'down' in others. Coastal axes are often orthogonal to a land-sea axis, which is naturally transverse to the coastal axis. However, the generic 'across' axis mentioned in §2.2.1 is not considered a coastal axis. The opposition between two terms meaning 'up' and 'down' is a distinguishing factor of coastal axes.

Interestingly, coastal axes have not been identified everywhere in the Malayo-Polynesian speaking region. No examples of coastal axes have been found in Western Indonesia, and only one has been observed in the Philippines. They are largely found in Eastern Indonesia—on Sulawesi and Halmahera in particular—and in Oceania.

In Halmahera of North Maluku, coastal systems seem to be a regional feature. The coastal axis in South Halmahera is co-lexified with terms meaning vertically 'up' and 'down', and the default meaning of these terms is always horizontal along the coast, not vertical. Thus, the Buli (bzq) example (2.1) could only refer to motion in a direction parallel to or along the coast.
Motion in a direction transverse to the coastline cannot be expressed using the ‘up’ and ‘down’ terms. Instead, the South Halmahera languages employ a transverse land-sea axis reflecting *daya and *lahud. This yields a system with two orthogonal axes: land-sea and upcoast-downcoast.

The South Halmahera directional roots are embedded within a larger deictic system which indicates direction of motion or absence of motion along the directional axis indicated by the directional root, as illustrated for Taba (mky) in Table 2.2.

<table>
<thead>
<tr>
<th></th>
<th>‘up’</th>
<th>‘down’</th>
<th>‘seaward’</th>
<th>‘landward’</th>
</tr>
</thead>
<tbody>
<tr>
<td>root</td>
<td>ya</td>
<td>po</td>
<td>la</td>
<td>le</td>
</tr>
<tr>
<td>essive</td>
<td>yase</td>
<td>pope</td>
<td>lawe</td>
<td>lewe</td>
</tr>
<tr>
<td>allative</td>
<td>attia</td>
<td>appo</td>
<td>akla</td>
<td>akno</td>
</tr>
<tr>
<td>venitive</td>
<td>yama</td>
<td>poma</td>
<td>lama</td>
<td>lema</td>
</tr>
<tr>
<td>partitive</td>
<td>tabtubo</td>
<td>umpo</td>
<td>kla</td>
<td>kle</td>
</tr>
</tbody>
</table>

Table 2.2: Taba (South Halmahera) directional stems (Bowden 1997).

One of the most remarkable features of the coastal directional system found in the South Halmahera languages is that it is areal, extending across all of Halmahera and small islands off the west coast. While the terms used to lexify the ‘up’ and ‘down’ directions vary across the languages, the orientation of the coastal axis remains consistent. This usage extends to local Malay (max) as well, so that Malay ka atas ‘upward’ and ka bawa ‘downward’ are interpreted by default as directions along the coast rather than along a vertical axis, even in regions of steep terrain (Taylor 1983). This axis is found in the non-Austronesian languages of the North Halmahera family as well (Holton 2017). The orientation of the coastal
axis is homologous to the upcoast-downcoast in the South Halmahera languages and local Malay. This shared regional alignment of the coastal axis allows multilingual speakers in the region to shift between languages without the need to shift orientation systems. This system has even been adopted into North Moluccan Malay which reflects the coastal system of orientation found in the local Austronesian (and non-Austronesian) languages of the region.

Because coastal axes are orthogonal to land-sea ones, both systems have the same subtypes; there are coastal axes that are circular, and there are those those which run parallel to a conventionalized coastline and converge at a certain point. Circular systems, where the polarity of the downcoast-upcoast axis is consistent, tend to be more common in small island environments. The coastal system is “circular,” in that if one circumambulates the island in an upward (or downward) direction, the direction remains upward (or downward) for the entire journey until one arrives again at the starting point. For instance, if one returns to
Figure 2.2, the Manam directional *ata* indicates clockwise movement around the island while *awa* indicates counterclockwise movement. This subtype is also seen in the Halmahera systems, particularly Makian Taba.

Makassarese (mak) provides a typical example of a coastal system that converges at a specific point. The axis is lexified by *rate* ‘up’ and *rawa* ‘down’. Makassarese also has a transverse land-sea axis lexified by *lau* ‘seaward’ (< *lahud*) and *raya* ‘landward’ (< *daya*) (Blust & Trussel 2010). The ‘up’ and ‘down’ terms of the coastal axis are paired with directional verbs *nai* ‘go up’ and *naung* ‘go down’. While all of these terms can be used in a vertical sense, they are commonly used by speakers in their horizontal, coastal sense (Liebner 2005, Jukes 2006: 271, 222). Example (2.2) reflects the conceptualization of this direction from Makassar to Pare-Pare, which is located approximately 125 km along the coast north of Makassar, shown in Figure 2.7 even though both locations are on the coast at the same elevation.

(2.2) *Ero-ka’ naung ri Pare-Pare.*

want-1sg GO.DOWN LOC P

‘I want to go down to Pare Pare’. (spoken in Makassar) (Makassarese; Liebner 2005: 271)

Similarly, the default interpretation of (2.3) is not vertical but horizontal along the coast. This example asks for news of a location up the coast, i.e., to the south in the vicinity of Makassar.

(2.3) *Apa-ji kabara’-na i-rate?*

what-QUAL news-3SG.POSS LOC-UP

‘What is the news from above?’ (Makassarese; Liebner 2005: 272)

Along the west coast of Sulawesi Island in the vicinity of Makassar the direction *rate* ‘up’ also aligns with south and *rawa* ‘down’ with north (see Figure 2.7). If this alignment were consistent, then this axis would be better viewed as cardinal, with the ‘up’ and ‘down’ terms serving merely as lexifiers of the axis. The geocentric nature of the axis becomes apparent as one moves south and east (i.e., anticlockwise) around the coast from Makassar. On the south coast, where the direction toward the sea is south, *rate* ‘upcoast’ and *rawa* ‘downcoast’ continue to be oriented parallel to the coast, so that *rate* ‘upcoast’ is aligned with east (to the left facing the water) and *rawa* ‘downcoast’ with west (to the right facing the water). As a result, there is a point of convergence of these two systems at the southeastern point of the island where, theoretically, to a person standing in that location, both directions along the coast would be *rawa* ‘downcoast’.

Some languages just show traces of a coastal system. This is the case in Keo, a language spoken on the south coast of Flores, which has just one term that is etymologically linked to ‘up’ and ‘down’. The primary orientation system in Keo is a land-sea axis indicating direction toward versus away from the coast, but Keo also makes use of two additional directional terms: *radé* ‘westwards along the shore’ and *mena* ‘eastwards along the shore’. Although these terms are sometimes associated with the cardinal directions ‘west’ and ‘east’, respectively, in practice they are oriented along the coast. Flores is a narrow island some 350 km in length, and in the region where Keo is spoken the coastline trends roughly northwest to southeast. Moreover, *radé* is co-lexified with the vertical directional ‘down’, so *radé* is literally ‘downcoast’, just as in the languages discussed earlier in this section. However, the opposing term, *mena*, is not co-lexified with *réta* ‘up vertically’, so it is not clear to what extent *mena* is conceptualized as ‘upcoast’. Still, *mena* is frequently used in constructions with the directional verb *nuka* ‘go up’, as in (2.4), suggesting that *mena* is indeed associated with the upward direction.

(2.4) *Imu mbana pau pu’u radé Mbawa nuka mena.*

3SG walk EMPH from DOWNCOAST M go.up UP COAST

‘She walked from downcoast (west) in Mbawa going east (up the coast).’ (Keo; Baird 2002: 360)
Figure 2.7: Arrows indicate the direction of *rawa* ‘downcoast’ along the coast of South Sulawesi and Selayar Island; *rate* ‘upcoast’ is oriented in the opposite direction.

Alune (alp), spoken on Seram Island in Central Maluku, also exhibits traces of a coastal axis, defined by *ndi* ‘parallel to the coast with ocean on the left’ and *mpai* ‘parallel to the coast with ocean on the right’. A transverse land-sea axis is defined by *mlau* ‘seaward, downriver’ (likely < *lahud*) and *ndai* ‘landward, upriver’ (likely < *daya*). An additional vertical axis is defined by *mlete* ‘up’ and *mpe* ‘down’. Thus, in contrast to many of the previously-described coastal systems, Alune coastal directions are lexically distinct from the vertical ‘up’ and ‘down’ terms. The etymologies of the coastal directional terms are obscure.

Coastal systems seem to develop from a variety of environmental features. In Halmahera it is not always possible to predict which way is ‘up’ and which way is ‘down’ along the upcoast-downcoast axis. Some authors have proposed that the ‘up’ direction is oriented toward the social center or area of higher social status (Bubandt 1997, Teljeur 1987), while other authors have proposed just the opposite, that the ‘down’ direction flows toward the social center (Bowden 1997, Allen & Hayami-Allen 2002). More recently, Holton (2017) has proposed that the coastal directional systems in Halmahera derive from an original riverine system. This riverine hypothesis is compelling since historically many coastal communities lived in an inland landscape before migrating to the coastal regions and adapting their riverine systems to a coastal context. In Oceania, in contrast, coastal systems seem to be motivated by the tradewinds (François 2004). Throughout Oceania, the tradewinds blow from the southeast to the northwest. A navigational axis based on these winds may have been adapted to fit the direction of the coastline, so that now ‘upcoast’ in many languages points south, southeast, or east while ‘downcoast’ points in the opposing direction.

### 2.2.3 Elevation

In spatial orientation, elevation distinguishes the elevation of a referent relative to the deictic center. Within the region, elevation systems are generally viewed to be a feature of the non-Austronesian languages of East Nusantara and New Guinea; however, elevation is found in several Malayo-Polynesian languages, often in combination with other systems. Elevation systems near-entirely occur in mountainous regions such as Sulawesi, Maluku, Sumatra, and the high islands of Oceania. They are most well-documented in Sulawesi, especially within the Eastern Celebic and Sangiric branches, thus suggesting they may be an areal or a genetic feature, or both. Yet, dramatic terrain is not a prerequisite to elevation systems. For instance, Muna island is not very mountainous. It is hilly with wide flat coastal areas resulting...
in villages that are around the same elevation; yet, an elevation system prevails. Similarly, elevation is a key component to Iaai (iai) orientation, but Iaai is spoken on a relatively flat, raised atoll.

The spatial criteria which distinguishes how elevation systems are used can vary across languages. Burenhult (2008: 110) makes a distinction between verticality proper, global elevation, and geophysical elevation. Verticality proper refers strictly to the vertical axis. Global elevation is irrespective of landscape and relies entirely on the elevation difference between the deictic center and the referent, whereas geophysical elevation is intimately tied to the topographic relief of the landscape. The latter two types of systems are of interest in this section.

Elevation systems distinguish at least two levels. In Austronesian languages, these two basic levels are usually high (above the deictic center) versus non-high (at the same level or below the deictic center) or high (above the deictic center) versus low (below the deictic center). Some Austronesian languages, however, may distinguish three or four levels.

Tukang Besi is a Celebic language of Sulawesi, spoken in the the Tukanbesi islands in the Wakatobi regency south of Sulawesi. It contrasts two elevational terms: ito refers to referents that are higher in elevation while iwo refers to referents that are lower in elevation.

(2.5)  
No-elo [te ana-no mai [um]ita te kadadi ito.  
3r-call core child-3poss inal see.sf core bird that.up  
‘She called her child, who was watching the bird up (in the tree)’. (Tukang Besi; Donohue 1999b: 145)

(2.6)  
Ku-[um]angke i iwo  
1sg-sail.sf obl that.down  
‘I want to sail to (Lasalimu)’. (Tukang Besi; Donohue 1999b: 139)

Aralle-Taulahan (atq) of western Sulawesi is a system that distinguishes high, level, and low. It employs two systems—an elevation and a riverine system—that are used opportunistically based on the most salient geographic feature at the time of the utterance and which are shown in Table 2.3. The elevation system has a three-way elevational distinction between high, level and low. This system is used alongside a riverine system that distinguishes ‘upriver’, ‘downriver’, and ‘across’. Interestingly, while the reflex of PAn *lahud, lau ‘downriver’, is part of the riverine system, the reflex of PAn *daya is reflected not as ‘upriver’ but rather as dai ‘high’.

<table>
<thead>
<tr>
<th>Directional</th>
<th>Locative</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>dai’</td>
<td>yaho</td>
<td>‘high’</td>
</tr>
<tr>
<td>naung</td>
<td>hoi’</td>
<td>‘low’</td>
</tr>
<tr>
<td>pano’</td>
<td>hao</td>
<td>‘level’</td>
</tr>
<tr>
<td>tama</td>
<td>yaling</td>
<td>‘upriver’</td>
</tr>
<tr>
<td>sau</td>
<td>lau’</td>
<td>‘downriver’</td>
</tr>
<tr>
<td>bete’</td>
<td>hipe</td>
<td>‘across’</td>
</tr>
</tbody>
</table>

Table 2.3: Aralle-Tabulahan directionals (McKenzie 1997: 224).

Examples (2.7) & (2.8) demonstrate how Aralle-Tabulahan speakers choose between the riverine and elevation systems according to context. In (2.7), naung ‘low’ is employed while sau ‘downriver’ is used in (2.8).
The only language identified to distinguish four elevational distinctions is Bantik (bnq), a Sangiric language of northern Sulawesi. It distinguishes terms for somewhat higher and lower referents and considerably higher and lower referents (Table 2.4). The distinction between 'considerably' and 'somewhat' upwards or downwards relies on the salience of the elevation change. As a result, the 'somewhat' terms daya and raʔ are usually used when the referent is farther away and thus the horizontal distance is more salient than the vertical one. Bantik additionally has two paradigms of dynamic forms distinguishing translocative movement away from the deictic center versus cislocative movement toward the deictic center, resulting in a total of sixteen elevational terms.

<table>
<thead>
<tr>
<th></th>
<th>LOC</th>
<th>TRANS</th>
<th>CIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considerably upwards</td>
<td>dan</td>
<td>tanaiʔ</td>
<td>naiʔ</td>
</tr>
<tr>
<td>Somewhat upwards (far)</td>
<td>daya</td>
<td>tamai</td>
<td>mahi</td>
</tr>
<tr>
<td>Somewhat downwards (far)</td>
<td>raʔ</td>
<td>tansao</td>
<td>nsao</td>
</tr>
<tr>
<td>Considerably downwards</td>
<td>baba</td>
<td>tanao</td>
<td>nao</td>
</tr>
</tbody>
</table>

Table 2.4: Bantik elevational terms, showing forms for a stationary entity (LOC), movement away from the deictic center (TRANS), and movement toward the deictic center (CIS) (after Utsumi 2014: 123).

A seeming feature of elevation in Malayo-Polynesian languages is that it can sometimes be difficult or maybe even impossible to tease apart global from geophysical elevation. In particular, land-sea and elevational systems tend to overlap since the land-sea distinction has a natural semantic extension to elevation, based on the association of seaward locations as lower in elevation and landward locations as higher in elevation. As a result, 'landwards' commonly coincides with 'upwards', and 'seawards' commonly coincides with 'downwards' throughout the Malayo-Polynesian languages. For example, if we return to the two-way elevation system of Tukang Besi (khc, bhq), it was originally a land-sea system, but can also be interpreted as an elevation system. Table 2.5 shows the many meanings that each term may have.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ito</td>
<td>'landwards, up, (north)east, in, higher social status'</td>
<td></td>
</tr>
<tr>
<td>iwo</td>
<td>'seawards, down, (south)west, out, lower social status'</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.5: Tukang Besi land-sea terms with extended meanings (Donohue 1999a: 139).

The hierarchy in Figure 2.8 demonstrates the convoluted and overlapping nature of notions of elevation, land-sea, containment, and cardinal directions (Donohue 1999b). Speakers of Tukang Besi prefer to locate a referent as ito 'high'. As a result, the term ito 'high' can be used in its elevational, cardinal, land-sea, or container sense before a speaker will choose iwo 'low'.

In Oceania, the impossibility of untangling land-sea and elevational systems is particularly prevalent. Throughout Oceania the land-sea axis may also take on the meaning of ‘up’ (i.e., landward) and ‘down’
Figure 2.8: Hierarchy of Tukang Besi high and low terms. Both ito high and iwo low can have several meanings, so a hierarchy has been developed to help speakers manage these different meanings and avoid miscommunications.

<table>
<thead>
<tr>
<th>Language</th>
<th>ISO</th>
<th>Land-sea axis</th>
<th>Etymology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saliba</td>
<td>sbe</td>
<td>sae, dobi</td>
<td>up, down</td>
</tr>
<tr>
<td>Yabêm</td>
<td>jae</td>
<td>-sà, -sa</td>
<td>in, out</td>
</tr>
<tr>
<td>Kokota</td>
<td>kkk</td>
<td>rhuku, rauru</td>
<td>?, ?</td>
</tr>
<tr>
<td>Longgu</td>
<td>lgu</td>
<td>longa, asi</td>
<td>[bush], sea</td>
</tr>
<tr>
<td>Kwaio</td>
<td>kwd</td>
<td>fataia, asi</td>
<td>bush, sea</td>
</tr>
<tr>
<td>Mwotlap</td>
<td>mlv</td>
<td>hay, yow</td>
<td>in, out</td>
</tr>
<tr>
<td>Ambae</td>
<td>omb</td>
<td>hage, hivo</td>
<td>up, down</td>
</tr>
<tr>
<td>Anejoñ</td>
<td>aty</td>
<td>-pahai, -pok</td>
<td>?, ?</td>
</tr>
<tr>
<td>Xäräcûã</td>
<td>ane</td>
<td>axwè, anâ</td>
<td>up, down</td>
</tr>
<tr>
<td>Nemi</td>
<td>nem</td>
<td>-da, -dic</td>
<td>up, down</td>
</tr>
<tr>
<td>Iiai</td>
<td>iai</td>
<td>iô, ü</td>
<td>[up, down]</td>
</tr>
<tr>
<td>Ponapean</td>
<td>pon</td>
<td>-long, ei</td>
<td>bush, sea</td>
</tr>
<tr>
<td>Samoan</td>
<td>smo</td>
<td>i uta, i tai</td>
<td>bush, sea</td>
</tr>
<tr>
<td>Marquesan</td>
<td>mrq,mqm</td>
<td>'i uta, 'i tai</td>
<td>bush, sea</td>
</tr>
</tbody>
</table>

Table 2.6: Etymologies of Oceanic directional terms (based on François (2004: 7))

(i.e., seaward), thus functioning as a kind of elevation system. This is shown in Table 2.6 which has been adapted from François (2004: 7). The axis in each system distinguishes the land from the sea. In languages with etymologies meaning 'bush' and 'sea', this axis has clearly always meant 'landwards' and 'seawards'. In others, however, the etymologies are 'up' and 'down', suggesting that perhaps elevation, as opposed to land and sea, played a larger role in the development of the axis.

This polysemy is particularly common among the languages of Vanuatu and New Caledonia. In many New Caledonian languages in particular, the land-sea axis is also accompanied by vertical terms indicating a conceptual state in which the sea is down and the land is up. Cauchard (2015: 138-139) nicely describes this phenomenon in Caac (msq) with the following explanation:

"As in other Kanak languages but in contrast to many Oceanic languages in which directionals are based on the lexemes ‘sea’ and ‘land’ (Bowden 1992: 35-44, 47-58), in Caac the two directionals da ‘upward’ and de ‘downward’ do not originate from the lexical words for ‘mountain’ (joor) and ‘sea’ (kumaac ‘beach, low tide, sea’, denec ‘deep sea’ or we ‘water’). As in other northern New Caledonian languages, like Nêlémwa (nee) and Nyelâyu (yly) (Bril 2004, Ozanne-Rivierre 1997: 51), the absolute directionals de ‘downward’ and da ‘upward’ most likely originate from the directional verbs te ‘go down’ and ta ‘go up’. Ta ‘go up’ and te ‘go down’ make the same semantic distinctions along the vertical axis and on the horizontal plane as their corresponding two pairs da ‘upward’ and de ‘downward’. The forms coding up/down in Caac and in the neighbouring languages are related: da/de in Caac, da/du in Nêlémwa (Bril
Evidently, because of the widespread acknowledgement that elevation is a crucial factor in shaping Malay-Polynesian orientation systems combined with the relative under-documentation of elevation in these languages, this is an area requiring more documentation and research.

### 2.2.4 River flow

Axes based on the flow of the river are oriented parallel to a river, distinguishing upriver and downriver directions. On islands this can seem like an arbitrary distinction to make since many rivers, especially the larger ones run towards the sea, suggesting that perhaps the conceptual ideas of ‘downstream’ and ‘seaward’ overlap entirely. In some areas, yes; ‘seaward’ is directly aligned with ‘downriver’ (at least at the river mouth). However, riverine systems are distinguished by the fact that the meaning of ‘upriver’ and ‘downriver’ has been fully conventionalized to follow the local bends of the relevant river body. Because riverine orientation relies on reference to a particular river, the interpretation of riverine directional terms can differ depending on which river is used for reference—for example, whether one is referring to a local tributary or the main river.

This reliance primarily on the direction of the river flow is evident in etymologies of riverine terms that are not derived from PAN *daya and *lahud. Inati (atk), a Malayo-Polynesian isolate of the Philippines, has *pamurik ‘upriver, toward the interior’ (< PWMP *pa- + *um-udahik ‘go upstream’) and *ribaba ‘downriver, toward the sea’ (< PMP *babaq ‘below’) (Gallego 2018: 91). In Borneo there is a widespread use of PMP *qiliR ‘to flow downriver’ which is often reflected as a directional meaning ‘downriver’, and PMP *udahik ‘upriver part of a river’ is often reflected with the meaning ‘interior, headwaters, upriver’. In addition, at least three riverine terms were innovated in Proto-Greater North Borneo: *ajuʔ ‘towards the interior; towards upriver areas’, *uud ‘the interior; upriver areas’, and *sabaʔ/*baʔay ‘downriver’ (Smith 2017: 315).

In riverine systems—like other geocentric orientation systems—the ‘upriver’ and ‘downriver’ directional terms are not just used for locations on and movement along the river. Rather, they are general directional terms which locate referents at a variety of scales. In Mualang (mtd) in Borneo, shown in example (2.9), the riverine system is used to describe the small-scale relationship of two frogs sitting beside each other.

(2.9) *Dua iku’... ti s-iku’ da ili’.*

two CLF REL ONE-CLF LOC DOWNRIVER

‘Two (frogs)...one of them was at the downriver side.’ (Mualang; Tjia 2007: 204)

Meanwhile, in the following Aralle-Tabulahan example, the riverine system describes the large-scale relationship between two villages.

(2.10) *Manii-ke’ di maloe la-sumule-ä yaling mai di Paku.*

later-NCMP GP afternoon FUT-RETURN-ISA upstream to.here GP Paku

‘I’ll return from (upstream at) Paku later this afternoon.’ (Aralle-Tabulahan; McKenzie 1997: 234)

Among Austronesian languages, riverine systems are mostly in locations where sight of the coast is quickly lost and people instead rely on the rivers for food, water, and transportation. This usually means that riverine systems are found on larger islands such as Borneo, Sumatra, Luzon, Mindanao, Sulawesi, and Papua. But while the majority of riverine systems are used on these islands, this is not at all exclusive. Riverine systems are also used by speakers of Buru (mhs) (Buru island, Maluku), Ambel (wgo) (Ambon, Maluku), and Biak (bhw) (Biak island, Papua), all of which are spoken on relatively small islands. Yet,
the proximity to the sea remains evident in the spatial orientation strategies of the these languages. In Ambel the land-sea system can also be used as a riverine system. Meanwhile, in Biak, a land-sea and a riverine system axis in concert, chosen opportunistically by speakers. The distribution of riverine systems is shown in Figure 2.9. Note that in the published literature, intriguingly, I have identified no reports of riverine systems in Austronesian languages beyond Western New Guinea.

As with land-sea systems the transverse axis of riverine systems may be a generic ‘across’ axis—as is the case in Buru (mhs), Irarutu (irh), and many Subanen and Manobo languages—or any number of axes from other types of systems (e.g. elevational or cardinal axes), a transverse axis of ‘toward the river’ and ‘away from the river’ is exclusive to riverine systems. This type of system is most common in Borneo, possibly due to the flat landscape of many parts of Borneo. For instance, in Ngaju (nij), a West Barito language of Central Borneo, the upriver-downriver axis is transected by a transverse axislexified with ngambu ‘away from the river’ and ngiwa ‘toward the river’. Ngaju also has a generic ‘across river’ term dimpah. The Ngaju region is transected by several major rivers, including the Kapuas, Kahayan, Katingan, and Mentaya Rivers, and as illustrated in Figure 2.10, it has little topographic relief. Thus, the toward and away from the river terms cannot readily be equated with downhill and uphill which is possible in some other systems in more mountainous areas such as Gayo (gay) (Eades 2005). Rather, they indicate directions toward and away from the river body itself, regardless of elevation. In a region with many rivers, the choice of directional term depends on the choice of reference river.

Embaloh (emb), spoken in the north-eastern part of West Kalimantan but belonging to the South Sulawesi language subgroup, has an additional term that adds more complexity to the system. Like Ngaju, Embaloh has urait ‘upriver’ < *udahik, kalaut ‘downriver’ < *lahud, and suali ‘across’, anait ‘toward the river’, and indoor ‘away from the river to a nearby area’. The Embaloh system is further elaborated with kandaa ‘away from the river beyond the village’ (see Figure 2.11) (Adelaar 1997: 70).

As this section demonstrates, the riverine axis is synchronically quite similar across languages, distinguishing ‘upstream’ from ‘downstream’. These terms may derive from PAN *daya and *lahud or from terms meaning ‘upstream, headwaters’ or ‘downstream’ (e.g. PMP *qiliR ‘to flow downriver’ and *udahik ‘upriver part of a river’). While those axes orthogonal to the riverine one may be based on a variety of
geographic or environmental features, one that is exclusive to riverine systems is that which distinguishes ‘towards the river’ and ‘away from the river’.

2.2.5 Wind systems

The winds of southeast Asia and Oceania have played an important role in shaping modern day orientation systems. Wind is a salient feature of marine environments, and was an instrumental natural phenomenon that Pacific navigators had to master (Lewis 1972, Osmond 2000).

In Indonesia, and the Philippines there are two major wind patterns. The east monsoon (‘southeast monsoon’) begins in July/August and the west monsoon (‘southwest monsoon’) begins in December/January (Blust 2013: 154). The names of the monsoon winds themselves are used in orientation systems. Thus, variations of *timuR and *habaRat (Blust & Trussel 2010) can be found throughout the region. These may either be direct reflexes of the PMP terms or borrowed from Malay.

The Malay (msa) system is the most well-known and widespread system derived from the monsoon winds. Today the Standard Malay system is an eight-point system that has become a cardinal system (see Figure 2.12). While it is now abstracted from environmental features, the etymologies of the terms reflect
their historical origins. The east-west axis is lexified with wind terms, *timur* (< PMP *timuR* 'southeast monsoon') and *barat* (< PMP *habaRat* 'northwest monsoon') (Blust & Trussel 2010). It is likely that this Malay 8-point cardinal system was adopted for its utility in maritime navigation (Adelaar 1997). The Malays were powerful navigators and traders, who had widespread influence on navigation throughout the regions, and as a result, the Malay system has been borrowed by many other languages.

One such language is Malagasy (mlg) of Madagascar. Malagasy -varatra 'north' and -tsimo 'south' correspond to Malay *barat* and *timur*, respectively. These terms' semantic shift from east-west to north-south suggests that the system was borrowed before the Malay east-west axis had been fully conventionalized to a cardinal system at a time when a polysemy with their original terms for the monsoon winds still existed, allowing them to be easily associated with local geographic and climatic patterns in Madagascar. The Malay term for the wet northwest monsoon, *barat*, was naturally associated with the wet northern monsoon in Madagascar (Adelaar 1997, citing Dahl 1951: 326).

While the Malay and, by proxy, the Malagasy systems have roots in navigation, these systems are now used for land orientation as well. The land extension of wind axes can be seen throughout Austronesia. Often, in the Philippines, a wind axis is orthogonal to a sun-based axis. For instance, impressionistically, the most common system in the Philippines employs sun terms for the east-west axis and wind terms for the north-south axis (see Table 2.7). In these systems, the terms for 'north' reflect *qamiS* 'north wind', while the terms for 'south' reflect *timuR* 'south or east wind', PMP *SabaRat* 'south wind', and PWMP *salatan* 'south wind'.

Several languages in the Philippines and Oceania combine a wind axis with a land-sea one instead. In the Philippines, these systems seemed to have been conventionalized to become cardinal systems (see Table 2.8). Meanwhile, in Oceania, the land-sea axes have retained their geographic association while

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1 A system with terms deriving from both the sun and the wind is most common in Gallego’s (2018) survey of the etymology of cardinal terms in 54 languages of the Philippines.
Absolute orientation in Austronesian languages

<table>
<thead>
<tr>
<th></th>
<th>north</th>
<th>south</th>
<th>east</th>
<th>west</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tagalog</td>
<td>hilaga</td>
<td>timog</td>
<td>silangan</td>
<td>kanluran</td>
</tr>
<tr>
<td>Hiligaynon</td>
<td>amihan</td>
<td>timog / habagatan</td>
<td>sidlangan</td>
<td>katundan</td>
</tr>
<tr>
<td>Cebuano</td>
<td>amihan</td>
<td>habagatan</td>
<td>silangan</td>
<td>kasadpan</td>
</tr>
</tbody>
</table>

Table 2.7: Cardinal systems based on sun and wind terms

<table>
<thead>
<tr>
<th></th>
<th>north</th>
<th>south</th>
<th>east</th>
<th>west</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ilokano</td>
<td>amianan</td>
<td>abagatan</td>
<td>daya</td>
<td>laud</td>
</tr>
<tr>
<td>Ibatan</td>
<td>ammyanan</td>
<td>abagatan</td>
<td>daya</td>
<td>laod</td>
</tr>
<tr>
<td>Madurese</td>
<td>dhájá</td>
<td>lao</td>
<td>temor</td>
<td>bhárá</td>
</tr>
</tbody>
</table>

Table 2.8: Cardinal systems of several languages of that Philippines that are based on wind and land-sea terms (based on (Gallego 2018))

The wind axes have been conventionalized to follow the coastline as was discussed in §2.2.2. In Oceania, for most of the year, the tradewinds primarily blow from the southeast. As a result, in the wind-based systems of Oceania, the direction for going against the wind colexifies with a term for ‘up’ while that going with the wind colexifies with the word for ‘down.’ While wind directions may be linked to a number of environmental dynamics (seasons, weather), throughout the Pacific, ‘up’ often points east or southeast, corresponding to the direction of the tradewinds.

The languages of New Caledonia provide a typical example of wind axes in Oceania. Most languages of Grand Terre distinguish an up-down axis running relatively south-north, corresponding both to the general southeast to northwest direction of the tradewinds and to the lengthwise direction of the island. This axis is orthogonal to the land–sea axes of most languages (which run roughly east-west) in New Caledonia (Ozanne-Rivierre 1999). In Nelémwa (nee), the ‘up’ and ‘down’ directionals—which refer to movement lengthwise along the island rather than vertical height or elevation—may occur alone, as shown in (2.11), but they are often accompanied by the terms for the winds—bweo ‘the southeast wind’ and bweeravac ‘the southwest wind’—as shown in (2.12) (Bril 2004).

Nelémwa, New Caledonia (Bril 2004)

(2.11) Hna-kuu/f-a faala-m da Numia xe eneda?
place-end-DET trip-poss.2sg up Noumea TOP when?

'Your last trip (up) to Noumea (south), when was it?' (Bril 2004: 115)

(2.12) ...ava yumeewu mahleena tuume na bweo.
...some clan these.DEIX go.down loc s.e.wind

'... some of these clans which arrived to the north from the east (coast)'. (Bril 2004: 116)

In general, in Oceania the wind axis seems to play a larger role at the navigational scale (e.g. traveling from one island to another) where the wind may be the most salient geophysical feature with which to orient oneself. In Ambae (omb), a language of Vanuatu, inter-island travel is based on a wind axis; travelers between islands go hage ‘up’ to any island to the south and east and hivo ‘down’ to any island to the north and west. However, for movement on the island of Ambae itself, speakers use a land-sea axis with an orthogonal undifferentiated ‘across’ axis.

Wind terminology has evidently become grammaticalized into many Malayo-Polynesian spatial systems for use in land navigation. This highlights the striking fact that that for Austronesian navigators,
the wind served as a geographic feature that was so salient that it became part of the spatial grammar of many contemporary Malayo-Polynesian languages.

### 2.2.6 The path of the sun

While geocentric orientation systems have received more attention among Malayo-Polynesian languages, systems based on the path of the sun are widespread throughout the family. Terms for the cardinal east-west axis commonly derive from reference to the movement of the sun. In a region which largely straddles the equator, there is a natural equation of east with the rising sun and west with the setting sun. This appears to be particularly common in the Philippines. Gallego (2018) identifies at least 16 of 54 languages with full cardinal systems for which the east-west axis is encoded using terms referencing the path of the sun, all of which are shown in Table 2.9.

<table>
<thead>
<tr>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aklanon (akl)</td>
<td>sidlangan</td>
</tr>
<tr>
<td>Capiznon (cps)</td>
<td>sidlangan</td>
</tr>
<tr>
<td>Casiguran Dumagat (dgc)</td>
<td>sikat</td>
</tr>
<tr>
<td>Cebuano (ceb)</td>
<td>sidlakan</td>
</tr>
<tr>
<td>Cuyunon (cyo)</td>
<td>sidlangan</td>
</tr>
<tr>
<td>Hiligaynon (hil)</td>
<td>sidlangan</td>
</tr>
<tr>
<td>Masbate (bks)</td>
<td>sirang</td>
</tr>
<tr>
<td>Tagalog (tgl)</td>
<td>silangan</td>
</tr>
<tr>
<td>Imorod Yami (tao)</td>
<td>dadan no araw</td>
</tr>
<tr>
<td>Kapampangan (pam)</td>
<td>aslagan</td>
</tr>
<tr>
<td>Bikol (bik)</td>
<td>sirgang</td>
</tr>
<tr>
<td>Isamorong Yami (tao)</td>
<td>dadaan</td>
</tr>
<tr>
<td>Ibanag (ibg)</td>
<td>lassang</td>
</tr>
<tr>
<td>Iraralay Yami (tao)</td>
<td>dadan no araw</td>
</tr>
<tr>
<td>Maguindanao (mdh)</td>
<td>sebangan</td>
</tr>
<tr>
<td>Maranao (mrw)</td>
<td>sebangan</td>
</tr>
</tbody>
</table>

Table 2.9: Terms for east and west in Philippine languages deriving from reference to the path of the sun (after Gallego 2018: 95).

Yet it is not possible to reconstruct a single term ‘east’ or ‘west’. Rather, terms for ‘west’ can be traced to at least five distinct historical sources; and terms for ‘east’ can be traced to eight different sources (Table 2.10). The diversity of sources is evidence of the relatively recent emergence of cardinal direction terminology—a point noted for Philippine languages by Gallego (2018: 91) and more generally by Brown (1983).

As Table 2.10 shows, many terms referring to ‘east’ and ‘west’ describe the act of the sun rising or setting. Often these directions are spatially metonymous, in that the term for ‘sunrise’ and ‘sunset’ are used to denote the direction toward sunrise (i.e., ‘east’) and the direction toward sunset (i.e., ‘west’), respectively. Gayo orientation uses a riverine system combined with elevational terms, but it also has indigenous cardinal terms based on the sun that refer to east and west (2.13).

(2.13) a. *Mata n=ló m-urip*

-eye POSS=day INTR-live

‘east’ (lit. the sun lives) (Gayo; Eades 2005: 213)
Absolute orientation in Austronesian languages

<table>
<thead>
<tr>
<th>West</th>
<th>PMP</th>
<th>*teɲej</th>
<th>‘sink, set (sun)’</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMP</td>
<td>*-nej</td>
<td>‘submerge, sink, drown’</td>
<td></td>
</tr>
<tr>
<td>PWMP</td>
<td>*len-ej</td>
<td>‘disappear underwater’</td>
<td></td>
</tr>
<tr>
<td>PAN</td>
<td>‘sejep’</td>
<td>‘to enter, penetrate’</td>
<td></td>
</tr>
<tr>
<td>PWMP</td>
<td>‘salem’</td>
<td>‘dive; immerse oneself’</td>
<td></td>
</tr>
<tr>
<td>East</td>
<td>PWMP</td>
<td>*siraŋ</td>
<td>‘dazzled, blinded by glaring light’</td>
</tr>
<tr>
<td>PPh</td>
<td>*sebaŋ</td>
<td>‘to rise, of the sun, moon, or stars’</td>
<td></td>
</tr>
<tr>
<td>PMP</td>
<td>*silaw</td>
<td>‘dazzling of light’</td>
<td></td>
</tr>
<tr>
<td>PMP</td>
<td>*sila</td>
<td>‘outpouring of light’</td>
<td></td>
</tr>
<tr>
<td>PMP</td>
<td>*silaq</td>
<td>‘outpouring of light’</td>
<td></td>
</tr>
<tr>
<td>PMP</td>
<td>*silak</td>
<td>‘beam of light’</td>
<td></td>
</tr>
<tr>
<td>PMP</td>
<td>*sirak</td>
<td>‘outpouring of light’</td>
<td></td>
</tr>
<tr>
<td>PPh</td>
<td>*sikat</td>
<td>‘sunrise, rising sun’</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.10: Sources of terms encoding ‘east’ and ‘west’ in Philippine languages (Blust & Trussel 2010, Gallego 2018).

b. **Ilup-en**

set(sun)-NMLZ

‘west’ (literally, ‘sunset’) (Gayo; Eades 2005: 213)

As one heads east into Oceania, systems based on the sun become less common, instead giving way to wind-based systems. However, there is one place in Oceania that has languages with a sun-based system: the Loyalty Islands of New Caledonia. Three of the four languages spoken on these islands—Iaai, Nengone, and Drehu—have been reported to have cardinal systems based on the sun, although these systems are only used on a navigational scale. Example (2.14) shows a typical example with reference to the sun while (2.15) shows a statement by the sun itself who is a character in a story. The sun refers to the location where it rises as iō or ‘east.’

(2.14)  *He seünö kene ditr thibut e-ü.*

go sun and penetrate away LOC-west

‘The sun goes off to set in the west.’ (Rivierre et al. 1980: 185)

(2.15)  *Buba! oge-me he but ka uf jime-iö...*

ganny 1sg-prs go away for jump SOURCE-east

‘Grandmother! I am off to rise in the east...’ (Rivierre et al. 1980: 185)

While it is typical for the orthogonal axis of sun-based systems to have distinct lexemes based on the wind or geographic features, there is some evidence of an indigenous cardinal system reflecting an axis that is perpendicular to the path of the sun. In Ata Manobo (atd) the term *balabagan* < *bala(R)báR ‘crosswise, athwart’ (cf. Tagalog (tgl) balaghág ‘crossbeam’) is used to indicate the direction crosswise to the sun and is entangled with what was previously a riverine system (Hartung 2016). Although the *balabagan* axis is unoriented, speakers may specify an orientation along this axis by using the riverine terms *dibabò* ‘downriver’ and *diraya* ‘upriver’. Thus, *balabagan dibabò* denotes ‘south’, literally ‘downriver along the axis transverse to the path of the sun’, and *balabagan diraya* denotes ‘north’, literally ‘upriver along the axis transverse to the path of the sun’.2 This geographic specification is clearly motivated by the location

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2Hartung (2016) also states that the direction of the *balabagan* axis can be clarified using the relative terms ‘left’ and ‘right’, though this of course requires knowing the orientation of the reference point from which ‘left’ and ‘right’ are specified—i.e., which way the speaker is facing.

28
of the Manobo-speaking region which is located upriver along the Libuganon River, which flows north to south across much of eastern Mindanao Island, emptying into the sea at the Gulf of Davao. In this geographic context, downriver is aligned with south, while upriver is aligned with north.

The secondary nature of the north-south axis is evident in several other languages. For example, Bukidnon Manobo has belavag with the general meaning 'crosswise'. In Muna, the terms for east and west, which are based on the sun are quite stable, but the terms for north and south vary by village and dialect and are sometimes disagreed upon by people in a single village. van den Berg (1997: 217) reports “…many informants were unsure and hesitant about the correct Muna terms for ‘north’ and ‘south’. Occasionally different terms were given in the same village (Lailangga). Often lively discussions ensued especially when people from different villages were present.”

Some languages have also innovated a two-term north-south cardinal axis derived from the east-west solar axis. Busang (xkn) uses the relative term bèh ulé ‘left side’ for ‘north’ and ‘south’, as in (2.16) in which ‘north’ is literally ‘left of the rising sun’ and ‘south’ is ‘left of the setting sun’.

(2.16) a. bèh ulé mata n dó muun
   side left eye   gen sun rise
   ‘north’ (literally, ‘left of the rising sun’) (Busang; Barth 1910: 29)

b. bèh ulé mata n dó uli
   side left eye   gen sun return
   ‘south’ (literally, ‘left of the setting sun’) (Busang; Barth 1910: 29)

Teduray (tiy) presents another example of an innovated north-south axis. According to Gallego (2018), deligdigán ‘south’ previously referred to both north and south based on data presented by Bennasar (1892: 37) who gives the meaning as ‘Septentríón, Sur’, using the Latin term meaning ‘of the north’ (referring ultimately to the seven stars of Ursa Major). However, in the modern language deligdigán only carries the meaning ‘south’, and the term tegeunon, originally meaning ‘north wind’, has been extended to mean ‘north’.

Evidently, although sun-based systems have not been a primary focus of spatial study in Austronesia they do occur in Malayo-Polynesian languages. Their etymologies and orthogonal axes are quite diverse, and while the east-west sun-based axis is certainly primary, in some languages, there is evidence of an indigenous north-south axis.

2.2.7 Summary

This section has identified the topographic and environmental features that have been grammaticized into the spatial systems of Malayo-Polynesian languages. These features include: the land-sea distinction, the coastline, elevation, river flow, wind, and the path of the sun. Even systems based on the same environmental feature can be quite diverse in practice, such as the several subtypes of land-sea and coastal systems which were described in §2.2.1. Further, while many languages have a generic ‘across’ axis that is orthogonal to the axes described here, others have developed system-specific axes. For instance, ‘towards the river’ and ‘away from the river’ is an axis exclusive to riverine systems. Similarly ‘left from the rising sun’ and ‘left from the setting sun’ is exclusive to cardinal systems. Finally, to complexify matters even further, axes based on each of these environmental factors can combine to create numerous hybrid systems (see Holton & Pappas (2022) for a more-detailed description). Common hybrid systems include land-sea+coastal, riverine+elevation, riverine+cardinal, and cardinal+land-sea. These hybrid systems result in over a dozen different types of orientation systems in Malayo-Polynesian languages that are based on geographic or environmental features.
2.3 Demonstratives

Spatial deixis refers to a spatial orientation strategy in which a member of the speech event serves as the single anchor point (as opposed to the axes with two anchor points—such as the land and the sea or the upriver and downriver directions—described in §2.2) in relation to which all referents are located. Spatial deixis may manifest in language in paradigms with varying syntactic functions, but I refer to these lexical items generally as demonstratives. These terms are used to point to a location or referent and are often accompanied with a pointing gesture (Levinson 1999: 132). Demonstratives are egocentric in nature, and because of this, their precise meaning is entirely dependent on the context of the utterance (Levinson 1983). Although demonstratives function to orient objects in physical space, often the same words may also have temporal, anaphoric, or cataphoric functions (Senft 2004). While these diverse applications of demonstratives are recognized, this section focuses solely on the spatial uses of demonstratives with mention to discourse and temporal deixis only when relevant to the discussion of the entire system. In the several decades-long research tradition surrounding the study of demonstratives, researchers have noted the significant role that they play in human language as a way to represent spatial cognition and humans’ relationship to their environment. Study of spatial deixis reveals the use of rich linguistic devices and conceptual frameworks to describe the human world (Sawaki 2004: 414).

In this section, I provide an overview of the literature of demonstratives in Malayo-Polynesian languages. I organize these demonstrative systems into three broad types: distance-oriented, person-oriented, and elevation-oriented. Distance-oriented systems use only the speaker as the deictic center and measure the position of referents based on their distance from the speaker. Person-oriented systems use more than one participant of the speech event and sometimes non-speech act participants as the deictic center. Elevation-oriented systems also include the vertical axis within the search domain of the deictic system. These systems may be further sub-categorized based on their number of deictic contrasts or the semantic parameters used to differentiate and define terms within the system. Some semantic parameters in use include touch, gesture, audibility, anaphor, plurality, visibility, audibility, temporality, definiteness, and physicality.

2.3.1 Asymmetricality in deictic systems

The theory of semplates developed by Levinson & Burenhult (2009) proposes that identical semantic templates occur across word classes. For instance, it is common to see symmetrical demonstrative systems, meaning that the system has the same number of contrasts and types of distinguishing semantic parameters across word classes. An example of a symmetrical system is seen in Itbayaten (ivv), a language of the Philippines. Itbayaten has two demonstrative pronouns that contrast proximal versus distal: *niaʔ* ‘this’ and *nawiʔ* ‘that’. It also has two demonstrative adverbs with the same distal contrast: *diiʔ* ‘here’, *dawiʔ* ‘there’. In both classes of words, there are just two deictic contrasts—proximal and distal—which both only use the speaker as the deictic center. Another more complex symmetrical system is that of Balantak (blz), a language of eastern Sulawesi. Its demonstrative system of seven terms is mirrored between pronominal and adverbial forms as shown in Table 2.11.

However, it is possible for a single language to employ different demonstrative systems in different areas of the grammar. Such systems are referred to as asymmetric systems (Blust 2013). The Malayo-Polynesian languages with asymmetric systems are geographically and genetically diverse. Yet, there are similarities in the realization of asymmetric systems across grammatical categories. Particularly in Oceania, demonstrative determiner systems more-commonly employ a person-oriented strategy while demonstratives in other areas of grammar tend to use a distance-oriented strategy. In the context of Oceania this may be because Proto-Oceanic (POC) had a person-oriented deictic system, which suggests that demonstrative systems tend to be more stable than directional particles and verbs. Ross (2004: 199)
Table 2.11: Balantak elevational demonstratives (Busenitz & Busenitz 1992: 132).

<table>
<thead>
<tr>
<th>Pronominal</th>
<th>Adverbial</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ni‘i</td>
<td>ita</td>
<td>near speaker</td>
</tr>
<tr>
<td>nono’</td>
<td>no’o</td>
<td>near addressee</td>
</tr>
<tr>
<td>ya’a</td>
<td>mba’a</td>
<td>near, but away from speaker and addressee</td>
</tr>
<tr>
<td>tu’u</td>
<td>ntu’u</td>
<td>far from speaker and addressee</td>
</tr>
<tr>
<td>le’e</td>
<td>nde’e</td>
<td>side at same level</td>
</tr>
<tr>
<td>ra’a</td>
<td>nda’a</td>
<td>high, or in front at same level</td>
</tr>
<tr>
<td>ro’o</td>
<td>ndo’o</td>
<td>low</td>
</tr>
</tbody>
</table>

Table 2.12: Cotabato Manobo locative and demonstrative systems

<table>
<thead>
<tr>
<th>Locatives</th>
<th>Pronouns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near speaker</td>
<td>ini</td>
</tr>
<tr>
<td>Near addressee</td>
<td>ia</td>
</tr>
<tr>
<td>Near third person</td>
<td></td>
</tr>
<tr>
<td>Distal</td>
<td></td>
</tr>
</tbody>
</table>

[...] the directional particles of many Oceanic languages have moved from the expression of a person-oriented to a speaker-oriented system. Why a person-oriented system should survive among demonstratives but not in directional particles is not completely clear to me, but I infer that it has to do with the different typical usages of these systems. A primary use of demonstrative systems is to locate referents in relation to the speech-act participants, so a person-oriented system is an eminently usable (but not a necessary) strategy. The major use of directional verbs and particles, however, has to do with the narration of dynamic events and the movement of referents. Here, a deictic centre—by default the speaker—is important, but the addressee, who was not present at the narrated events, is often irrelevant. Hence the addressee-related member of the directional set falls out of use.

In Indonesia and the Philippines, however, the opposite commonly occurs. For example, in Cotabato Manobo (mta), a language of Mindanao, locatives exhibit a four-way person-oriented system—dahini ‘near speaker’, dahia ‘near addressee’, kaʔədoʔ ‘near third person’, dahədoʔ ‘distal (or out of sight)’—and pronominal demonstratives exhibit a two-way distance-oriented system—ini ‘proximal’ and ia ‘distal’ (Kerr 1988). The locative and pronominal demonstrative systems are shown in Table 2.12.

A dramatic difference in the number of contrasts between systems can be seen in Ôma Lóngh. Ôma Lóngh’s system of determiner demonstratives exhibits a binary contrast between ji ‘proximal’ (di ‘PROXIMAL.PL’) and jé ‘distal’ (dé ‘DISTAL.PL’). Its system of location adverbs, however, has six distal contrasts. Both systems are shown in Table 2.13. Locatives contrast three degrees of distance—‘proximal’, ‘medial’, and ‘distal’—which are each divided further into ‘proximal’ and ‘distal’. Thus, there is a slight distance distinction between ghi ‘PROXIMAL-PROXIMAL’ and ghé ‘PROXIMAL-DISTAL’. Both terms refer
to locations that are near the speaker, but *ghi* refers to a location that is nearer to the speaker than *ghé*. Soriente (2018) suggests that some non-spatial parameters may distinguish location adverbs at each distance. For instance, whether the location is within reach may differentiate terms between proximal ((2.17) & (2.18)) and medial ((2.19) & (2.20)) locatives.

<table>
<thead>
<tr>
<th>Gloss</th>
<th>Determiner</th>
<th>Gloss</th>
<th>Location adverb</th>
</tr>
</thead>
<tbody>
<tr>
<td>proximal</td>
<td><em>ji, di</em>(pl)</td>
<td>PROXIMAL-PROXIMAL</td>
<td><em>ghi</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PROXIMAL-DISTAL</td>
<td><em>ghé</em></td>
</tr>
<tr>
<td>medial</td>
<td></td>
<td>MEDIAL-PROXIMAL</td>
<td><em>ti</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MEDIAL-DISTAL</td>
<td><em>té</em></td>
</tr>
<tr>
<td>distal</td>
<td><em>jé, dé</em>(pl)</td>
<td>DISTAL-PROXIMAL</td>
<td><em>ki'i</em></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DISTAL-DISTAL</td>
<td><em>ké'e</em></td>
</tr>
</tbody>
</table>

Table 2.13: Ôma Lóngh asymmetrical demonstrative systems. The determiner paradigm exhibits a two-way distal contrast while the system of location adverbs exhibits six distal contrasts. (Soriente 2018)

(2.17) **kempèny-nyi**  **ghi-ne**  
**picture-PROX.SG** **PROX.PROX-SPEC**  
‘that picture here’ (can be touched) (Ôma Lóngh; Soriente 2018: 12)

(2.18) **kempèny-nyé**  **ghé-ne**  
**picture-DIST.SG** **PROX.DIST-SPEC**  
‘that picture here’ (a bit distant but definitely can be seen) (Ôma Lóngh; Soriente 2018: 12)

(2.19) **facény-nyi**  **ti**  
**papaya-PROX.SG** **MED.PROX**  
‘this papaya there’ (can easily be reached) (Ôma Lóngh; Soriente 2018: 12)

(2.20) **ude’ jé**  **té’é-te**  
**dog** **DIST.SG** **MED.DIST-MED.DIST**  
‘that dog over there’ (can be seen but not touched) (Ôma Lóngh; Soriente 2018: 12)

Asymmetricality does not simply occur when there is an asymmetric number of contrasts. It is also possible to have the same number of contrasts across word classes with varying semantic parameters. For instance, in Tirax (mme), a language of Vanuatu, the pronominal demonstrative system is distance-oriented with the terms *ɔtan* ‘proximal’, *wɛri* ‘medial’, *ue* ‘distal’. The system of locatives, on the other hand, is person-oriented with the terms *ɔxan* ‘near speaker’, *wuweri/xori* ‘near addressee’, and *xue* ‘distal’. Both are three-way systems, but in the pronominal system both speaker and addressee can serve as the deictic center while in the locative system only the speaker may be deictic center. Wooi (wbw) has an even more nuanced asymmetric system. Both pronominal and locative systems are person-oriented, and the systems only differ in their near addressee term. Wooi has a three-way system among deictic adverbs which includes ‘near speaker’, ‘near addressee’, and ‘distal’ (Sawaki 2004: 418). However, there are three demonstratives which distinguish ‘near speaker’, ‘near speaker and addressee’, and ‘unreachable from both’ (Sawaki 2004: 420).

In the following sections, asymmetrical systems are treated as separate systems. Thus a single language, such as Tirax which has a distance-oriented demonstrative system and a person-oriented locative system.
Demonstratives

system, will be classified to have both types of systems. In this way, all documented systems are counted and preference is not given to one word class over another.

2.3.2 Distance-oriented systems

Distance-oriented demonstrative systems are defined here as demonstrative systems which solely use the speaker as the deictic center and subsequently measure the distance of a referent from the speaker’s position. Malayo-Polynesian languages distinguish distance from the speaker with two-, three-, four-, six-, or seven-way contrasts. Further, even when two languages have the same number of distinctions, the semantic parameters used to identify the boundaries between two distance-based terms can be quite diverse. The following sections typologize the different ways in which Malayo-Polynesian languages categorize space based on distance from the speaker.

2.3.3 Two-way distance distinctions

Two-way distance-oriented demonstrative systems are the simplest, and there is very little variation in how they are realized throughout Malayo-Polynesian languages. All Malayo-Polynesian languages that have a two-way demonstrative system distinguish proximal from distal. The following examples ((2.21) and (2.22)) from Standard Indonesian demonstrate this contrast. In (2.21) the demonstrative ini follows the noun rumah ‘house’. The use of ini here indicates that the speaker is nearby their own house and is distinguishing it from the other houses nearby. In contrast, in (2.22), the speaker uses the distal demonstrative itu to indicate a chair that is outside of the speaker’s personal space. In this utterance, the chair is still in sight, and the speaker is separating it from any other chairs that might be present.

(2.21) Saya tinggal di rumah ini.
    1sg live loc house prox
    ’I live in this house’. (Sneddon 1975: 130)

(2.22) Duduk di kursi itu.
    sit loc chair dist
    ’Sit in that chair’. (Sneddon 1975: 130)

Two-way distance-oriented systems occur more frequently than any other type of system, and they are scattered throughout the Malayo-Polynesian languages. There are two demonstratives in Hewa, a language of Flores; ‘ete refers to a proximal location and ia refers to a distal location (Fricke 2014: 52). In Sulawesi the Bugis language distinguishes yeró ‘proximal’ and yeré ‘distal’ (Caballero 2014). Takia (tbc), an Oceanic language of the Madang province of Papua New Guinea has proximal and distal forms that may each be used in a variety of syntactic contexts including as determiners, locatives, and manner particles, but the most basic forms are proximal e and distal o. Takia also has a form a which appears to only be used anaphorically.

2.3.3.1 More complex two-way systems

All two-way distance-oriented systems thus far discussed are two-term systems that contrast a simple proximal term with a distal one. However, some systems can be much more complex while maintaining a simple distinction between proximal and distal. This added complexity may arise from a number of factors, but most commonly, it is due to a variety of closely-related syntactic forms, morphological complexity, or non-spatial semantic parameters that are coded within the demonstrative system.

Vurës (msn) of Vanuatu has s syntactically complex system. Its ten demonstratives, shown in Table 2.14, largely vary in syntactic rather than semantic function, and the syntactic differences are usually quite
subtle. For example, the terms *iŋke* and *(i)gēn(ak)* are both labeled as proximal demonstratives, and their syntactic function almost entirely overlaps. However, they differ in two key environments. *iŋke* may modify another demonstrative which serves as the head of an NP, or it may modify a temporal. *(i)gēn(ak)* can do neither but otherwise serves the same functions as *iŋke*.

<table>
<thead>
<tr>
<th>Proximal</th>
<th>ko</th>
<th>proximal modifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>oko</td>
<td>proximal adverb</td>
<td></td>
</tr>
<tr>
<td><em>(i)loko</em></td>
<td>proximal presentative</td>
<td></td>
</tr>
<tr>
<td>me</td>
<td>proximal location</td>
<td></td>
</tr>
<tr>
<td><em>iŋkē</em></td>
<td>proximal demonstrative</td>
<td></td>
</tr>
<tr>
<td><em>(i)gēn(ak)</em></td>
<td>proximal demonstrative</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distal</th>
<th>e</th>
<th>distal modifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>ilēkē</td>
<td>distal presentative</td>
<td></td>
</tr>
<tr>
<td><em>ine</em></td>
<td>anaphoric demonstrative</td>
<td></td>
</tr>
<tr>
<td><em>(i)ken(e)</em></td>
<td>distal demonstrative</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.14: Vurës deictic terms (Malau 2016)

Like Vurës, Mavea (mkv) of Vanuatu has slightly different forms with varying syntactic functions. Demonstrative pronouns include *aro* 'proximal' and *nel(e)* 'distal'. There are also the alternative forms *maro* 'proximal' and *male* 'distal' which are a combination of the complementizer *ma* and the demonstrative pronouns. These alternate forms also function as demonstrative pronouns, but they can additionally be used as demonstrative determiners. Mavea further has plural forms of both demonstratives: *maror* 'proximal' and *malere* 'distal' (Guérin 2011). The resulting system has six demonstrative forms with a simple proximal versus distal contrast.

Non-spatial semantic parameters may also add complexity to the system. The Mavea example above showed a system that marks plurality. In Lamaholot (slp) the tangibility of the referent is an added parameter. There are different demonstrative forms depending on whether the referent exists in physical space or not. All forms are shown in Table 2.15. The proximal *pi* and distal *pé* modify and locate concrete nouns, while proximal *wi* and distal *wē* modify abstract nouns.

The Nias selatan (nia) system similarly encodes tangibility as well as discourse tracking (Brown 2001). The resulting system has six terms plus three fossilized demonstratives that only occur with specific lexical items (Table 2.16).

Finally, in Madurese, speech style plays an important role in the demonstrative system. The most basic terms include *reya* 'proximal' and *rowa* 'distal'. However several other terms may be used. Other terms for the proximal include *reya*, *areya*, *jareya*, *jariya*, *jiya*, *jeh* and for the distal include *rowa*, *arowa*, *juwa* (Davies 2010). These alternative terms may be specific to certain dialects or speech styles. Thus, speakers may choose between different demonstratives depending on the the social situation they are in (Davies 2010). As such, what may seem like a simple system with just two distance distinctions is actually quite complex when cultural and social expectations are taken into account.

| *pi* | proximal for concrete nouns |
| *wi* | proximal for abstract nouns |
| *pé* | distal for concrete nouns |
| *wē* | distal for abstract nouns |

Table 2.15: Lamaholot demonstratives
Demonstratives

<table>
<thead>
<tr>
<th>Proximal</th>
<th>Gloss</th>
<th>Distal</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ha’a</td>
<td>tangible objects, discourse tracking</td>
<td>höö</td>
<td>tangible</td>
</tr>
<tr>
<td>andra</td>
<td>less tangible objects e.g. place, time</td>
<td>andre</td>
<td>tracking</td>
</tr>
<tr>
<td>=ndra</td>
<td>discourse tracking</td>
<td>=ndre</td>
<td>tracking</td>
</tr>
<tr>
<td>-a, -e, -ö</td>
<td>fossilized deictics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.16: Deictic demonstratives in Nias Selatan

2.3.3.2 Summary of two-way distance-oriented systems

Two-way distance-based systems see little diversity in their spatial categorization. All systems distinguish proximal and distal locations. Yet, some systems may contain numerous terms due to syntactic categorization, morphological complexity, and non-spatial semantic parameters such as plurality, tangibility, concreteness, discourse tracking, and language register.

The languages in the sample identified to have a two-way distance-oriented system in some part of their grammar are presented in Table 2.17.\(^3\) As previously mentioned, two-way distance systems are the most common type of system in the sample, occurring in both genetically and geographically diverse languages.

\(^3\)Note that not all forms are represented in the tables in this section. For the sake of simplicity, full, singular forms were preferenced.
<table>
<thead>
<tr>
<th>Language</th>
<th>ISO</th>
<th>Demonstratives</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Proximal</td>
<td>Distal</td>
<td></td>
</tr>
<tr>
<td>Itbayaten</td>
<td>ivv</td>
<td>nia?</td>
<td>nawi?</td>
<td></td>
</tr>
<tr>
<td>Cotabato Manobo</td>
<td>mta</td>
<td>ini</td>
<td>iа</td>
<td></td>
</tr>
<tr>
<td>Nias Selatan</td>
<td>nia</td>
<td>ha’a</td>
<td>хо’о</td>
<td></td>
</tr>
<tr>
<td>Madurese</td>
<td>mad</td>
<td>reya</td>
<td>rowa</td>
<td></td>
</tr>
<tr>
<td>Óma Lóngh</td>
<td>ulu</td>
<td>ji, di</td>
<td>jé, dé</td>
<td></td>
</tr>
<tr>
<td>Toratán</td>
<td>rth</td>
<td>tiqi</td>
<td>teqé</td>
<td></td>
</tr>
<tr>
<td>Hewa</td>
<td>ham</td>
<td>’ete</td>
<td>’ia</td>
<td></td>
</tr>
<tr>
<td>Lamaholot</td>
<td>slp</td>
<td>pi, we</td>
<td>pé, vé</td>
<td></td>
</tr>
<tr>
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<td>mky</td>
<td>ane</td>
<td>adia</td>
<td></td>
</tr>
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<td>Takia</td>
<td>tbc</td>
<td>e</td>
<td>o</td>
<td></td>
</tr>
<tr>
<td>Tatana’</td>
<td>txx</td>
<td>iti</td>
<td>ino</td>
<td></td>
</tr>
<tr>
<td>Ngaju Dayak</td>
<td>nij</td>
<td>tuh</td>
<td>teh</td>
<td></td>
</tr>
<tr>
<td>Enggano</td>
<td>eno</td>
<td>ek</td>
<td>еёк, ok</td>
<td></td>
</tr>
<tr>
<td>Tontemboan</td>
<td>tnt</td>
<td>se’y, ambi’i</td>
<td>itu, ambi’tu</td>
<td></td>
</tr>
<tr>
<td>Alas</td>
<td>btz</td>
<td>ènde, enome</td>
<td>èdi, è, di</td>
<td></td>
</tr>
<tr>
<td>Palauan</td>
<td>pau</td>
<td>tia, tirka (pl)</td>
<td>se, aike (pl)</td>
<td></td>
</tr>
<tr>
<td>Belait</td>
<td>beg</td>
<td>inai</td>
<td>yieh</td>
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<td>Bulungan</td>
<td>bdb</td>
<td>ito</td>
<td>inon</td>
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<td>Tidung</td>
<td>tid</td>
<td>gitu</td>
<td>gine</td>
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<td>Balinese</td>
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<td>puniki</td>
<td>punika</td>
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<tr>
<td>Iban</td>
<td>iba</td>
<td>to?</td>
<td>pa?</td>
<td></td>
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<td>Mamanwa</td>
<td>mmm</td>
<td>ini</td>
<td>iton</td>
<td></td>
</tr>
<tr>
<td>Tagbanwa</td>
<td>twb</td>
<td>lito</td>
<td>layan</td>
<td></td>
</tr>
<tr>
<td>Tanimbar</td>
<td>kei</td>
<td>iyo</td>
<td>ine</td>
<td></td>
</tr>
<tr>
<td>Tetun Dili</td>
<td>tdt</td>
<td>né</td>
<td>nebá</td>
<td></td>
</tr>
<tr>
<td>Idate</td>
<td>idt</td>
<td>enia</td>
<td>enene</td>
<td></td>
</tr>
<tr>
<td>Warembori</td>
<td>wsa</td>
<td>na-ni</td>
<td>na-yave</td>
<td></td>
</tr>
<tr>
<td>Ratahan</td>
<td>rth</td>
<td>tiqi</td>
<td>teqé</td>
<td></td>
</tr>
<tr>
<td>Melayu Betawi</td>
<td>bew</td>
<td>ini</td>
<td>itu</td>
<td></td>
</tr>
<tr>
<td>Lele</td>
<td>lle</td>
<td>oko</td>
<td>aka</td>
<td></td>
</tr>
<tr>
<td>Neverver</td>
<td>lgk</td>
<td>anjakh</td>
<td>anjing</td>
<td></td>
</tr>
<tr>
<td>Lelepa</td>
<td>lpa</td>
<td>tewas</td>
<td>tewa-n</td>
<td></td>
</tr>
<tr>
<td>Tamambo</td>
<td>mla</td>
<td>niani</td>
<td>niala</td>
<td></td>
</tr>
<tr>
<td>Vera’a</td>
<td>vra</td>
<td>gèn(è)</td>
<td>né(’qit)</td>
<td></td>
</tr>
<tr>
<td>Ura</td>
<td>uur</td>
<td>mori</td>
<td>mo</td>
<td></td>
</tr>
<tr>
<td>Engdewu</td>
<td>ngr</td>
<td>donu</td>
<td>mo</td>
<td></td>
</tr>
<tr>
<td>Maisin</td>
<td>mbq</td>
<td>inin</td>
<td>nenin</td>
<td></td>
</tr>
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<td>nrz</td>
<td>kanae</td>
<td>ua</td>
<td></td>
</tr>
<tr>
<td>Manam</td>
<td>mva</td>
<td>nga-e</td>
<td>nga-ra</td>
<td></td>
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<tr>
<td>Nalik</td>
<td>nal</td>
<td>angkare</td>
<td>angkanaan</td>
<td></td>
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<tr>
<td>Nahavaq</td>
<td>sns</td>
<td>tiyig</td>
<td>tiyug</td>
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<tr>
<td>Tigak</td>
<td>tgc</td>
<td>egeng</td>
<td>evang</td>
<td></td>
</tr>
</tbody>
</table>
2.3.4 Three-way distance distinctions

Three-way distance distinctions generally include proximal, medial, and distal terms located in reference to the position of the speaker. As may be expected from the vague terms ‘proximal’, ‘medial’, and ‘distal’, the boundaries between the terms may be fluid and are likely to differ from language to language. Often these glosses are used in grammars without further explanation as to how each term is used in everyday speech. For instance, Keo (xxk) simply is documented to have three demonstratives: té ‘proximal’, ké ‘medial’ and kéra ‘distal’ (Baird 2002). Similarly, in Nêlêmwa of New Caledonia the proximal demonstrative hleny is defined as ‘near speaker’, the medial defined as ena ‘a small distance from speaker’, and the distal as ali ‘far away’. While the glosses give the reader an idea of the system, the denotation ‘a small distance’ is quite subjective. Thus, often descriptions of three-way distance-oriented systems could benefit from further documentation and description.

In other descriptions the distinction is relatively clear. Languages in this sample use touch, visibility, and accompanying gesture to differentiate proximal from medial from distal. For instance, the Caac (msq) demonstrative system distinguishes ‘proximal’ versus ‘medial’ based on whether the referent is close enough to touch. As such Cauchard (2015: 29) analyzes the language to have a ‘super-proximal’ form hî that is close enough to the speaker to touch when gesturing at it. The medial -(i)en thus describes referents that are nearby but out of the speaker’s reach. The distal -(i)na indicates referents that are out of the speaker’s immediate vicinity. Each term also has a temporal and anaphoric meaning.

While touch appears to be a common parameter among proximal and medial terms, visibility usually serves to distinguish medial from distal terms. In the distance-based system of the Long Lamai dialect of Penan (pez) visibility marks the distinction between inah ‘medial, visible’ and itay ‘distal, out of view’ (Blust 2013). Visibility also distinguishes terms in Kilivila (kij), a language of the Trobriand islands of PNG. However, pointing also plays a role. Besa/beya ‘proximal’ refer to a referent near the speaker. Beyo ‘medial’ refers to a visible but distant referent and is accompanied by pointing. Beyuuu ‘distal’ refers to a referent that is far away and may even be invisible (Næss 2004).

Three-way distance-oriented systems are quite common all throughout the Malayo-Polynesian languages. Table 2.18 exhibits the languages in the sample identified to have a three-way distance-oriented system.
<table>
<thead>
<tr>
<th>Language</th>
<th>ISO 639-3</th>
<th>Proximal</th>
<th>Medial</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keo</td>
<td>xkk</td>
<td>té</td>
<td>ké</td>
<td>kéra</td>
</tr>
<tr>
<td>Nelèmwa</td>
<td>nee</td>
<td>hleny</td>
<td>ena</td>
<td>and ali</td>
</tr>
<tr>
<td>Caac</td>
<td>msq</td>
<td>hi</td>
<td>-(i)en</td>
<td>=(i)na</td>
</tr>
<tr>
<td>Long Lamai Penan</td>
<td>pez</td>
<td>textititau?</td>
<td>inəh</td>
<td>itay</td>
</tr>
<tr>
<td>Mukah Melanau</td>
<td>mel</td>
<td>-ga? gitɔw</td>
<td>ga? giɔn</td>
<td>ga? ginan</td>
</tr>
<tr>
<td>Tondano</td>
<td>tdn</td>
<td>yaʔi, naʔi</td>
<td>itiʔi, niʔitu</td>
<td>itiʔi lia, naʔi mač</td>
</tr>
<tr>
<td>Tajio Sienjo</td>
<td>tdj</td>
<td>eini, he’ee</td>
<td>eitu, ha’aa</td>
<td>amai/amai’ee</td>
</tr>
<tr>
<td>Tajio Kasimbar</td>
<td>tdj</td>
<td>eini</td>
<td>eitu</td>
<td>eua</td>
</tr>
<tr>
<td>Kiliivila</td>
<td>kij</td>
<td>besa/beya</td>
<td>beyo</td>
<td>beyuuu</td>
</tr>
<tr>
<td>Sama/Bajau</td>
<td>bdl</td>
<td>itu</td>
<td>iru</td>
<td>orè</td>
</tr>
<tr>
<td>Paluai</td>
<td>blq</td>
<td>pwo</td>
<td>yo</td>
<td>lo</td>
</tr>
<tr>
<td>Lebu’ Kulit</td>
<td>whk</td>
<td>ini, ni</td>
<td>inyé, nyé</td>
<td>iti, ti</td>
</tr>
<tr>
<td>Dampelas</td>
<td>dms</td>
<td>ani</td>
<td>ana</td>
<td>ua</td>
</tr>
<tr>
<td>Wolio</td>
<td>wlo</td>
<td>sii</td>
<td>humai, sumai</td>
<td>itu</td>
</tr>
<tr>
<td>Kelab̃̃</td>
<td>kzi</td>
<td>sinih</td>
<td>sidih</td>
<td>sineh</td>
</tr>
<tr>
<td>Acehnese</td>
<td>ace</td>
<td>nyoe</td>
<td>nyan</td>
<td>jéh</td>
</tr>
<tr>
<td>Alorese</td>
<td>aol</td>
<td>ha’ang</td>
<td>kali</td>
<td>kate</td>
</tr>
<tr>
<td>Leti</td>
<td>lti</td>
<td>dì</td>
<td>dö</td>
<td>dé</td>
</tr>
<tr>
<td>Windesi Wamesa</td>
<td>wad</td>
<td>ne</td>
<td>pai</td>
<td>wa</td>
</tr>
<tr>
<td>Bih</td>
<td>ibh</td>
<td>nei</td>
<td>nān</td>
<td>dih</td>
</tr>
<tr>
<td>Melayu Betawi</td>
<td>bew</td>
<td>sini</td>
<td>situ</td>
<td>sono</td>
</tr>
<tr>
<td>Sula</td>
<td>zn</td>
<td>ik</td>
<td>neka</td>
<td>ikina</td>
</tr>
<tr>
<td>Paluanu</td>
<td>pau</td>
<td>pwo</td>
<td>yo</td>
<td>lo</td>
</tr>
<tr>
<td>Wuvulu</td>
<td>wuv</td>
<td>nei</td>
<td>nā</td>
<td>rā</td>
</tr>
<tr>
<td>Paamese</td>
<td>pma</td>
<td>ekoke=se=ke</td>
<td>aut=neke=ngani=ke</td>
<td>ekoke=neke</td>
</tr>
<tr>
<td>Avea</td>
<td>sku</td>
<td>itnani</td>
<td>itnani ki</td>
<td>teki</td>
</tr>
<tr>
<td>Sakao</td>
<td>sku</td>
<td>mam</td>
<td>vm</td>
<td>móm</td>
</tr>
<tr>
<td>Neve’ei</td>
<td>vnm</td>
<td>nene</td>
<td>nenang</td>
<td>nenokhoi</td>
</tr>
<tr>
<td>Unua</td>
<td>onu</td>
<td>ien</td>
<td>iog</td>
<td>iag</td>
</tr>
<tr>
<td>Lengo</td>
<td>lgr</td>
<td>de(ni)</td>
<td>nga</td>
<td>deri</td>
</tr>
<tr>
<td>Anejoń</td>
<td>aty</td>
<td>ininhi</td>
<td>enaanai</td>
<td>enaikou</td>
</tr>
<tr>
<td>Engdewu</td>
<td>ngr</td>
<td>me</td>
<td>ga</td>
<td>gàă</td>
</tr>
<tr>
<td>Bariat</td>
<td>bch</td>
<td>ne</td>
<td>na</td>
<td>oa</td>
</tr>
<tr>
<td>Uhele</td>
<td>uge</td>
<td>pi(la)</td>
<td>za</td>
<td>pioi(la)</td>
</tr>
<tr>
<td>Singaugoro</td>
<td>mme</td>
<td>mai</td>
<td>mani</td>
<td>mo(a)na</td>
</tr>
<tr>
<td>Tirax</td>
<td>tio</td>
<td>vai</td>
<td>bona</td>
<td>voi</td>
</tr>
<tr>
<td>Teop</td>
<td>tio</td>
<td>vai</td>
<td>bona</td>
<td>voi</td>
</tr>
<tr>
<td>Mambai</td>
<td>mgm</td>
<td>rai</td>
<td>ra</td>
<td>ran</td>
</tr>
<tr>
<td>Tape</td>
<td>mrs</td>
<td>gi</td>
<td>levēr</td>
<td>nen</td>
</tr>
<tr>
<td>Nasal</td>
<td>nsy</td>
<td>ajo</td>
<td>ani</td>
<td>udi</td>
</tr>
</tbody>
</table>

### 2.3.4.1 Four-way distance distinctions

One language from this dataset, Lavukaleve (lvk), a language of the Solomon islands, may be argued to have a four-way distance-oriented system which is shown in Table 2.19. In addition to 'proximal', 'neutral' and
‘distal’ demonstratives, Lavukaleve has an ‘unspecified’ demonstrative -oa. This system also distinguishes between gender and number of the referent.

Proximal demonstratives refer to referents that are near the speaker and notably nearer to the speaker than the addressee, regardless as to whether the speaker can see the object or not. Distal demonstratives refer to objects that are far away which may include distant but visible landforms, a referent that is quite far out of the space of the conversation, and even a referent that is nearer to the addressee than the speaker. Meanwhile neutral demonstratives have a much broader application and may refer to a variety of situations ranging from referents on the speaker’s body to those that are quite far in the distance. As a result of this vast disparity in applications, Terrill (2018) treats it as a distance-neutral term. Finally, unspecified demonstratives are used for: 1) referents that are very far from the deictic center and thus the speaker is uncertain of the position, 2) referents that do not actually exist, and 3) very general referents. An example of the first application is shown in (2.23); the speaker uses the term hoaka, a variant of the unspecified demonstrative modifier, to refer to Selwyn College, which is located on another, relatively distant island. Because of the distance, the speaker is uncertain about the college’s exact location, so they use the unspecified demonstrative. Similarly, unspecified demonstratives are commonly used in the elicitation context where the referents do not truly exist in physical space. If one elicits a sentence as in (2.24), the unspecified demonstrative is used because ‘man’ is grammatically definite but may refer to any man anywhere (Meira & Terrill 2005, Terrill 2018).

(2.23) Selwyn hoaka nun kini vau-m.
Selwyn there.UNSP from ACT go.seawards-sg.m
‘It went seawards from way over there at Selwyn [College].’ (Terrill 2018: Lavukaleve;)

(2.24) Ali hoana songi-nu.
man.M MOD.UNSP.SG.M swim-PRES.SG
‘That man is swimming.’ (Lavukaleve; Terrill 2018: 211)

These examples illustrate the overlapping nature of distance and specificity; often as distance increases, specificity decreases. In Lavukaleve, this distinction has been grammaticized within the demonstrative system.

### 2.3.4.2 Six-way distance distinctions

Kadazan (dtb), a language of Sabah Malaysia, exhibits a six-way distance distinction in its locative paradigm using parameters including specificity and visibility. The six locative demonstratives are shown in Table 2.20. Like many of the systems already discussed, visibility discriminates distal terms; the locative duunia marks visible yet distant referents while duahia marks distant referents that are out of sight. On the other
hand, proximal demonstratives are distinguished by specificity; *doiti* refers to the precise location of the speaker while *doino’* encompasses a broader area that extends beyond the exact location of the speaker but is still near the speaker (Miller & Miller 1985). There are two additional distal terms whose exact definitions are not specified but may serve as a medial terms: *doinho’* and *doinhuu’*.

<table>
<thead>
<tr>
<th>Term</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>doiti</em></td>
<td>‘here (this exact place)’</td>
</tr>
<tr>
<td><em>doino’</em></td>
<td>‘here (this general area)’</td>
</tr>
<tr>
<td><em>doinho’</em></td>
<td>‘there’</td>
</tr>
<tr>
<td><em>doinhuu’</em></td>
<td>‘there (farther away)’</td>
</tr>
<tr>
<td><em>duunia</em></td>
<td>‘over there (within sight)’</td>
</tr>
<tr>
<td><em>dhuuia</em></td>
<td>‘way over there (usually out of sight)’</td>
</tr>
</tbody>
</table>

Table 2.20: Kadazan locative system

As discussed in §2.3.1, Ôma Lóng also has a system of six distal contrasts in its locative system, which is shown in 2.13 in §2.3.1. The Ôma Lóng system is similar to that of Kadazan in that it has two proximal, two medial, and two distal terms. However, while proximal demonstratives are distinguished by specificity in Kadazan, those in Ôma Lóng are distinguished by touch or reach.

### 2.3.4.3 Seven-way distance distinctions

According to Rasoloson & Rubino (2005), Malagasy distinguishes seven degrees of distance from the deictic center. The entire system is shown in Table 2.21. While visibility does play a role in the system, unlike other the languages in which visibility is a distinguishing factor between terms of different degrees of distance, in Malagasy, each degree of distance has a term for visible referents and one for invisible referents. For instance, one may say *ény* ‘distal, visible’ to refer to a location that is far away and visible (see (2.25)), or *âny* ‘distal, invisible’ (see (2.26)) to refer to a distal location that the speaker cannot see. Interestingly although the referent in (2.25) is nonexistent, the speaker uses *ény* because they can see the location where the clouds would be if they were present.

(2.25) ̀ëry ̀tsy ̀m-isy ̀ràhona ̀ény ̀àmin’ny ̀lànitra  
and NEG PRS-exist cloud DIST.VIS IN-GNRL.DEF sky  
‘...and there are no clouds there in the sky (distal, visible)’. (Malagasy; Rasoloson & Rubino 2005: 471)

(2.26) ̀Mbòla ̀ány ̀izy ̀ány.  
still DIST.INVIS 3SG DIST.INVIS  
‘He’s still (hanging about) there (distal, invisible)’ (Malagasy; Rasoloson & Rubino 2005: 471)

Unfortunately, the distinctions between terms within each distance category (proximal, medial, and distal) are relatively unclear. Rasoloson & Rubino (2005: 470) state that “[Malagasy’s deictic system] involves the remarkably high number of seven degrees of distance from the speaker in addition to a visible/non-visible distinction.” However, there is no further explanation. It may be that specificity separates terms, but this is only documented among proximal terms. The proximal terms *àto* ‘PROX.NSF.C.Vis’ and *èto* ‘PROX.NSF.NVIS’ refer to general locations near the speaker while *ety* ‘PROX.SFC.Vis’ and *àty’ ‘PROX.SFC.NVIS’ are more specific, meaning ‘here in the exact place where we are’. Unfortunately, this is the only distinction with clear documentation. Such a complex distance-based demonstrative system would benefit from further analysis.
2.3.4.4 Summary of distance-oriented systems

The distance-oriented systems discussed in this section are diverse. Distance-oriented systems range from two-way to seven-way systems. While two-way systems remain quite simple, distinguishing proximal versus distal, the more complex systems use a variety of semantic parameters to differentiate terms based on distance. Specificity and touch/reach are commonly used to disambiguate proximal demonstrative while visibility and specificity are commonly used to distinguish boundaries between distal demonstratives.

The languages with distance-oriented systems are listed in Table 2.22. There are vastly more two and three-way systems than there are systems with more than three distance distinctions.

2.3.5 Person-oriented demonstrative systems

Person-oriented demonstrative systems use more than one speech event participant as the deictic center. This may include just the speaker and the addressee. It may also include an additional person who is not part of the speech act. Although person-oriented systems evidently encode distance information as well—especially since many systems have a generic distal term which could be interpreted as ‘far from both’ or ‘near’—person-oriented systems are distinguished from distance-based systems in that people other than the speaker can serve as the deictic center. Person-oriented systems largely range from a three-way system to a five-way system with a few even more complex systems, all of which will be described in the following sections.

2.3.5.1 Three-way person-oriented deictic systems

Three-way person-oriented systems are the simplest possible person-oriented systems among Malayo-Polynesian languages (Blust 2013). They are quite common throughout the region, especially in Oceania. This pervasiveness may be due to the fact that Proto-Oceanic had a three-way person-oriented system (see §3.5 for more information). There are two contemporary types of three-way person-oriented systems that occur in Malayo-Polynesian languages. The first distinguishes ‘near speaker’, ‘near addressee’, ‘near third person’. The second distinguishes ‘near speaker’, ‘near addressee’, ‘far from both’. This section will describe each in turn.

A system that distinguishes ‘near speaker’, ‘near addressee’, and ‘near third person’ uses three different people as deictic centers: the speaker, the addressee, and someone who is not participating in the speech act. Table 2.23 demonstrates some of the languages in which this system is found. It appears to be very common in the Philippines. In Reid’s 1971 survey of 41 Philippines languages about 25 have this type of three-way system. Unfortunately, though, the documentation of the demonstrative systems in most of these languages is lacking beyond a wordlist and gloss. As a result, the function of the near third person demonstrative in particular may not be empirically tested. The implication of such systems is that the near third person demonstrative can only be used when a person who is not part of the speech event serves as the deictic center; if the term could also designate referents that are simply far from the speaker and...
### Table 2.22: Malayo-Polynesian languages in this corpus with distance-oriented systems and their number of spatial contrasts

<table>
<thead>
<tr>
<th>Two-way</th>
<th>Three-way</th>
<th>Four-way</th>
<th>Six-way</th>
<th>Seven-way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Itbayaten</td>
<td>Tagbanwa</td>
<td>Keo</td>
<td>Palauan</td>
<td>Lavukaleve</td>
</tr>
<tr>
<td>Cotabao Manobo</td>
<td>Tanimbang</td>
<td>Nelêmwa</td>
<td>Wuvulu</td>
<td>Øma Lóngh</td>
</tr>
<tr>
<td>Nias Selatan</td>
<td>Tetun Dili</td>
<td>Caac</td>
<td>Paamese</td>
<td></td>
</tr>
<tr>
<td>Madurese</td>
<td>Idate</td>
<td>Long Lamai Penan</td>
<td>Avea</td>
<td></td>
</tr>
<tr>
<td>Óma Lóngh</td>
<td>Waremborina</td>
<td>Mukah Melanau</td>
<td>Sakao</td>
<td></td>
</tr>
<tr>
<td>Toratán</td>
<td>Ratahan</td>
<td>Tondano</td>
<td>Neve‘ei</td>
<td></td>
</tr>
<tr>
<td>Hewa</td>
<td>Melay Betawi</td>
<td>Tajio Sienjo</td>
<td>Unua</td>
<td></td>
</tr>
<tr>
<td>Lamaholot</td>
<td>Lele</td>
<td>Tajio Kasimbar</td>
<td>Lengo</td>
<td></td>
</tr>
<tr>
<td>Taba</td>
<td>Neverver</td>
<td>Kilivila</td>
<td>Anejoñ</td>
<td></td>
</tr>
<tr>
<td>Takia</td>
<td>Lelepa</td>
<td>Sama/Bajau</td>
<td>Engdewu</td>
<td></td>
</tr>
<tr>
<td>Tatana</td>
<td>Tamambo</td>
<td>Paluai</td>
<td>Bariai</td>
<td></td>
</tr>
<tr>
<td>Ngaju DAyak</td>
<td>Vera’a</td>
<td>Lebu’ Kulit</td>
<td>Ughele</td>
<td></td>
</tr>
<tr>
<td>Enggano</td>
<td>Ura</td>
<td>Dampelas</td>
<td>Singaugoro</td>
<td></td>
</tr>
<tr>
<td>Tontemboan</td>
<td>Engdewu</td>
<td>Wolio</td>
<td>Tirax</td>
<td></td>
</tr>
<tr>
<td>Alas</td>
<td>Maisin</td>
<td>Kelabit</td>
<td>Teop</td>
<td></td>
</tr>
<tr>
<td>Palauan</td>
<td>Pokau</td>
<td>Acehnese</td>
<td>Mambai</td>
<td></td>
</tr>
<tr>
<td>Belait</td>
<td>Manam</td>
<td>Alorese</td>
<td>Tape</td>
<td></td>
</tr>
<tr>
<td>Bulungan</td>
<td>Nanik</td>
<td>Leti</td>
<td>Nasal</td>
<td></td>
</tr>
<tr>
<td>Tidung</td>
<td>Nahaq</td>
<td>Windesni Wamesa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balinese</td>
<td>Tigak</td>
<td>Bih</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iban</td>
<td>Melayu Betawi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mamanwa</td>
<td></td>
<td></td>
<td></td>
<td>Sula</td>
</tr>
</tbody>
</table>
addressee, it would belong to a ‘near speaker, ‘near addressee’, ‘far from both’ system instead. Because of the overall lack of such systems outside of Reid’s study, further investigation is necessary to understand why Reid classified these languages as such and how the individual terms within their demonstrative systems are used.

<table>
<thead>
<tr>
<th>Language</th>
<th>Near speaker</th>
<th>Near addressee</th>
<th>Near third person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinaang Kalinga (knb)</td>
<td>siyaná</td>
<td>siyanát</td>
<td>siyadi</td>
</tr>
<tr>
<td>Siocon Subanen</td>
<td>koni</td>
<td>koyon</td>
<td>kitu?</td>
</tr>
<tr>
<td>Kayan, Uma Juman dialect (ree)</td>
<td>hinih</td>
<td>tinan</td>
<td>hithh</td>
</tr>
</tbody>
</table>

Table 2.23: Person-oriented systems based on Reid (1971: 39)

More commonly, languages are not constrained to having a third person as the deictic center. Rather, the third term is simply a distal term marking a referent that is neither near the speaker nor the addressee. This type of system is seen throughout the Austronesian languages, but it is most common among Oceanic languages.

Nevertheless, outside of Oceania, this type of system also occurs. Pampanga (pam) and CHamoru serve as examples among the Philippine languages. The following examples demonstrate the use of the Pampanga terms diád ‘near speaker’, ditán ‘near addressee’ and dimád ‘far from both’. In (2.27), guini indicates that the speaker wants to know how many fish are in their own personal space. In (2.28) the speaker specifically wants to know if it is raining where the addressee is located, and in (2.29) the speaker saw the referent in a location far from both speech act participants.

(2.27) **Kao bula guihän guini?**

Q many fish SPKR

‘Are there many fish here?’ (Pampanga; Topping 1969: 249)

(2.28) **Kao u’uchan guenao?**

Q rain ADDR

‘Is it raining there (where you are)?’ (Pampanga; Topping 1969: 249)

(2.29) **Hu li’e’ gue’ guihi.**

1sg see 3sg DIST

‘I saw him there (near neither of us)’ (Pampanga; Topping 1969: 249)

Iloko (ilo), a language of the Philippines provides a complex example of this system by including different lexical items based on visibility, plurality, and case as non-spatial semantic parameters. As Table 2.24 shows, daytóy refers to referents near the speaker, and daydíáy refers to those far from both the speaker and the addressee. Daytá, however, varies from the other addressee-centered terms that have already been discussed; it can refer either to referents that are nearer to the addressee than they are to the speaker, or it may designate referents that are near both. Thus, perhaps a more descriptive glossing of the term would be ‘not nearer to the speaker than to the addressee’. The Iloko demonstrative system further encodes visibility and plurality. Full form demonstratives inflect for case (core vs. oblique) and number (singular vs. plural), but only the core demonstratives are given in Table 2.24.

Many languages that distinguish near speaker, near addressee, and distal also have a fourth term that has a purely anaphoric function. For instance, Bundu Dusun (dtp) has four demonstratives: near speaker, near addressee, distal, and aforementioned (Price 2007: 18). The aforementioned term solely has a discourse rather than a spatial function; therefore Bundu Dusun is still considered to have a three-way person-oriented system.
Demonstratives

<table>
<thead>
<tr>
<th>Visibility</th>
<th>Distance</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>visible</td>
<td>speaker</td>
<td>daytóy</td>
<td>dagitóy</td>
</tr>
<tr>
<td>addressee (&amp; speaker)</td>
<td>daytá</td>
<td>dagitá</td>
<td></td>
</tr>
<tr>
<td>distal</td>
<td></td>
<td>daydiáy</td>
<td>dagidiáy</td>
</tr>
<tr>
<td>invisible</td>
<td>recent</td>
<td>daytáy</td>
<td>dagitáy</td>
</tr>
<tr>
<td>remote</td>
<td></td>
<td>daydi</td>
<td>dagidi</td>
</tr>
</tbody>
</table>

Table 2.24: Core full-form Iloko demonstratives
(Rubino 2005: 335)

Three-way person-oriented systems are common throughout the Malayo-Polynesian languages, and the languages with this system are displayed in Table 2.25. Lexical items in the table were chosen as examples of each distance distinction. They do not necessarily represent the full demonstrative system.
<table>
<thead>
<tr>
<th>Language</th>
<th>ISO</th>
<th>Near speaker</th>
<th>Near addressee</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pampanga</td>
<td>pam</td>
<td>diád</td>
<td>ditán</td>
<td>dimád</td>
</tr>
<tr>
<td>CHamoru</td>
<td>cha</td>
<td>guini</td>
<td>guenao</td>
<td>guihi</td>
</tr>
<tr>
<td>Aralle-Tabulahan</td>
<td>atq</td>
<td>in(e)</td>
<td>ne(e)</td>
<td>indo(e)</td>
</tr>
<tr>
<td>Bantik (dem)</td>
<td>bnq</td>
<td>ie</td>
<td>ene</td>
<td>e?e</td>
</tr>
<tr>
<td>Pendau (dem)</td>
<td>ums</td>
<td>moo</td>
<td>nao</td>
<td>'uo</td>
</tr>
<tr>
<td>Saliba</td>
<td>sbe</td>
<td>teina</td>
<td>temeta</td>
<td>tenem</td>
</tr>
<tr>
<td>Pileni</td>
<td>piv</td>
<td>ne</td>
<td>na</td>
<td>la</td>
</tr>
<tr>
<td>Saliba-Logea</td>
<td>sbe</td>
<td>ina</td>
<td>meta</td>
<td>nem</td>
</tr>
<tr>
<td>South Efate (dem)</td>
<td>erk</td>
<td>ne</td>
<td>go</td>
<td>nen</td>
</tr>
<tr>
<td>Bundu Dusun</td>
<td>dtp</td>
<td>iti</td>
<td>ilo</td>
<td>ino</td>
</tr>
<tr>
<td>Tawala</td>
<td>tbo</td>
<td>geka</td>
<td>naka</td>
<td>noka</td>
</tr>
<tr>
<td>Biak</td>
<td>bhw</td>
<td>ne</td>
<td>ya?i</td>
<td>wa?u</td>
</tr>
<tr>
<td>Makassar</td>
<td>mak</td>
<td>anne</td>
<td>antu</td>
<td>anjo</td>
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<tr>
<td>Guinaag Kalinga</td>
<td>ksc</td>
<td>siyanaa</td>
<td>siyanat</td>
<td>siyadi</td>
</tr>
<tr>
<td>Siocon Subanen</td>
<td>sic</td>
<td>koni</td>
<td>koyon</td>
<td>kituʔ</td>
</tr>
<tr>
<td>Kayan (Uma Juman dialect)</td>
<td>bfg</td>
<td>hinhi</td>
<td>tinan</td>
<td>hitih</td>
</tr>
<tr>
<td>Masbatenyo</td>
<td>msb</td>
<td>ini</td>
<td>iná</td>
<td>idtó</td>
</tr>
<tr>
<td>Tagbanwa</td>
<td>twn</td>
<td>lito</td>
<td>liti</td>
<td>liti</td>
</tr>
<tr>
<td>Keikel</td>
<td>kel</td>
<td>iye</td>
<td>iroi</td>
<td>ivel</td>
</tr>
<tr>
<td>Idate</td>
<td>idt</td>
<td>he nia</td>
<td>henene</td>
<td>hele</td>
</tr>
<tr>
<td>Sula</td>
<td>szn</td>
<td>isuka</td>
<td>bangana</td>
<td>samana</td>
</tr>
<tr>
<td>Irarutu</td>
<td>irh</td>
<td>ini</td>
<td>ei</td>
<td>imai</td>
</tr>
<tr>
<td>Rapa</td>
<td>rap</td>
<td>tenei</td>
<td>tena</td>
<td>tera</td>
</tr>
<tr>
<td>Nakanai</td>
<td>nak</td>
<td>-e</td>
<td>-ele</td>
<td>-o</td>
</tr>
<tr>
<td>Niuean</td>
<td>niu</td>
<td>nei, ū</td>
<td>nā</td>
<td>kō</td>
</tr>
<tr>
<td>Maori</td>
<td>mri</td>
<td>nei</td>
<td>nā</td>
<td>rā</td>
</tr>
<tr>
<td>Vaeakau-Taumako</td>
<td>piv</td>
<td>ne</td>
<td>na</td>
<td>la</td>
</tr>
<tr>
<td>Kiribatese</td>
<td>gil</td>
<td>aei</td>
<td>anne</td>
<td>arei</td>
</tr>
<tr>
<td>Ponaean</td>
<td>pon</td>
<td>-e(t)</td>
<td>-en</td>
<td>-o</td>
</tr>
<tr>
<td>Tamambomla</td>
<td>mla</td>
<td>niani</td>
<td>niae</td>
<td>niala</td>
</tr>
<tr>
<td>Maskelynes</td>
<td>klv</td>
<td>egai</td>
<td>enan</td>
<td>lai</td>
</tr>
<tr>
<td>Neve’ei</td>
<td>vnm</td>
<td>utne</td>
<td>utnang</td>
<td>utnokhoi</td>
</tr>
<tr>
<td>Raga</td>
<td>lml</td>
<td>geki</td>
<td>kea</td>
<td>kaha</td>
</tr>
<tr>
<td>‘Ōrōe</td>
<td>bpk</td>
<td>nā</td>
<td>vē</td>
<td>nī</td>
</tr>
<tr>
<td>Tinrin</td>
<td>cir</td>
<td>ânra-ha</td>
<td>ânra-mwā</td>
<td>ânra-rra</td>
</tr>
<tr>
<td>Vita</td>
<td>bbp</td>
<td>kua</td>
<td>kena</td>
<td>kuart</td>
</tr>
<tr>
<td>Lote</td>
<td>atk</td>
<td>nei</td>
<td>nem</td>
<td>neu</td>
</tr>
<tr>
<td>Mekeo</td>
<td>mek</td>
<td>i-na-(i)</td>
<td>e-na-(i)</td>
<td>u-na-(i)</td>
</tr>
<tr>
<td>Niuafo’ou</td>
<td>num</td>
<td>eni</td>
<td>ena</td>
<td>ee</td>
</tr>
<tr>
<td>Tirax</td>
<td>mme</td>
<td>xotan</td>
<td>wuweri/xori</td>
<td>xue</td>
</tr>
<tr>
<td>Hoava</td>
<td>hoa</td>
<td>heni</td>
<td>sani</td>
<td>huani</td>
</tr>
<tr>
<td>Kove</td>
<td>kvc</td>
<td>diene</td>
<td>diana</td>
<td>duwawa</td>
</tr>
<tr>
<td>Tawoyan</td>
<td>twy</td>
<td>ehe</td>
<td>iduh</td>
<td>iro</td>
</tr>
</tbody>
</table>
### 2.3.5.2 Four-way person-oriented systems

Four types of four-way person-oriented demonstrative systems have been identified in the language sample and are described in this section. The first system contrasts near speaker, near addressee, near third person, and distal. According to Reid (1971), this is a relatively common system among Philippine languages. In total, 11 of the Philippine languages included in his sample have this four-way system. The demonstratives in three of these Philippine languages can be viewed in Table 2.26. One non-Philippine language, East Uvean, is also included as the only language in the sample outside the Philippines with this type of system.

<table>
<thead>
<tr>
<th>Language</th>
<th>ISO 639-3</th>
<th>Region</th>
<th>Speaker</th>
<th>Addressee</th>
<th>Third person</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agta duo Luzon</td>
<td></td>
<td></td>
<td>yən</td>
<td>ənə</td>
<td>yewən</td>
<td>yen</td>
</tr>
<tr>
<td>Koronadal Bilaan bpr</td>
<td>Mindanao</td>
<td></td>
<td>ani</td>
<td>aye</td>
<td>atuʔ</td>
<td>ayə</td>
</tr>
<tr>
<td>Pamplona Atta att</td>
<td>Luzon</td>
<td></td>
<td>yawe</td>
<td>yine</td>
<td>yuke</td>
<td>yurin</td>
</tr>
<tr>
<td>East Uvean wls Wallis Island</td>
<td></td>
<td></td>
<td>æ-ni</td>
<td>æ-n</td>
<td>æe</td>
<td>age</td>
</tr>
</tbody>
</table>

Table 2.26: Four-way person-oriented system that distinguishes ‘near speaker’, ‘near addressee’, ‘near third person’, and ‘distal’.

All other four-way systems described in this section do not use a third person as the deictic center; they solely use the speaker and addressee. Three languages—Kambera (xbr), Ske (ske), and Hawaiian (haw)—have systems with two speaker-oriented demonstratives. The resulting speaker-oriented terms are distinguished using semantic parameters such as distance, specificity, and touch/gesture. In Kambera, a language of Sumba, Indonesia, the four-term system has two terms that are distinguished by distance from the speaker. They include ni ‘near speaker’ and nai ‘near speaker (but further away than ni)’. The non-speaker-centered terms include na ‘near addressee’ and nu ‘distal’ (Klamer 1998).

Ske of Vanuatu also has two speaker-centered terms, but these are more clearly distinguished by whether there is an accompanying gesture or touch: nie ‘near speaker’, nied ‘near speaker (possibly touching the object)’. Non-speaker-centered terms include niam ‘near addressee’ and diae ‘distal’ (Johnson 2014).

Hawaiian near speaker demonstratives are distinguished by the definiteness of the referent’s location. The Hawaiian system consists of the following terms: kēia and nei mean ‘near speaker, definite’, ia and ua ‘near speaker, indefinite’, kēnā and nā ‘near addressee’, and kēlā, ala, la, ana ‘distal’. There is also an obsolete term, nei, which, for the sake of this typology, is excluded as it is not considered to be part of the synchronic system. The Hawaiian system is shown in Table 2.27, and it is not symmetrical over all word classes. The ø-class demonstratives follow the four-way system just described, but the k-class demonstratives instead have just a three-way contrast without a speaker-centered indefinite demonstrative.

Cebuano (ceb) of the Philippines, differs from the other four-way person-oriented systems because it includes a term for referents that are near both the speaker and addressee, simultaneously using both speech act participants as the deictic center. This term, dinhi, is used when the referent is nearby, but it

<table>
<thead>
<tr>
<th>Class</th>
<th>Near speaker</th>
<th>Indefinite</th>
<th>Near addressee</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>ke-class dem</td>
<td>kēia</td>
<td>kēnā</td>
<td>kēlā</td>
<td></td>
</tr>
<tr>
<td>ø-class dem</td>
<td>nei, nei†</td>
<td>ia, ua</td>
<td>nā</td>
<td>ala, lā/-la, ana</td>
</tr>
<tr>
<td>Directionals</td>
<td>mai, iho</td>
<td>aʻe</td>
<td>aku</td>
<td></td>
</tr>
<tr>
<td>Locatives</td>
<td>ʻaneʻi, ʻoneʻi</td>
<td>laila</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

Table 2.27: Hawaiian demonstrative system
is not perceptually nearer to either speech act participant. For instance, in (2.31) dinhi indicates that the reference location is that near both the speaker and the addressee. The remaining Cebuano demonstratives are illustrated in the following examples. In (2.30), the term diqa indicates that the Coca-Cola is nearer to the speaker than to the addressee. Conversely, in (2.32), dihaq indicates that the beer is nearer to the addressee than the speaker. Finally, in (2.33), the use of didtu indicates that the people of reference are far from both speech event participants.

(2.30) Díqa dirí ang kukakúla
spkr.pst spkr det Coca-Cola
'The Coca-Cola is over here (near me)'. (Cebuano; Wolff 1966: 13)

(2.31) Niqa mi dinhi
near.both.pst 1pl near.both
'We are here (near both)'. (Cebuano; Wolff 1966: 13)

(2.32) Ánhaq ang bir dihaq kanímu
fut.addr av bir addr 10.2pl
'Keep the beer (where you are)'. (lit: 'Let the beer there where you are'.) (Cebuano; Wolff 1966: 13)

(2.33) Dághan kaqáyung táwu didtu
many there.is person dist
'There are many people there'. (Cebuano; Wolff 1966: 13)

Cebuano additionally encodes a temporal aspect in its demonstrative paradigm. There are thus three separate forms of each demonstrative depending on whether the event occurs in the past, present, or future, resulting in a total of sixteen different demonstratives.

<table>
<thead>
<tr>
<th>Deixis</th>
<th>Past</th>
<th>Present</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near speaker</td>
<td>diqa/adiqa</td>
<td>dirí</td>
<td>arí</td>
</tr>
<tr>
<td>Near addressee</td>
<td>náqa/anáqa</td>
<td>dinhaq/diháq</td>
<td>ánhaq</td>
</tr>
<tr>
<td>Near addressee and listener</td>
<td>níqa/aníqa</td>
<td>dinhi</td>
<td>ánhi</td>
</tr>
<tr>
<td>Far from speaker and listener</td>
<td>túqa/atúqa</td>
<td>didtu</td>
<td>ádtu</td>
</tr>
</tbody>
</table>

Table 2.28: Cebuano demonstratives with temporal meaning (Wolff 1966: 12).

Finally, Mualang (mtd), a language of Borneo, shows that a language with a four-way person-oriented demonstrative system may have two distal terms. Mualang has one distal demonstrative that indicates referents that are relatively far from both speakers while the other is very far from both. The four demonstratives include tu’ ‘near speaker’, la’/nya’ ‘far from the speaker but may be near the listener’, nyin’distal (relatively far from all speech participants)’ and nyun ‘that far away’. The term nyu’ is in use in (2.34) which indicates that the referent location is near the addressee rather than the speaker.

(2.34) nya’ mah ia!
that mah 3sg
'There he is! (finally after having waited for so long)'. (Mualang; Tjia 2007: 62)

Despite the fact that nyin is clearly closer than nyun, the distinction between the two terms can occasionally be vague and reliant on the speaker’s point of view. For instance, either term is acceptable in
(2.35) The Sepan river is out of sight and quite far away, so the speaker may easily refer to the people who are at the river with the more neutral term *nyin*. However, if the speaker sees the river as exceptionally far, perhaps to emphasize that it is farther than the addressee imagines, they might choose to use *nyun*. In this sense, although their meaning may overlap in practice, they clearly are still related to the (perceived) distance of the referent.

(2.35) **urang da sungay Sepan nyin/nyun**

*person loc river that.over.there/that.far.away*

‘the people at the Sepan River there/far over there’ (Mualang: Tjia 2007: 62)

Gayo of Sumatra has the same system as Mualang. It has two demonstratives which use both the speaker and the addressee as reference points and two distal terms that are distinguished by visibility. Terms include: *sien* (*sinen* in Dëret dialect) ‘near speaker’, *onè* (*sonè* in Dëret dialect) ‘near addressee/place just referred to’, *sia (=sa)* ‘away from but within view of the speaker and hearer’ and *so/ho* ‘far from the speaker and the hearer’ (Eades 2005). Visibility marks the difference between *sia* and *so/ho*; the former refers to visible referents while the latter refers to referents that are out of sight. The Binukid demonstrative system is the same as Gayo which includes the terms: *haini* ‘near speaker’, *hayan* ‘near addressee’, *hayà* ‘far from both’ and *haena* ‘out of sight’ (Otanes & Wrigglesworth 1992: xix).

### 2.3.5.3 Five-way person-oriented demonstrative systems

Languages that have a five-way person-oriented demonstrative system—Karo Batak, Begak, and Marquesan—have have two proximal demonstratives and three distal demonstratives. While initially, the three systems may appear similar, the languages, in fact, differ in the semantic parameters that are used to distinguish distal terms.

The three distal demonstratives in Karo Batak (ISO 639-3 btx) of northern Sumatra are defined by distance and visibility (Table 2.29). *Ah/adah* refers to locations just outside of the speech participants’ immediate proximity. The demonstrative, *e*, refers to locations that are farther away but within view while *oh* is even farther away and potentially out of sight. Each distal term is slightly farther than the next, and visibility is an additional factor that distinguishes *e* from *oh*.

<table>
<thead>
<tr>
<th>Demonstrative</th>
<th>Locative pronouns</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>-énda</td>
<td>jénda</td>
<td>‘near speaker’</td>
</tr>
<tr>
<td>éna</td>
<td>jéna</td>
<td>‘relatively near addressee’</td>
</tr>
<tr>
<td>ah, adah</td>
<td>jah, jadah</td>
<td>‘over there, outside of immediate proximity of both speaker and addressee’</td>
</tr>
<tr>
<td>é</td>
<td>jé</td>
<td>‘far but within view of both or something just referred to’</td>
</tr>
<tr>
<td>oh</td>
<td>joh</td>
<td>‘far from speaker and addressee, possibly out of sight’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demostrative</th>
<th>Locative pronouns</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>-énda</td>
<td>jénda</td>
<td>‘near speaker’</td>
</tr>
<tr>
<td>éna</td>
<td>jéna</td>
<td>‘relatively near addressee’</td>
</tr>
<tr>
<td>ah, adah</td>
<td>jah, jadah</td>
<td>‘over there, outside of immediate proximity of both speaker and addressee’</td>
</tr>
<tr>
<td>é</td>
<td>jé</td>
<td>‘far but within view of both or something just referred to’</td>
</tr>
<tr>
<td>oh</td>
<td>joh</td>
<td>‘far from speaker and addressee, possibly out of sight’</td>
</tr>
</tbody>
</table>

Table 2.29: Karo Batak demonstrative system (Woollams et al. 1996: 120)

While Karo Batak proximal demonstratives contrast ‘near speaker’ from ‘near addressee’, Begak (dbj) proximal demonstratives, rather, contrast ‘near speaker’ from ‘near speaker and addressee’. The distinction between these two terms are shown in (2.36) and (2.37). In (2.36) the speaker uses *ate* ‘near speaker’ to indicate that the book is within the speaker’s vicinity even though it is not visible. In contrast, the use of *ano* ‘near speaker and addressee’ in (2.37) indicates that the book is within reach of both the speaker and the addressee. If a speaker wanted to express that the referent is near the addressee and not the speaker, they would use *ino*, which has the dual meaning of ‘far from both speech event participants’ or ‘near addressee’; the latter interpretation is adopted in (2.38). The Begak system uses visibility as a parameter...
Demonstratives

<table>
<thead>
<tr>
<th>Long form</th>
<th>Short form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ate</td>
<td>ne/te</td>
<td>'closer to the speaker than to the addressee'</td>
</tr>
<tr>
<td>ano</td>
<td>-</td>
<td>'close to both speaker and addressee'</td>
</tr>
<tr>
<td>ino</td>
<td>no</td>
<td>'far away from speaker'</td>
</tr>
<tr>
<td>udi</td>
<td>-</td>
<td>'far from speaker, visible'</td>
</tr>
<tr>
<td>adi</td>
<td>di</td>
<td>'far from speaker, invisible'</td>
</tr>
</tbody>
</table>

Table 2.30: Begak demonstratives
(Begak; Goudswaard 2005: 95)

to distinguish demonstratives. While in Karo Batak visibility is just one parameter that helps speakers choose between distal demonstratives, in Begak, visibility is a defining factor. This contrast is shown in (2.39) and (2.40). In (2.39), udi refers to a hill. The speaker can see the hill and is asking the addressee if they can see it as well, so the speaker chooses to use udi. However, in (2.40), the hill is out of sight; thus, the speaker uses adi.

(2.36) Ate buk mo gam?
spkr book 1sg q
'Is this your book?' (The book is behind the speaker’s back but closer to him than to the addressee.) (Begak; Goudswaard 2005: 286)

(2.37) Ano buk mo gam?
near.both book 1sg q
'Is this your book?' (The book is in front of the speaker, in between and addressee, or closer to the addressee. In all three cases speaker and addressee are close to each other and the book is within hand reach of both. This demonstrative is also appropriate if speaker or addressee are holding the book) (Begak; Goudswaard 2005: 286)

(2.38) Ino kulos nogn ttas sadtong mo! 'This is an insect on your shoulder!' (Speaker is pointing at an insect on the addressee’s shoulder.) (Begak; Goudswaard 2005: 287)

(2.39) Ttan mo bulud udi?
see.uv 2sg hill dist.vis
'Do you see the hill there?’ (The hill is several hundreds of meters away but visible.) (Begak; Goudswaard 2005: 287)

(2.40) Bay mil ikow mëñnik bulud adi?
pref ever 2s.n dep-go.up hill dist.invis
'Have you ever climbed the hill over there?’ (The hill is out of sight.) (Begak; Goudswaard 2005: 287)

In Marquesan, the final language that has been documented to have a five-way system, demonstratives are distinguished through specificity and discourse information. The nearest distal term, ’a or a’a is a generic distal that indexes a referent that is far from both participants in the speech event. This term contrasts with -ia, which, in addition to its discourse tracking role, may also be used to express a specific distance. In contrast, ana refers to a nonspecific location that is distant from the speech event. Because familiarity and certainty decrease with distance, ana generally refers to farther referents (Cablitz 2006).4

4Reporting of Marquesan’s deictic system varies by publication. The description in Lynch et al. (2002) also notes that
**Demonstratives**

<table>
<thead>
<tr>
<th>Demonstrative</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>nei</em></td>
<td>'something near the speaker or deictic centre'</td>
</tr>
<tr>
<td><em>na</em></td>
<td>'something close to the addressee'</td>
</tr>
<tr>
<td><em>'a/a'a</em></td>
<td>'something neither close to speaker nor addressee'</td>
</tr>
<tr>
<td><em>-ia</em></td>
<td>'a new referent or when the speaker wants to express a certain distance'</td>
</tr>
<tr>
<td><em>ana</em></td>
<td>'somewhere over there (=unspecific)'</td>
</tr>
</tbody>
</table>

Table 2.31: Marquesan demonstratives (Cablitz 2006: 102)

In comparison to the four-way person-oriented systems described in §2.3.5.2 which are quite diverse, the five-way person-oriented systems are surprisingly homogeneous. Each contains two proximal terms and three distal terms, but they vary based on the semantic parameters used to distinguish each demonstrative.

### 2.3.5.4 More complex person-oriented demonstrative systems

Interestingly, the two languages with person-oriented demonstrative systems that have six or more distance distinctions also have quite similar systems. Both systems use touch as a semantic parameter to distinguish two speaker and two addressee-oriented demonstratives. Referents within reach of either speech-act participant receive a different categorization from those that are nearby but out of reach.

Kadazan was previously discussed in §2.3.4.2 since it has a six-way distance-oriented locative system. However, Kadazan is a language with an asymmetric demonstrative system; its determiner system is a six-way person-oriented system shown in Table (2.32). There are two demonstratives centered on each speech act participant. The speaker-centered terms *iti* and *itiia* are distinguished by whether the referent is held or touched by the speaker. Similarly, *ino* and *inia* are both addressee-centered, distinguished by whether the referent is held or touched by the addressee. Distal terms are differentiated by whether they are within the immediate vicinity of the actors of the speech act or not.

<table>
<thead>
<tr>
<th>Demonstrative</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>iti</em></td>
<td>'held or touched by speaker'</td>
</tr>
<tr>
<td><em>itiia</em></td>
<td>'near speaker, not touched'</td>
</tr>
<tr>
<td><em>ino</em></td>
<td>'held or touched by addressee'</td>
</tr>
<tr>
<td><em>inia</em></td>
<td>'near addressee, not touched'</td>
</tr>
<tr>
<td><em>ihia</em></td>
<td>'out of immediate vicinity of speaker or addressee'</td>
</tr>
<tr>
<td><em>iho</em></td>
<td>'far from both speaker and addressee'</td>
</tr>
</tbody>
</table>

Table 2.32: Kadazan Demonstratives

The Samoan system, shown in Table 2.33, is quite similar to the Kadazan system (otd). As the table shows, most of the categories overlap between Kadazan and Samoan. Two demonstratives are speaker-anchored, two are addressee-anchored, and two are distal. *Lea* and *lenā* require the referent to be in the possession of the speaker or addressee respectively. *Lele* and *nale* indicate referents that are farther away but still require an accompanying gesture. Distal terms are distinguished as to whether they are within

---

Marquesan has five demonstratives. The proximal terms align with the analysis by Cablitz (2006). Terms include *nei* ‘near speaker’, *naa* ‘near addressee’, *'a/a'a* ‘distal/near third person’. The other terms differ. Lynch et al. reports that *hua* solely has an anaphoric role, and *tea* may be used anaphorically but like *ana*, it can also be used to refer to a nonspecific location.
Demonstratives

<table>
<thead>
<tr>
<th></th>
<th>Near speaker</th>
<th>Near addressee</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very close, in the possession of</td>
<td>lea, lenei</td>
<td>lenā</td>
<td></td>
</tr>
<tr>
<td>Near to, within reach of</td>
<td>lele (+gesture)</td>
<td>nale (+gesture)</td>
<td></td>
</tr>
<tr>
<td>Not too far away from participants but beyond reach</td>
<td></td>
<td></td>
<td>lale (+gesture)</td>
</tr>
<tr>
<td>Far away from participants</td>
<td></td>
<td></td>
<td>lelā</td>
</tr>
</tbody>
</table>

Table 2.33: Samoan demonstratives (Mosel 2004: 145)

the speech actors’ immediate vicinity or if they are quite far away. The only major difference between the Kadazan and Samoan systems is that Samoan has a seventh demonstrative, which is a general proximal, lenei. Lenei is not marked for touch, possession, or gesture and simply refers to referents near the speaker.

2.3.5.5 Summary of person-oriented systems

There are a plethora of different types of person-oriented deictic systems in Malayo-Polynesian languages. The minimal number of contrasts that are possible in person-oriented systems is three, and there are two types of three-way systems. One distinguishes near speaker, near addressee, and near third person. The other distinguishes near speaker, near addressee, and distal. Samoan, has the highest number of person-oriented spatial contrasts with a seven-term person-oriented system. Parameters that are used to differentiate terms in person-oriented systems include distance, touch, gesture, possession, specificity, and visibility.

Person-oriented systems are quite common among Malayo-Polynesian languages, though they are particularly common among Oceanic languages. All of the languages and their number of spatial contrasts are listed in Table 2.34.

2.3.6 Elevational demonstrative systems

Elevational demonstrative systems are those that distinguish a search domain on the vertical axis from that on a horizontal axis. There is admittedly quite a bit of overlap between this section and §2.2.3. However, the systems discussed in this section differ in that the elevational terms are part of a larger person or distance-oriented demonstrative system. Because elevational systems also include demonstratives on a horizontal axis, all elevational systems also include a system of person or distance-oriented demonstratives. Therefore, elevational systems are treated separately here on the sole basis that elevation is part of the demonstrative system, and thus, when speakers are choosing a demonstrative, they can choose between locating a referent on the horizontal or the vertical axis. In many systems, elevation becomes a factor at the distal level, and it may coexist with other semantic parameters that distinguish distal demonstratives. Many elevational systems are concentrated on the island of Sulawesi and in Vanuatu. However, there are a few languages in the sample that are spoken in other regions.

The most basic elevational systems are those which make two distinctions on the vertical axis: high vs. non-high or high vs. low. Three-way systems that distinguish high, level, and low are also common. Because of the island topography of Malayo-Polynesian languages and the entangled nature of notions of land vs. sea and up vs. down which was previously discussed in §2.2.3, many of the elevational demonstratives discussed in this section may also mean ‘in the seawards direction of the deictic center’ or ‘in the landwards direction of the deictic center’. In such systems, elevation plays an important and pervasive role in everyday speech though it is not always possible to tease apart from the land-sea systems of the region. Because this requires further study to properly disentangle (if it is even possible), the two
### Table 2.34: Malayo-Polynesian person-oriented systems and their number of spatial contrasts

<table>
<thead>
<tr>
<th>Three-way</th>
<th>Four-way</th>
<th>Five-way</th>
<th>Six-way</th>
<th>Seven-way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinaag Kalinga</td>
<td>Kove</td>
<td>Korondal Bilaan</td>
<td>Karo Batak</td>
<td>Kadazan</td>
</tr>
<tr>
<td>Siocon Subanen</td>
<td>Tirax</td>
<td>Agta</td>
<td>Begak</td>
<td>Samoan</td>
</tr>
<tr>
<td>Kaya (Uma Juman)</td>
<td>Niuafou’ou</td>
<td>Pamplona Atta</td>
<td>Marquesan</td>
<td></td>
</tr>
<tr>
<td>Papapanga</td>
<td>Lote</td>
<td>Kambera</td>
<td>Puluwat</td>
<td></td>
</tr>
<tr>
<td>Chamoru</td>
<td>Mekeo</td>
<td>Ske</td>
<td>Marshallese</td>
<td></td>
</tr>
<tr>
<td>Aralle-Tabulahan</td>
<td>Vita</td>
<td>Hawaiian</td>
<td>Lenakel</td>
<td></td>
</tr>
<tr>
<td>Bantik</td>
<td>Tinnin</td>
<td>Cebuano</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pendau</td>
<td>’Öroê</td>
<td>Gayo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saliba</td>
<td>Raga</td>
<td>Mateq</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pileni</td>
<td>Neve’ei</td>
<td>Woleaian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saliba-Logea</td>
<td>Maskelynes</td>
<td>Old Rapa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Efate</td>
<td>Tamambo</td>
<td>Ulithian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bundu Dusun</td>
<td>Ponapean</td>
<td>Lewo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tawala</td>
<td>Kiribatese</td>
<td>Toqabaqita</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biak</td>
<td>Vaeakau-Taumako</td>
<td></td>
<td>North Tanna</td>
<td></td>
</tr>
<tr>
<td>Makassar</td>
<td>Maori</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buol</td>
<td>Tokelau</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoava</td>
<td>Niuean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Botolan Sambal</td>
<td>Nakanai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masbatenyo</td>
<td>Rapa</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tagbanwa</td>
<td>East Uvean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kei</td>
<td>Irarutu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idate</td>
<td>Sula</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

52
are considered together here.

2.3.6.1 Two-term elevation distinctions

There are two types of two-term elevational systems which will be described separately here. The first distinguishes high from non-high. Non-high refers to referents that are at the same level or lower than the deictic center. This contrasts with referents that are higher than the deictic center. The other type of system contrasts high from low. The latter is the more common system.

Muna is the only language to have a system that contrasts high vs. non-high. The terms are determined by the position of the referent related to the deictic center of the speaker. A referent that is higher in elevation will be *tatu* and one that is level or lower in elevation will be *watu* as in (2.42). It encodes elevation in its demonstrative and prepositional systems which are shown in Tables 2.35 and 2.36.

Within the demonstrative system, elevation is encoded solely in the distal demonstratives. At a proximal level, Muna has a person-oriented system that distinguishes *ini* ‘near speaker’, *itu* ‘near addressee’ and *maitu* ‘nearby but away from both speaker and addressee’. Semantic parameters that speakers use to categorize distal referents include: visibility and elevation. Visibility defines *anagha* ‘invisible’ and *awaghaitu* ‘visible’. *Anagha* may refer to something that is heard but not seen, or it may have an anaphoric meaning ‘that, the aforementioned’. Meanwhile *awaghaitu* means ‘that which was in view but is no longer in view’. Evidently, they also differ by temporality, audibility, and anaphora. While the other terms in the demonstrative system may refer to invisible referents as well, for *anagha* and *awaghaitu* “[visibility] is distinguishing” (van den Berg 1997: 201).

<table>
<thead>
<tr>
<th>PROXIMAL</th>
<th>DISTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ini</td>
<td>nagha</td>
</tr>
<tr>
<td>itu</td>
<td>wagha</td>
</tr>
<tr>
<td>maitu</td>
<td>watu</td>
</tr>
<tr>
<td>near speaker</td>
<td>invisible</td>
</tr>
<tr>
<td>near hearer</td>
<td>past visible</td>
</tr>
<tr>
<td>near, but away from speaker and hearer</td>
<td>level or lower</td>
</tr>
<tr>
<td></td>
<td>tatu</td>
</tr>
<tr>
<td></td>
<td>higher</td>
</tr>
</tbody>
</table>

Table 2.35: Muna demonstratives (van den Berg 1997: 199). This table shows just the determiners; the Muna system is symmetrical and is reflected across six additional word classes.

The elevation terms are used only for the farthest of referents regardless of their visibility. While the horizontal plane has four dimensions (near speaker, near addressee, near both, far from both), the vertical plane has just two: high *tatu* and non-high *watu*. Both are determined by the position of the referent related to the deictic center, which tends to be the speech event. A referent that is higher in elevation will be *tatu* as in (2.41) in which Speaker 1, who is standing on the ground, is talking to someone up in a jambu tree. Speaker 1 uses *atatu*, the form of *tatu* ‘high’ used for identifying referents, to indicate that the jambu fruit in question is up above them. A referent that is lower in elevation will be *watu* as in (2.42) in which the speaker refers to their field, which is lower in elevation than the speech event.

(2.41) a. *Me-uta-kaeta dhambu aitu*
IMP-pick-1PL jambu ADDR

Speaker 1: ‘Please pick that jambu-fruit near you.’
b. *Hamai?*  
which  
**Speaker 2:** ‘Which one?’

c. *Atatu.*  
**Speaker 1:** ‘That one up there’ (Muna; van den Berg 1997: 203)

(2.42)  
\[\text{a. } Ne \text{ hamai galu-mu?} \]  
\[\text{LOC which field-your}\]  
**Speaker 1:** ‘Where is your field’?

\[\text{b. } Awatu-ee \]  
\[\text{HIGH-EMPH}\]  
**Speaker 2** ‘Over there (far away and lower in elevation)’ (Muna; van den Berg 1997: 200)

*Tatu* appears to be the more marked form while *watu* is the more neutral one. There is no generic distal term in Muna, but *watu* and its various forms serve somewhat as such. Van den Berg (1989) states that while speakers perceive *watu* to mean low, in practice it only serves as an opposition to *tatu*. A referent that is level or lower in elevation will be referred to with *watu*. Use of *watu* to refer to a level referent is shown in (2.43). However, *tatu* can also refer to entities that are level with the deictic center, but usually referents that are *tatu* are farther away than those that are *watu*, further suggesting the more marked status of *tatu*.

(2.43)  
\[\text{ne-ngkora simbali } \text{watu}\]  
\[\text{3sg-sit in inner.room non-HIGH}\]  
‘She is sitting in the inner room over there’. (Muna; Van den Berg 1989: 95)

<table>
<thead>
<tr>
<th>Preposition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>te</em></td>
<td>high or front or east</td>
</tr>
<tr>
<td><em>ne</em></td>
<td>unmarked</td>
</tr>
<tr>
<td><em>we</em></td>
<td>non-high (level/lower), back, west/south</td>
</tr>
</tbody>
</table>

Table 2.36: Muna elevational prepositions (van den Berg 1997: 204). Height overrides cardinal direction

Muna’s prepositional system has the same number of elevational distinctions as the demonstrative system and further demonstrates how Muna speakers distinguish high versus non-high. *Te* refers to positions, directions, or sources that are higher than the deictic center, and *we* refers to those that are level or lower. *Ne* is an unmarked preposition used when height is irrelevant. As a result, an utterance may change solely due to the position of the speaker. For instance, in both (2.44) and (2.45) the speaker is talking about their machete falling into the sea. The utterances are identical except in the choice of preposition. In (2.44), the speaker is at sea level, so elevation does not particularly matter to the utterance. Therefore, they use the unspecified preposition *ne*. In (2.45), the speaker is on land and talking about an event that took place at sea level. The land is inherently higher than the sea, so the speaker must use *we* ‘non-high’.

(2.44)  
\[\text{Kapulu-ku } \text{no-ndawu } \text{ne tehi.}\]  
\[\text{machete-my 3sg.rls-fall LOC sea}\]  
‘My machete fell into the sea’. (spoken at sea) (Muna; van den Berg 1997: 207)
(2.45) Kapulu-ku no-ndawu we tehi. machete-my 3SG.RLS-fall LOC.DOWN sea
'My machete fell into the sea'. (spoken at on land) (Muna; van den Berg 1997: 207)

While relative height (relative to deictic center) is one point of reference, the prepositions may also refer to a referent’s absolute height, meaning whether the referent is inherently high or low. For instance, the preposition te is used to refer to the attic in (2.46). This utterance is grammatical regardless as to whether the speaker is located at a position higher than the attic, because the very notion of ‘attic’ suggests that it is higher than other parts of the house.

(2.46) O kahitela do-runs-e te/’we ghahu ART maize 3PL-store-it LOC attic
‘maize is stored in the attic’ (Muna; van den Berg 1997: 205)

The other type of two-way elevation system contrasts high versus low. In such systems, low does not designate referents that are level with the deictic center. Balantak, which, like Muna, is a member of the Celebic subgroup, is one language that distinguishes high and low. Elevational terms are only used for referents whose relative height differs from that of the speech event. In Balantak, ro’o and ndo ‘low’ can only refer to referents that are lower than the deictic center (Table 2.37). For instance, in (2.47), the use of ro’o indicates that the referent, the person, is lower than the speaker and addressee. Although the referent is also located to be underneath the tree, ro’o does not convey this information. Rather, the term intu conveys the meaning ‘under’, and ro’o serves the sole purpose of locating the person and the tree at a lower elevation than the speaker. Similarly ra’a and nda’a can only refer to referents that are higher than the speech event. Like Muna, these elevational terms are only used with distal referents; for proximal referents, a person-oriented system is used. However, on a distal level, the Balantak system differs from the Muna system in that it encodes laterality rather than visibility. The terms le’e and nde’e are used for referents that are to the side of the deictic center at the same elevation.

<table>
<thead>
<tr>
<th>Demonstrative</th>
<th>Adverbial</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ni’i</td>
<td>ita</td>
<td>near speaker</td>
</tr>
<tr>
<td>nono’</td>
<td>no’o</td>
<td>near hearer</td>
</tr>
<tr>
<td>ya’a</td>
<td>mba’a</td>
<td>near, but away from speaker and hearer</td>
</tr>
<tr>
<td>tu’u</td>
<td>ntu’u</td>
<td>far from speaker and hearer</td>
</tr>
<tr>
<td>le’e</td>
<td>nde’e</td>
<td>side at same level</td>
</tr>
<tr>
<td>ra’a</td>
<td>nda’a</td>
<td>high, or in front at same level</td>
</tr>
<tr>
<td>ro’o</td>
<td>ndo’o</td>
<td>low</td>
</tr>
</tbody>
</table>

Table 2.37: Balantak elevational demonstratives (Busenitz & Busenitz 1992: 132).

(2.47) l-ro’o na intu-na woo’ i-ya’a
extension-low prep under-3SG:POSS areca extension-DEM
‘that person down there underneath that areca palm’ (Balantak; Busenitz & Busenitz 1992: 134)

The demonstrative system of Ambel, a SHWNG language spoken in the Waigeo Islands off the coast of the Bird’s Head of New Guinea, has a very different system from those described thus far. It forms a matrix between distance parameters and topographic or topological parameters. It distinguishes four distance parameters that include proximal, medial, and distal, and one that encodes several possible motion
trjectories, glossed as ‘and’ in Table 2.38. The motion trajectories expressed by demonstratives in the and
category include: 1) The speaker is moving towards the addressee and away from the figure or moving
away from both; 2) The figure is moving towards the addressee and away from the speaker; or 3) The
figure is moving away from both. Each distal category contains seven terms that exist on three opposing
axes rooted in topography and topological relations: landward vs. seaward, up vs. down, and front vs.
back vs. side as shown in Table 2.38. The Ambel demonstrative system resembles the elevational systems
of non-Austronesian languages which separate the elevational terms high’ and ‘low’ from ‘landward’ and
‘seaward’ respectively. Thus, in Ambel the distinction between the elevational and the land-sea axes is
clearer. Yet, the synonymy is not entirely gone; for instance, the elevational terms can also be used as
costal directionals in which ‘high’ refers to movement along the coast in one direction and ‘low’ refers to
movement along the coast in the opposite direction.

<table>
<thead>
<tr>
<th>prefix</th>
<th>prox</th>
<th>mid</th>
<th>dist</th>
<th>and</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘seaward’</td>
<td>lu-</td>
<td>hune</td>
<td>lupa</td>
<td>luma</td>
</tr>
<tr>
<td>‘landward’</td>
<td>li-</td>
<td>line</td>
<td>lipa</td>
<td>lima</td>
</tr>
<tr>
<td>‘up, out’</td>
<td>i-</td>
<td>ine</td>
<td>ipa</td>
<td>ima</td>
</tr>
<tr>
<td>‘down’</td>
<td>pu-</td>
<td>pune</td>
<td>pupa</td>
<td>puma</td>
</tr>
<tr>
<td>‘front’</td>
<td>ta(y)-</td>
<td>tane</td>
<td>tapa</td>
<td>tama</td>
</tr>
<tr>
<td>‘in, back’</td>
<td>mu-</td>
<td>mune</td>
<td>mupa</td>
<td>muma</td>
</tr>
<tr>
<td>‘side’</td>
<td>pa(y)-</td>
<td>pane</td>
<td>papa</td>
<td>pama</td>
</tr>
</tbody>
</table>

Table 2.38: Demonstrative and directional terms in Ambel (Waigeo) (Arnold
2018: 489).

This section has provided several examples of demonstrative systems that encode two levels of
elevation. There are two possible types. Muna alone codes high versus non-HIGH while Balantak and
Ambel distinguish high versus low. Because all elevational terms are part of a larger demonstrative
system, all of the systems described here are quite complex. Muna and Balantak both have seven terms
while Ambel has the most complex system with 28 individual terms that form a matrix of distance and
topography/topological relations.

2.3.6.2 Three-term elevation systems

Three-way elevation systems in Malayo-Polynesian languages distinguish high, level, and low. Like the
two-way systems, the elevational demonstratives are part of a larger person or distance-oriented system,
and as a result, three-way elevation systems are quite complex. There are two types of systems: those that
use a person or distance-oriented system on the proximal level and in which elevation becomes relevant
at the distal level; and those that have a matrix in which each distal level includes several terms that
correspond to elevational, topographic, or other spatial contrasts.

Mori Bawah (xmz), spoken on the east coast of Sulawesi, has a five-way demonstrative system that
is oriented towards person and elevation, shown in Table 2.39. Nearer locations may be distinguished
based on their proximity to the speaker or the addressee. As an example, in (2.48) the implied referent
is the addressee who is also serving as the deictic center, so the speaker uses the deictic adverb itu’ai.
However, distal locations are distinguished by their elevation relative to the level of the speech event,
rather than their horizontal distance. There is no generic distal term; all distal referents must be located
with elevational information. In (2.49), the speaker uses the deictic adverb ilo’ai because they are speaking
of a village that is at a lower elevation than the speech event. The level demonstrative is shown in (2.50).
This example is part of a narrative, and without explanation, it is difficult to determine whether the use
of the demonstrative arau indicates that the location of the tree is on the same level as the speaker (the
narrator) or on the same level as some other deictic center indicated in the narrative. Regardless, the use of *arau* makes clear that the tree is neither at a higher nor lower elevation from whichever deictic center has been established.

<table>
<thead>
<tr>
<th></th>
<th>Determiners</th>
<th>Locational verbs</th>
<th>Deictic adverbs</th>
<th>Directional deictics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Near speaker</td>
<td>andio</td>
<td>ndio</td>
<td>indi’ai</td>
<td>ramai, tamahi</td>
</tr>
<tr>
<td>Near listener</td>
<td>atuu</td>
<td>tuu</td>
<td>itu’ai</td>
<td></td>
</tr>
<tr>
<td>Remote, level</td>
<td>arau</td>
<td>rau</td>
<td>ira’ai</td>
<td>raane</td>
</tr>
<tr>
<td>Remote, higher</td>
<td>atahu</td>
<td>tahu</td>
<td>itahai</td>
<td>tahane</td>
</tr>
<tr>
<td>Remote, lower</td>
<td>alou</td>
<td>lou</td>
<td>ilo’ai</td>
<td>loane</td>
</tr>
</tbody>
</table>

Table 2.39: Mori Bawah demonstratives (Mead 2005: 695)

(2.48) *Polai itu’ai!*

flee  DIST.HIGH

‘Get away from there!’ (Mori Bawah; Mead 2005: 696)

(2.49) *Mo’ia=aku ilo’ai i Sampalowo indi’upua*

PART:live=1SG.ABS DIST.LOW at S.  former.time

‘Formerly I lived down there in Sampalowo’. (Mori Bawah; Mead 2005: 697)

(2.50) "Po’ia-ia nde ali ka-ku lako te’eme a m-pu’u-no keu *arau.*”

remain  HORT only and-1SG.NOM go  urinate at LG-base-3SG.G tree  DIST.LEVEL

‘Wait here first, so that I can go relieve myself at the foot of the tree’. (Mori Bawah; Mead 2012: 20)

Three-way elevational demonstrative systems occur in a few languages of Melanesia, particularly in Vanuatu. Merei is one language of Vanuatu that encodes elevation in its demonstrative system. Chung (2005) separates the demonstrative systems into two; there is the four-way person-oriented system shown in Table 2.40, and there is the matrix that encodes both distance and elevation, shown in Table 2.41.

<table>
<thead>
<tr>
<th></th>
<th>Determiners</th>
<th>Locational adverbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Singular</td>
<td>Plural</td>
</tr>
<tr>
<td>Near speaker</td>
<td>na-nie</td>
<td>na-ire</td>
</tr>
<tr>
<td>Near both</td>
<td>get-nie</td>
<td>get-ire</td>
</tr>
<tr>
<td>Near addressee</td>
<td>gata-nie</td>
<td>gata-ire</td>
</tr>
<tr>
<td>Uncertain/not visible</td>
<td>ani-nie</td>
<td>ani-ire</td>
</tr>
</tbody>
</table>

Table 2.40: Person-oriented demonstrative and locational adverb systems of Merei, Vanuatu. Demonstrative and locational adverb systems are not symmetrical (Chung 2005: 13)

(2.51) *Iadu tese get-ire tato toma?*

ART.PL man  SPKR.PL 3.RLS what.happen

‘What are these men doing?’ (Merei; Chung 2005: 13)

Demonstratives in both systems are morphologically complex forms. In the person-oriented system, these are deictic prefixes combined with the third person independent pronouns *nie* and *ire*; the former
is used for singular referents and the latter for plural referents (2.51). The demonstrative system shown in Table 2.41 is a distance-oriented system on the horizontal axis, contrasting proximal, medial, and distal distances from the deictic center. On the vertical axis it contrasts: sa, ja ‘high’, va ‘level’, and sio, jio ‘low’. As a result of this complex demonstrative system, these forms are not just used for distal referents. Instead, elevation information is expressed on proximal, medial, or distal levels. Two examples of these terms in use are given in (2.52) and (2.53). In (2.52) the term leva-nie indicates that the referent, tese ‘man’, is quite far away but level with the speaker. In (2.53), the use of lesa locates the river of reference at a higher elevation than the speech event.

Table 2.41: Demonstrative system of Merei, Vanuatu. Demonstrative and locational adverb systems are symmetrical (Chung 2005: 14)

<table>
<thead>
<tr>
<th></th>
<th>proximal</th>
<th>medial</th>
<th>distal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ascending direction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>ai-sa-nie</td>
<td>ma-ja-nie</td>
<td>le-sa-nie</td>
</tr>
<tr>
<td>plural</td>
<td>ai-sa-ire</td>
<td>ma-ja-ire</td>
<td>le-sa-ire</td>
</tr>
<tr>
<td>locational adverb</td>
<td>ai-sa</td>
<td>maja</td>
<td>le-sa</td>
</tr>
<tr>
<td><strong>Same level</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>ai-va-nie</td>
<td>ai-va-nie/le-va-nie</td>
<td>le-va-nie</td>
</tr>
<tr>
<td>plural</td>
<td>ai-va-ire</td>
<td>ai-va-ire/le-va-nie</td>
<td>le-va-ire</td>
</tr>
<tr>
<td>locational adverb</td>
<td>ai-va</td>
<td>ai-va/le-va</td>
<td>le-va</td>
</tr>
<tr>
<td><strong>Descending direction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>ai-sio-nie</td>
<td>ma-jio-nie</td>
<td>le-sio-nie</td>
</tr>
<tr>
<td>plural</td>
<td>ai-sio-ire</td>
<td>ma-jio-ire</td>
<td>le-sio-ire</td>
</tr>
<tr>
<td>locational adverb</td>
<td>ai-sio</td>
<td>majio</td>
<td>le-sio</td>
</tr>
</tbody>
</table>

(2.52)  ia  tese  le-va-nie  ta  logologo
       ART  man  DIST-LEVEL-3SG  R  bad

‘That man is bad’. (referring to a man who is a long way from the speaker) (Merei; Chung 2005: 43)

(2.53)  I  tama-m  ta  sa  le-sa  la  bei.
       ARP  father-2SG  R  GO.UP  DIST-UP  LOC  river

‘Your father goes up far away at the river’. (Merei; Chung 2005: 43)

Tolai (ksd), a language of New Britain, PNG has a demonstrative system (Figure 2.13) that is similar in complexity to Ambel. It distinguishes just two degrees of distance (proximal and distal), but the system is further complicated with features related to motion and the environment that include island topography (land versus sea), elevation (high, level, low), containment (inside), and front versus back. As with several of the other elevational systems, environmental information is only expressed on a distal level. Interestingly, among these distal terms, topographic information is quite nuanced. Something that is higher in elevation but rooted in topography (e.g. uphill, or towards the interior of the island) is distinct from something that is located vertically upwards, which is further distinct from something that is upwards and inside of a container. Because of this complexity, speakers can quite accurately locate a referent. Notably there is polysemy between high-low and land-sea.

In contrast, the Iaai system (Table 2.42) partially eliminates this polysemy. The three-way elevation contrast in Iaai differs from the other three-way systems described thus far. In Iaai, a language of New Caledonia, ‘high’ and ‘landwards’ are expressed in a single word dhöö. However ‘low’ and ‘seawards’ are somewhat separated. The term jii refers to entities that are in a seawards direction and at a lower elevation while jo refers to those that are proximal to the speaker and at a lower elevation. Thus, on a distal level, ‘low’ and ‘seaward’ are conflated, but on a proximal level, ‘low’ is distinct from ‘seaward’. As a result,
Figure 2.13: Tolai demonstratives
unlike the other three-way elevation systems presented in this section, Iaai does not have a level term. Its three elevational terms are *dhöö* ‘high and inland’, *jii* ‘low (and towards the sea)’, and *jo* ‘low (near speaker)’. They use both geophysical and global elevation.

<table>
<thead>
<tr>
<th>Demonstratives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ang</strong></td>
</tr>
<tr>
<td><strong>e</strong></td>
</tr>
<tr>
<td><strong>lee</strong></td>
</tr>
<tr>
<td><strong>jii</strong></td>
</tr>
<tr>
<td><strong>jo</strong></td>
</tr>
<tr>
<td><strong>dhöö</strong></td>
</tr>
<tr>
<td><strong>lââ</strong></td>
</tr>
<tr>
<td><strong>ü</strong></td>
</tr>
<tr>
<td><strong>iö</strong></td>
</tr>
<tr>
<td><strong>ling</strong></td>
</tr>
</tbody>
</table>

Table 2.42: Iaai demonstratives (132 Ozanne-Rivierre 2004)

Some examples of Iaai elevation are presented in the examples below. The use of *dhöö* in (2.54) refers to the direction of the shouting which originates at a lower elevation (sea level) and is directed towards a higher one (slightly above sea level). Though (2.54) is rooted in topography, *dhöö* can also be used on a strictly vertical sense as shown in (2.55), an excerpt from the Lord’s Prayer, in which *dhöö* refers to the sky.

(2.54) *Wá-me kuku ka tavëë e-* **dhöö** **hoot.**  
3sg-prs shout to people loc-up ashore  
‘He shouts to the men on the shore’. (Iaai; Ozanne-Rivierre 2004: 134)

(2.55) *Kamö-hmun e-* **dhöö** **hnyi draany** . . .  
Father-our.excl loc-up in sky  
‘Our Father, who art in Heaven’. [Lord’s Prayer] (Iaai; Ozanne-Rivierre 2004: 134)

As I have shown in this section, most three-way elevational demonstrative systems contrast referents that are higher, level, and lower than the deictic center. Environmental features—such as the land-sea distinction—and other relational features—such as ‘in’, ‘out’, ‘front’, and ‘back’—can also be encoded in these systems. Because of the nuanced interactions between various deictic and topological features all of the systems described in this section warrant further research in order to provide a better-understanding of how speakers employ them in everyday speech.

2.3.7 Other

It should now be clear that topographical or environmental factors can be encoded in demonstrative systems. Several languages, such as Ambel and Iaai, use the land and the sea as actors in their demonstrative systems. Ambel and Tolai further use relative terms such as ‘beside’, ‘inside’, etc. to deictically locate referents.

One language in the sample has a demonstrative system that uses the river as an actor in speech events. The Timugon Murut (tih) system includes the terms *pipit* ‘space/place nearer to the river than speaker’ and *lantur* ‘space/person further away from the river than speaker’. The entire system is shown in Table 2.43. The demonstrative system corresponds to the language’s riverine geocentric orientation system. Based on current documentation, Timugon Murut appears to be alone in using the river as an actor; however, with closer study of demonstrative systems in languages that use riverine orientation systems, other cases like Timugon Murut may surface.
2.3.8 Summary of demonstrative systems

This section has typologized the demonstrative systems of the Malayo-Polynesian languages. I have identified three broad types of systems: distance-oriented systems use only the speaker as the deictic center; person-oriented systems use the speaker, addressee, and possibly a third person as the deictic center; and elevational systems distinguish a horizontal from a vertical search domain. There are various sub-systems within each type that differ based on the number of spatial distinctions as well as the types of semantic parameters used to differentiate terms. Figure 2.14 shows the geographic distribution of each type of system. Strikingly, person-oriented systems are more common in Oceania while distance-oriented systems are more common in Indonesia and the Philippines. Elevational systems occur in pockets in East Nusantara and Near Oceania.

In this overview of demonstrative systems, several typological currents have taken shape. Firstly, as shown in Table 2.44, the most common type of system in Malayo-Polynesian languages is a distance-oriented system. Distance-oriented systems account for approximately 2/3 of the surveyed languages.
Table 2.44: Overview of demonstrative systems in Malayo-Polynesian languages

<table>
<thead>
<tr>
<th></th>
<th>Distance-oriented</th>
<th>Person-oriented</th>
<th>Elevation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-way</td>
<td>56</td>
<td>-</td>
<td>66</td>
<td>10</td>
</tr>
<tr>
<td>Three-way</td>
<td>44</td>
<td>54</td>
<td>4</td>
<td>98</td>
</tr>
<tr>
<td>Four-way</td>
<td>4</td>
<td>12</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Five-way</td>
<td>1</td>
<td>6</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Six-way</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Seven-way</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>74</td>
<td>14</td>
<td>195</td>
</tr>
</tbody>
</table>

Among distance-oriented systems, two-way systems are the most common; they are used in a total of 56 languages in the sample.

Secondly, among person-oriented systems, if a language codes several degrees of distance from just one of the speech event participants, it will always be the speaker. For example, Puluwat has a system of five demonstratives that contrast yee(y) ‘near speaker, exact’, yeen, kaan ‘near speaker, general vicinity’, (a)mwu ‘near addressee’, y(A)na(an) ‘distal’, and yEwe ‘distal, invisible’. There are two speaker-oriented terms—one indicating an exact location near the speaker, the other indicating the speaker’s general vicinity—while just one term is addressee-oriented. Samoan serves as another example. It has three speaker-oriented terms and just two addressee-oriented terms. No language in this sample has more addressee-oriented demonstratives than speaker-oriented ones. In fact, languages rarely have more than one addressee-centered term at all. Only Woleian and Kadazan have systems with two terms that are speaker-oriented and two that are addressee-oriented. More likely, if languages have two or more demonstratives centered on a single speech event participant, it will be the speaker.

Finally, a note should be made that the data presented here should be taken cautiously. The demonstrative systems presented in this chapter were collected by different researchers using different methodologies and with different levels of interest in disentangling the semantics of deictic systems. As such, some language systems were well-described and well-researched while others were only loosely glossed. The latter situation is particularly common in older grammars that were written before there was a widespread recognition that spatial terms do not directly translate across languages and before the development of standardized methodologies developed for the cross-linguistic comparison of demonstrative contrasts. As a result, authors were largely constrained by the language in which they wrote the publication, which usually contained two distance-oriented demonstratives: ‘proximal’ and ‘distal’. In English, these are ‘this’ and ‘that’ or ‘here’ and ‘there’; in Indonesian—the second most common language of publications in this sample—these are ‘ini’ and ‘itu’. Researchers’ native language constraints may be the reason that there is such a large number of distance-oriented systems. This is an issue that is geographically situated as well. In Oceania and East Nusantara there is a higher concentration of newer grammars in which spatial language is well-described. As a result, the data from these regions may be more accurate and complete.

Still, even more recent grammars may be hard-pressed to accurately tease apart demonstratives. The following is an excerpt from a grammar of Naman (lzl), a language of Vanuatu:

There is a variety of additional postnominal modifiers in Naman which provide locational and contextual specification about which it is difficult to offer much detail given that this language has not been (and probably never will be) heard spontaneously in conversation. Forms of this type include nen, nakh/nokh, nge and net, for which the common glosses ‘this’ or ‘that’ will be offered (Crowley et al. 2006: 90).
Crowley et al. clearly state the issues with much of the published documentation on demonstratives; it takes a concerted and targeted effort to accurately describe demonstrative systems, and the more terms there are within the system, the more work it takes to truly understand each term. Naman has four demonstratives which are not entirely understood, but because untangling the demonstrative system is not the authors’ primary goal, they choose to only use the glosses ‘this’ and ‘that’.

Still, while there is much room for improved documentation, this typology has offered an overview of demonstratives in Malayo-Polynesian languages based on the available documentation. This overview has revealed patterns in the types of systems that are common in Malayo-Polynesian languages, their regional distribution, and their complexity. I further hope that it has drawn attention to areas that should be targeted in future research on demonstratives in Malayo-Polynesian languages.

2.4 Conclusion

In this chapter, I have demonstrated the diversity in spatial language among Malayo-Polynesian languages. I have typologized two generative areas of research into language and space in the region: absolute orientation systems and demonstrative systems. I have identified six environmental features on which Malayo-Polynesian absolute orientation systems are based: land and sea, coast, river, elevation, wind, and the path of the sun. Most systems in the region incorporate several of these environmental features in a single system such as Gayo, which combines a riverine axis with an orthogonal elevation one, or many of the Oceanic languages, which have an axis which is indistinguishable between land-sea and elevation.

I have further identified three types of demonstrative systems: distance-oriented, person-oriented, and elevational. Distance-oriented systems solely use the speaker as the deictic center and locate all referents based on their distance from the speaker. Person-oriented systems minimally use both the speaker and the addressee as deictic centers though they may also use a third person. Elevational systems distinguish whether referents are located on a horizontal or vertical plane in reference to the deictic center. Within each of these three types of systems there are a variety of sub-systems that are distinguished by their number of contrasts and the semantic parameters used to separate terms.

These typologies reveal certain currents within the research on language and space. First, the long-assumed prevalence of land-sea systems is not as notable when considering all Malayo-Polynesian languages. This primacy of the land-sea system likely surfaced due to the historical reconstruction of *daya ‘landward’ and *lahud ‘seaward’ as well as the fact that Oceanic languages—among which land-sea systems are near-universal—have been at the forefront of spatial research for longer than the languages of other areas. Demonstrative systems in Malayo-Polynesian languages are similarly diverse, so further study may reveal previously-undescribed systems. In particular, the use of topographic features within demonstrative systems is relatively undocumented, but study of the phenomenon may contribute both to a broader understanding of demonstratives’ relationship to topography and of spatial orientation in the Pacific more generally. Finally, there is a paucity of high-quality data on spatial language in the Philippines, a hole that future researchers should seek to fill.

Throughout the following chapters, I will identify the different lenses that linguists and near-field researchers have used to explain the diversity of spatial systems and why they have developed. Through these explanations, I will establish a typological foundation in order to analyze the spatial language and gesture of Hawu and explore how it informs the typologies presented in this chapter.
Chapter 3: Modeling Space in Austronesia

3.1 Introduction

In Chapter 2 I demonstrated that research on space in Austronesian languages has become a relatively vast literature that has revealed diverse strategies for spatial orientation. Absolute systems are anchored in a variety of topographic and environmental features. Demonstrative systems, which may range in complexity from two to seven spatial contrasts, may be used to orient referents in relation to the speaker, addressee, elevation, and occasionally other topographic features. This body of work additionally reveals patterns in research methods and approaches that have been adopted by researchers to attempt to systematize and describe this diverse array of spatial language. Researchers have sought to understand why certain topographic features are more commonly used as anchoring features for absolute systems than others. Some interested in demonstrative systems are curious why three-way person-oriented systems are so prevalent throughout Oceania. Others are interested in why patterns in spatial language are sometimes localized within a single region or linguistic group while others transcend geographic and linguistic boundaries.

In order to tackle these issues, researchers tend to adopt non-spatial perspectives and frameworks to understand spatial phenomena. This is unsurprising considering that researchers commonly recognize that how space is manifested in language is more than just the result of the cognitive process of a human perceiving the world and organizing it in a way that can be easily communicated through language. Extralinguistic factors such as geography, culture, society and social expectations, historical developments, profession, age, identity, among many others also influence the expression of space in language. In order to account for these, linguists and anthropological linguistics have adopted a variety of approaches to explain the motivating factors behind the linguistic realization of space in Austronesian languages.

In this chapter, I summarize several of these approaches and discuss their strengths by comparing case studies and offering my own quantitative and qualitative data to support the other researchers’ claims when possible. Approaches that are recognized in this chapter include those that explore the cultural, numerous, identity-rooted, historical, gestural, and sociotopographic features of spatial language. Cultural influence on space can be explored through a variety of means—including, among others, speech events, architecture, rituals, and the mediation of social hierarchy (Pappas & Mawyer 2022)—but one prominent research current in the Pacific is a reflection of radiality in both culture and space. A multiplicity approach recognizes the complexity of space and spatial language, and rather than describe and analyze each individual spatial system, researchers emphasize the fact that every language uses multiple models of space that often fluidly interact but occasionally clash. An approach which recognizes a sense of place (in the sense of Tuan (1977)) looks at space through the lens of identity which is intertwined with the current generation’s—or on a more personal level, the self’s—place in the world (i.e. space), in history (i.e. time), and in social relationships (i.e. culture). This more holistic approach personalizes space by turning it into place, and it has been adopted by Indigenous and non-Indigenous authors alike. In a historical approach to understanding space, researchers use etymologies and reconstructions of spatial lexicon or spatial systems to explain synchronic spatial phenomena. Some researchers have studied space by studying gestures. In this approach, gestures
A cultural lens

serve as an additional modality through which to understand models of space. Finally, a sociotopographic approach—one that looks at the interplay of social and topographic features—is perhaps the most activated point of inquiry in contemporary linguistic research. This attention is warranted since in order to orient oneself within the landscape, one must invoke elements of the landscape as anchors. Thus, not one approach discussed in this chapter avoids incorporating the landscape. A sociotopographic approach was first introduced to the literature in a systematic manner with the Topographic Correspondence Hypothesis (THC) (Palmer 2015), was later refined in the Sociotopographic Model (STM) (Palmer et al. 2017), and has since played a crucial role in the academic investigation of space, shaping much of the current literature on language and space. Because of this, though all approaches will be discussed, there will be a particular focus on sociotopography in this chapter.

This chapter is not exhaustive; for a more comprehensive overview of research approaches to space, refer to Pappas & Mawyer (2022). This chapter, rather, is intended to offer a window into the published literature reflecting some of the ways in which researchers have sought to understand language and space, and it will be critiqued and expanded upon in later chapters.

3.2 A cultural lens

Although culture has become crucial to the study of language and space in the past few years, largely as a result of the STM, traditionally, the exploration of how social order can both shape and reflect spatial language has been largely left, perhaps predictably, to the linguistic anthropologists and the anthropological linguists. This large literature has suggested that culture and language shape each other in countless aspects of life. For instance, researchers have observed that speakers spatialize social hierarchy with the use of directionals and deixis—particularly those on the vertical axis—that allow speakers to politely create and navigate relationships with others (Bubandt 1997, Ozanne-Rivierre 1997, Keating 2000, 2002). In direction-giving, speakers of Tongan often use man-made landmarks such as villages, houses, bridges, and churches (Bennardo 2002), and they may preference these landmarks over the shortest possible route, thus suggesting that cultural models play a salient role in direction-giving and may even override the need for route efficacy (Bennardo 2014). Further, speech events are inherently spatially organized (Duranti et al. 1981), which allows speakers to establish referents both in the world and in event-of-speech-narration in order to effectively locate, orient, frame, and track those referents (Bowerman 2000). Research has also shown that local spatial culture is realized in the built environment both at the micro-scale of the domestic organization of households; the meso-scale of communities’ houses, roads, and other structures; and the macro-scale of the ordering of communities with respect to the insular landscape. The architecture of the buildings themselves or their layout in relation to each other may reflect topography (Wassmann 1994, Cooperrider et al. 2017) and linguistic and social models of space (Grimes 1997, Refiti 2008, 2015).

These are simply a couple of examples of the various research edges that have emerged in the exploration of culture and space, which have revealed that culturally-rooted models that rely on the speaker’s “spatial mental models” play a role in the selection of the path and landmarks of reference (Tversky 2003: 14). In the Pacific, researchers have recognized that radiality is one model that seems to transcend and connect cultural values and structures (such as social hierarchy, the built environment, and speech events) with the landscape and the linguistic realization of space. This distinctly (though not exclusively) Pacific strategy of organizing both social and physical space has resulted in a rich literature that will be the focus of this section.

Radial models of space have been largely explored by linguistic anthropologists including Giovanni Bennardo, Richard Feinberg, Bradd Shore, and Alexander Mawyer. Importantly, though motivated by social, cultural, and environmental features of the speaker community. Generally, notions of radiality in Austronesian culture, architecture, cognition and other facets of the human experience lead to a radial
A cultural lens

conceptualization or use of space. While theories of radiality have been productive foci for researchers in Austronesia, and Polynesia in particular, such approaches, which note the parallels between social and physical space, have purchase in the anthropological literature dating to the mid 20th century (Evans-Pritchard 1940). Identified in the Pacific context by Bennardo (2009) as a “‘foundational cultural model’ of Polynesian spatial understanding” (Mawyer & Feinberg 2014: 246), radial models are rooted in the built and natural island environment of their speakers. Their realization may vary by culture or language, and there may even be several radial models in use by a single linguistic group. However, all relate in that there is a single, fixed, central point in reference to which all entities are located. In this way, radial models are a subtype of an absolute system; the single, central point of reference is fixed in space and does not at all change with the speaker’s position or orientation (Bennardo 2009).

While radial systems differ from the binary ones summarized in Chapter 2, researchers recognize that radial representations coexist with non-radial ones. A single language group may employ a binary absolute opposition in one context (e.g. a land-sea axis) and a radial one in another (e.g. towards and away from the speaker). Binary oppositions may also be integrated with a radial system. For instance, the absolute system employed on Manam island which was described in Chapter 2 and shown in Figure 2.2 is a radial system that is fixed at the center of the circular island. As a whole, the system is radial with a single, fixed, central point and coastal terms that describe clockwise and counterclockwise movement around this central point. However, in any single location, there is an intersection of two orthogonal, binary axes: a land-sea axis and a coastal one (Lichtenberk 1983). In this way, Manam’s system integrates both radial and binary elements in a single system.

This cohesion between two seemingly opposing systems directly conflicts with early spatial work in Oceania which focused on the primacy of the land-sea binary. Douglas Oliver, for instance, even went so far as to claim that despite the variety of spatial dimensions available in Tahitian, they could all be reduced to a single “prescriptive sociological binary, mua/muri (before/behind),” that could work as a master model of Tahitian spatial and social relations (Oliver 1974, Mawyer 2014: 603, 281). Research on the radial model offers a contrasting view. By inherently recognizing that both radial and binary models may exist simultaneously, researchers suggest that it may be disingenuous to condense an entire language group’s spatial culture down to a binary axis. This celebration of diversity and multiplicity and its utility for understanding spatial language, culture, and cognition will be further discussed in §3.3.

Just as absolute binary oppositions are diverse, as shown in Chapter 2, there is also diversity in radial models. Diversity emerges in whether the central reference point is fixed in culture, an individual, or topography. For instance, in one Samoan radial model, the central fixture is the sacred center of the village, the malae, the location from which “power, sanctity, and order emanate” (Mawyer & Feinberg 2014, Shore 2014: 247). This is a socially-rooted radial system which is centered on an agreed-upon sacred location that is created by the built environment and cultural values of the people. In both social order and physical space, as one gets farther from the malae, sanctity, power, and order decrease. Meanwhile the Hawaiian and Taumako radial systems are rooted in natural topography. In Hawai‘i, the ahupua’a system represents a radial model. Each ahupua’a radiates from a central point on the island which allows inhabitants of the municipality to have access to the entire length of a water source, from its origin in mountains to its end in the sea. Under this system, everyone has access to fishing and farmland; further, the parts of the land that are least used, such as those near the mountaintops, are the smallest areas of the ahupua’a while those that are most often used, such as the reef and shoreline, are the largest areas (Blaisdell et al. 2005). In the Taumako radial system shown in Figure 3.1, the highest point of the island also serves as the center of the model, and concentric circles radiate from this center. Each zone is both geographically and culturally motivated in that vague geographic boundaries separate circles, and people use each region for a different purpose.

In this model, te vao is fixed at the highest mountain peak or center of the island. This region is characterized as being the most inaccessible part of the island, and because of this, large trees grow in this
area, which the Taumako use for dugout canoes. Another island interior circle is *mouku* which includes the mountain slopes and the heavily-wooded areas of the coastal flatlands where most people have their gardens. Further outwards is *ngauta*, which means ‘towards the land’ and encompasses the area between *mouku* and the beach. This is also the area where most people live. Following *ngauta* is *te one*, the beach just along the shoreline. These are the concentric rings that make up the island. They are followed by several rings that separate the sea around the island with boundaries based on the reefs, the breaking waves, and the deep sea. The final ring is *te valenga*. Deriving from *vale* ‘ignorant’, it is the point at which land can no longer be seen. These are the most basic rings which can be elaborated upon depending on the speaker and their knowledge of and interactions with the world. As shown in Figure 3.1, the system can become much more complex.

This model is evidently rooted in both the natural and the human, the social and the topographic. Each ring is motivated by land or sea features as well as how humans interact with those features. For instance, *ngauta* refers to the land just along the beach. This is motivated by the naturally physical barrier between stable land and the start of the shifting sands of the beach. However, it is simultaneously motivated by the fact that this is the area in which most of the population lives. Similarly, *mouku* is both defined by the fact that it is the gently-sloping and heavily-wooded areas of the island as well as that it is the area in which most people have their gardens. There may not be a strict physical line between the beach-adjacent lands of *ngauta* and the sloping, wooded areas of *mouku*, but the way in which people use the land—for living or for farming—serves as another way to delineate one from the other. In Taumako, the distinctions between these rings can be quite discrete. Meanwhile, in Samoa, one ring may grade into the other (Feinberg 2014, Shore 2014).
The fact that the concentric model is socially-motivated also becomes apparent in the deep sea rings of the model. A person’s occupation may influence which rings they recognize within the model and even where the boundaries between rings occur, leading to idiosyncrasies in the model between people. A sailor might recognize more rings in the ocean than a farmer, for instance, simply because a sailor is more familiar with the seascape of the deep sea and is likely more adept at identifying differences in the ocean that a farmer may not be trained to recognize.

As with binary oppositions of land and sea or east and west, radiality can be encoded on several scales. The Taumako model serves as an example of a radial model on the scale of an entire island and beyond. It has a single fixed point at the mountaintop, and all points on the island and the surrounding sea can be located in reference to it. The Samoan example, in contrast, is a radial model on a village scale. The central anchor is the center of the village and the center of social and spiritual power. The social layout of the Meto home of Eastern Timor is an example of a radial model on the scale of a single building. It contains three concentric regions: the inside space, or nanan, bounded physically by the walls of the house and culturally as the women’s space used for food storage, sleeping and childbirth; the houseyard space, or mone, bounded physically by the fence bordering the houseyard and culturally by the space that men use to gain income; and the outside space, or kotin, which is outside the house’s fence and associated with strangers, spiritual entities, and the unknown (McWilliam 1997). In a radial model on a personal scale, an individual serves as the fixed central point, and referents are located using concentric circles or radiating axes from that individual.

Most, if not all languages are documented to have a radial model on a personal scale. In Oceania, the grammaticalization of the notions of ‘towards the speaker’ and ‘away from the speaker’ or ‘hither’ and ‘thither’ is widespread. Reflexes of POc *mai ‘direction towards the speaker’ and *atu ‘direction away from the speaker’ have been identified in 64 Oceanic languages, and reflexes of POc *atu ‘direction away from the speaker’ have been identified in 13 Oceanic languages (Blust & Trussel 2010) while the system itself exists in many more languages. Similar to the Samoan and Taumako radial models, this personal-scale radial model has a single, central point, the ego, and movement may occur in direction towards or away from that central point. A demonstrative system may also be considered to be a radial model. Just as concentric circles mark zones around a mountaintop in Taumako, demonstrative categories such as ‘near speaker’, ‘near addressee’, and ‘away from both’ mark concentric boundaries around the speaker and addressee. A depiction of the radial nature of these systems can be seen in Figure 3.2. In Buli, speakers serve as the center of a three-way distance-oriented demonstrative system which radiates outward from the ego. This egocentric radial system also corresponds to the geocentric land-sea and coastal system so that speakers may include information about both in a single utterance, as demonstrated in (3.1).

(3.1) Nim  eta  ca, ya i-sispe  i poláu nea’
2sg.POSS knife the, 1sg 1sg-stick.in.wall it seaward MED
‘I stuck your knife in the wall over there on the seaside’. (Buli; Bubandt 1997: 139)

This personal-level radial representation, may not initially be considered absolute like its local or island-level counterparts. On a large scale, the self is anything but fixed. People move. They move about their homes, their villages, their islands, and the world. Yet, on a micro-scale, the system that indicates ‘towards the speaker’ and ‘away from the speaker’ is just as absolute as the Taumako radial system that surrounds a mountaintop. Though the person may change locations, the radial system is always oriented directly around the speaker, never changing regardless of their location or orientation. As such, it is possible that such radial models can be simultaneously egocentric and allocentric depending on the point of view. For instance, Shore (2014) views the Samoan individual-scale radial models as egocentric; they are oriented in relation to the speaker or the ego and thus display the ego’s point of view. Bennardo (2009), however, views them as allocentric; there is one absolute reference point at the very center of the spatial...
frame. In this sense, even if an ali‘i—who is a culturally-recognized center of Tongan radial models—moves about the island, physically changing his position, he always remains the center of the radial frame.

The above examples provide distinct axes or concentric rings around a center. However, in Marshallese navigation, the ego, or the navigator, serves as a more metaphorical center of a radial frame. As the navigator moves through the sea, they are constantly updating their position using several strategies which include the etak system and celestial knowledge; patterns in wind, wave swells, and currents; and other kinaesthetic information. These experiential ways of knowing location and mapping a journey contribute to creating a powerful center at an ego that is filled with sensory experience. Yet, the power of this experiential knowledge decreases as it radiates outward from the self (Genz 2014).

Although, at face value, systems of towards and away from the speaker may seem to refer to physical space, as with larger-scale models, individual-scale radial systems are also culturally and socially grounded. In Sāmoa, there is a common ‘moral admonition’ teu le va ‘look after the space’ which means to mediate and manage personal and power relations which are organized in a ‘foundational radial model’ (Shore 2014). Similarly, the Bugis recognize radiality in their notions of power, called sumange’. They view the posi or naval to have the highest concentration of cosmic life force which radiates outward with decreasing power as distance increases. Because of this social model, notions of ‘place’ or ‘location” “both physically and socially, [derive] meaning with respect to an implicit center” (Errington 1989: 360) via (Ammarell 2014: 360). In both Bugis and Tonga, this center is often a chief, raja, or some other charismatic figure with a network of followers. While there is certainly a physical element to this system—people exist and move around in physical space—these charismatic leaders also serve as cultural or social centers.

This discussion has demonstrated that models of radiality have particularly shaped the discussion around culturally-mediated space and spatial language among researchers throughout Austronesia. Radial models are a type of absolute system that may exist on an individual, local, or island scale. Their features are rooted in both culture and topography, however cultural perceptions of a central power serve as strong motivators for shaping radiality in both physical and social settings. As such, radiality is built from a
A multiplicity lens that also extends to physical space. Radial models, although not exclusive to Austronesian languages, also are uniquely-suited to describing the island experience and the nature of containment offered by island living, thus merging both social and topographic elements of Pacific life.

3.3 A multiplicity lens

As mentioned in §3.2, there has been a recent shift in research priorities from a goal to identify a single, simple model that encompasses all diversity within a language’s spatial culture to one that celebrates and acknowledges diversity. This shift seems to have been born out of researchers’ desire to demonstrate that the spatial-conceptual landscape is much more complex than many attempts to systematize and describe spatial language give credit for (Shore 2014). Linguists have addressed this issue by aiming for lengthy and detailed descriptions of the language components of these systems while several linguistic anthropologists have approached the same issue by discussing “issues of ambiguity, ambivalence, and multiple and potentially conflicting encoding of spatial being or relations” that may arise due to the juggling of several different systems (Mawyer & Feinberg 2014: 249). Researchers of both disciplines do not simply aim to describe the co-existence of multiple models but rather to understand how they relate and interact in a single, human subjective experience (Shore 2014). These two approaches to the same issue reflect broader differences in research culture between linguistics and anthropology. A linguist may take an entire book to describe a language’s spatial system, but discussion of the interaction of models is often limited. Meanwhile, anthropologists tend to forego detailed description of the inner workings of the language, instead opting to focus on the interactions between systems. Nevertheless, both have the same goals in recognizing and describing multiplicity. In this body of literature, it is largely suggested that spatial models are generally complimentary; different systems are employed at opportune times (e.g. a wind compass is less useful for navigating through a village than across an ocean and thus less likely to be used in the village context). However, there are boundaries between any model, and these may reveal some areas of fuzziness that may result in ambiguity, miscommunication or disorientation. Thus, the broader implications of any single model must be understood in the context of the spatial manifold.

Parallel to the literature on radiality, the interaction of multiple models of space has been most-widely studied among Oceanic peoples. As briefly noted in §3.2, researchers usually recognize that radial systems coexist with binary ones, thus leading to the existence of several distinctly different models within a single language (e.g. Bubandt 1997, Feinberg 2014). Conversely, several binary systems may also interact. François’ work on directionals in Vanuatu highlights the systems that exist on several different scales. He recognizes that the languages of the Torres Banks have directionals on a personal, local, and navigational scale, and sometimes the same words may be used on each scale with a different connotation (François 2003, 2015). For instance, hōw, in Mwotlap may mean ‘downward’ or ‘westward.’ As a result, one might imagine the potential conflicts that may arise, particularly if the listener lacks crucial information. For instance, in (3.2), while the glossing clearly shows that here hōw means ‘westward’, one could imagine a situation where the speaker could just as easily be asking the addressee to kick the ball downward.

(3.2) Nek so kik lokes hōw!
2SG PRSP kick again west
‘You should kick (the ball) westward!’ (Mwotlap, Vanuatu; François 2015:421)

Homophony is not necessary for disorientation; ambiguity may simply arise by the existence of different models on different scales. For instance, many of the languages of New Caledonia have differing local and navigational systems, one based on the land–sea axis of the region and one adapted from a wind system. Speakers choose between these systems based on the nature and location of the event described (Ozanne-Rivierre 1997). However, these are not the only interacting systems in these languages. In Caac
several models may be used at once, one of which is demonstrated in (3.3). In this single sentence, the speaker invokes a geocentric land-sea or elevation system with the use of da ‘upward/inland’ while also using an egocentric left-right system with the use of jure hi-nya ‘right hand’. This requires both speakers and listeners to juggle two different spatial frames simultaneously, revealing the sophisticated nature of spatial reasoning.

(3.3)  
\text{Alô da o jure hi-nya}  
look upward LOC true hand-1PL.INCL.POSS  
‘(They) look inland to our right.’ (Caac; Cauchard 2015: 234)

Often, descriptions of spatial systems are accompanied by generalizations about when different systems are used; however, researchers also tend to acknowledge that the boundaries between these different systems may be fuzzy. For instance, Mawyer (2014), in his description of what he terms the intraisland reflection effect, details how radial models around islands in a sea of islands require navigators to transition from one orio to another raising the question at what point the navigator stops orienting themselves in the spatiality of the origin island and begins using that of the destination island. Yet, while boundaries are fluid and may vary from person to person, Lober & Boerger (2009) suggest that speakers of Natug can likely determine the change in system with a high degree of accuracy. Similarly, in Buli, it is suggested that the orio shifts upon arrival at the destination island as (Bubandt 1997: 137) says ‘Once we landed on Femlawas, the spatial reference had shifted to this small uninhabited island, and “landside” was therefore naturally defined by [the destination island’s] central point.” Ultimately, adopting and agreeing upon the contextually-appropriate orientation may rely on the constant interaction between multiple models that could be relevant with the possible result that the orientation provided by one model produces a discordance or, worse, disorientation, with respect to another (Mawyer 2014).

The diverse languages of focus in these studies suggests that every language likely uses multiple systems of spatial orientation, which should have profound consequences for how researchers approach and frame studies that are narrow in scope. Already, it appears that even when researchers are not specifically aiming to understand multiplicity, it is still recognized in the various systems that researchers unpack in their works of language and space (see e.g. Cauchard 2015, van den Heuvel 2006, Kroon 2016). However, while the recognition of multiple models has become more widespread, just a small subset of researchers have aimed to tackle questions of how these models interact. As with theories of radiality, such inquiry has largely been conducted by linguistic anthropologists, particularly those of Oceania. Yet, conflict and complexity are inherent features of spatial language, and those studies that have observed it have extended the discussion of language and space from one that was a simplistic approach to one of multiplicity.

### 3.4 An identity lens

Some authors have sought to understand space in Austronesia by observing it through the lens of place, and by extension, through the lens of identity. Commonly, this approach asserts that space cannot be separated from society, culture, time, and the character of indigeneity or personhood (Bubandt 1997: 132), correlating with Tuan’s notion of “sense of place” (Tuan 1977). This research asserts a much more personal and acute relationship between space and the individual than a general cultural approach. Fox (1997: 89) articulates this intense connection between people, place, and space among the Roti by saying, “personhood cannot be explicated without reference to place. Places may take on the attributes of persons, and persons the attributes of place.” This growing literature seeks to engage with spatial language as a cultural keystone, and it has drawn attention to culture-specific ideas about mobility, social relationality, and the philosophical nature of timespace as part of an Austronesian worldview.
A sense of place is shaped by the people and events of the past, and thus, the conceptualization of space is also intertwined with time. As a result, the interconnectedness of time and space in the Pacific has become an influential discourse. In some cases, place is history. For instance, among the Tana Toraja, places are the records of the past due to the absence of a writing system (Waterson 1997). Families have associations with places which are maintained by the recitation of genealogies. A particularly rich discourse has revolved around, the Tongan and Samoan concept of vā ‘space between social actors’ and tā ‘temporality of social relations’ has become extremely energetic in recent writings, particularly within anthropology (Ka’ili 2005, Ka’ili et al. 2017). In Tongan, both concepts, tā and vā, are central to many societal practices (Māhina 2004). Some scholars even assert that it is not possible to fully understand the spatial dimension of Tongan tauhi vā without consideration of the cultural understanding of time (Tevita 2008). Notions of both space and time are essential for maintaining relationships but may also change them for the worse (Māhina 2004). Unfortunately, even cultural keystones such as the notion of vā is changing due to Western introduction of spatial and temporal concepts (Kape 2005).

As the notion of vā ‘space between social actors’ suggests, social space is paramount to the discussion around identity and space. The broader literature even suggests that separation in physical space is much less problematic than separation in social space (Tevita 2017). This is true both in home (is)land communities and for Pacific Islanders living in diaspora. Among Tongans who no longer live in Tonga, the responsibility of maintaining balance and harmony in tauhi vā (sociospatial harmony) remains an important value in motivating actions and decisions (Tevita 2017). For instance, in a notable work on Samoan spatiality, Lilomaiva-Doktor suggests that malaga, journeyings back and forth in physical space, maintain societal civility and are motivated by cultural and societal obligations. All malaga is purposeful and has a social origin, whether it is a celebration, to financially support family members, or an expulsion (Lilomaiva-Doktor 2015). Yet, while movement in space is always meaningful to Pacific islanders, human relationships are generally more important than physical possessions or movement. ‘We move only in body, not in spirit,’ as Bautista (2010: 85) states. It may be that the social history of diaspora for both Tonga and Sāmoa may have heightened attention to culturally-salient spatiality over physical spatiality in an age of accelerating and intensifying mobilities.

Genealogies are traditionally a common way to nurture an individual’s place in time. For both Hawaiians and Samoans, a person’s sense of belonging within society is motivated by their place within many generations of their family, emphasizing a spatial component to a largely temporal concept (Lilomaiva-Doktor 2015). Among the Gomei, genealogies serve both as a means to situate individuals within a diachronic society and as a means to situate them in relation to their places of origin. As a result, origin places are crucial to identity; they are also used to keep families in touch, pass on historical records, and even maintain health (Sakai 1997). The parallel between time and space is particularly salient among the Roti of Indonesia who recite genealogies, which establish a succession of time, and topogenies, which establish a succession of space. Both create ritual spaces which exhibit social and spatial relationships between places (Fox 1997). The Hawu people themselves recite separate male and female genealogies in an act called huhu kebie ‘pile up beams’ or huhu raiti d’a’i, huhu d’èi dida ‘pile up from the bottom, pile up to the top’. Through this act, speakers situate themselves near the top of a construction that is continually growing higher with each generation (Duggan & Hägerdal 2018: 4).

While many aspects of space and time differ across Oceania, it is difficult not to observe a common theme across this literature emphasizing the experienced management of spatial relations as a key to maintaining social order, captured, perhaps, by Peteru who writes “There is myself and yourself. Through you, my being is contextually meaningful and whole” (Peteru 1997:28). This approach, which creates place from space, is a more holistic approach that does not isolate language nor space from the human. It suggests that space is more than physical space and that it is not coincidental that linguistic conventions for talking about space are also used for temporal, discourse, and social functions, among others. Yet, while space is widely observed in language, not all space can be reflected in a language’s grammar. Rather than focus
on language structure and lexical items, this approach instead uses language as a means to observe what notions of space mean to being human and existing in society and in time. It is a reminder that language is inherently a human construct and as such, cannot be separated from human tendencies.

### 3.5 A historical lens

Several researchers have used historical reconstruction and description to understand the motivations for spatial systems (Adelaar 1997, François 2004, Ross 2004, Gallego 2018). These researchers use synchronic typological information to explore the past. This historical approach to understanding the linguistic manifestation of space highlights the influence that genetic affiliation can have on the realization of space in language. Two researchers in particular—Alexander François and Malcolm Ross—have sought to reconstruct proto-spatial systems within the Austronesian family. François has reconstructed the POc geocentric system (François 2004) and the Proto Torres-Banks geocentric system (François 2015). Ross, on the other hand, has reconstructed the POc cardinal system and its demonstrative system (Ross 1995, 2004). In addition, Blust has reconstructed PAN terms that suggest that PAN speakers used a land-sea system lexified by *daya ‘landward’ and *lahud ‘seaward’ (Blust & Trussel 2010). Other researchers have used these etymologies and historical reconstructions to better understand contemporary systems, particularly cardinal systems (Adelaar 1997, Gallego 2018, Holton & Pappas 2022). As a whole, this work has elucidated the way that languages may inherit spatial systems from their ancestral languages and to what extent these genetic ties shape contemporary spatial systems.

Both Ross (1995) and François (2004) have reconstructed the absolute spatial system of POc using the Comparative Method in slightly different capacities. Still, the results of their work vary quite drastically. Ross seems to focus more on reconstructing the syntactic and phonological/phonetic features of the forms within a system while François, primarily focuses on reconstructing the semantic and systemic features of the systems. As a result of these differing approaches and likely as a product of the state of the literature at the time of their publication, Ross’s POc cardinal system contrasts starkly with the geocentric systems reconstructed by François.

Ross’s system is given in Figure 3.3. In this reconstructed system, The east-west axis is lexified by terms referring to the sunset and sunrise—*sipo ‘west, downward (as of setting sun)’, *sake ‘upward, eastward’—while the north-south axis is lexified by terms referring to the tradewinds—*tokalau(r) ‘NW storm wind’ and *karak(a) ‘SE trade wind’—which, as I showed in Chapter 2, are crucial to space in Oceania. Ross presents one axis based on the path of the sun and an orthogonal axis based on meteorological terminology for the winds and the weather in POc.

François’s systems, on the other hand only have one differentiated axis on both the local and
navigational scales. These are shown in Figures 3.5 and 3.3. Trade wind terms *tokalau(r) ‘NW storm wind’ and *karak(a) ‘SE trade wind’ are not part of either the local-scale or the navigational-scale systems. Rather, *sipo and *sake, which Ross reconstruct to mean ‘(sun)set’ and ‘(sun)rise’ respectively, instead refer to the wind axis. This semantic change is quite logical considering that the ‘up’ and ‘down’ meanings of these terms are maintained whether they refer to the path of the sun (sunrise and sunset) as in Ross’s reconstructions, the direction of the tradewinds (upwind and downwind), or the geography of an island (upwards/uphill/landward and downwards/downhill/seaward) as in François’s reconstructions.

The orientation systems of the Torres-Banks islands show several variations of François’s POC system that are adapted for the local environment. François identifies two opposing extremes—the Gaua system and the Mwotlap system. Gaua has a land-sea axis (lexified by up-down) with a generic transverse axis on land, and an up-down axis on the navigational scale. Mwotlap has a land-sea axis (lexified by ‘in’ and ‘out’) with an up-down traverse axis and an up-down axis on the navigational scale. François concludes that all other languages of the Torres-Banks islands exist somewhere between these two extremes (François 2015: 168). This descriptive strategy allows François to simply categorize the languages in his sample and identify systems which have elements of both the systems of Gaua and Mwotlap. Mota is one such system; it has two land-sea axes which are used in different contexts. The first (used in the interior) contrasts up-down, which corresponds to the Gaua system, while the second (used near coast) contrasts up-out; the ‘up’ part of the axis corresponds to Gaua, but the ‘out’ part corresponds to Mwotlap.

This work reveals some of the currents in spatial language that are inherited. In Near Oceania especially, cultural and geographic diversity could motivate a variety of different spatial systems. A higher number of elevational systems could arise through contact with Papuan people, or riverine systems could develop near communities living on larger islands and depending on rivers for food. However, in Oceania, there is this incredible unity of systems that rely on the land and the sea and the winds, and this unity
POc’s demonstrative system and egocentric directional systems have also been reconstructed. In terms of directionals, Ross (1995) observes that most directional forms throughout Oceanic languages come from a set of POc verbs that occurred sentence-finally and include *mai/*ma ‘come towards speaker’, *ua[tu] ‘go towards addressee’, *lako/*la ‘go(to), and *pano/*pa ‘go away, go across’. Similarly, there are vertical directionals that include *sipo ‘go downward’, *sake ‘go upward’, *jua ‘go down vertically, fall’, and *(j,dr)a ‘go up vertically, rise’. The demonstrative system is shown in Figure 3.6.

As in his reconstruction of the POc cardinal system, Ross focuses more on the syntactic and phonological/phonetic features of the forms he reconstructs. For instance, he notes that commonly throughout Oceanic languages locative POc forms shifted to a more adnominal usage (e.g. ‘the house there’). Similarly, sometimes new morphemes are added to wordforms in order to give more phonological weight or emphasis to the lexical item. In Mekeo -mo ‘only’ has been added to forms. Thus, ina ‘near speaker/proximal’ becomes na-mo through the deletion of the initial i- and the addition of -mo. Ross also observes changes in the syntactic function of the terms. For instance, demonstratives may have been local nouns in POc. This explains the curiosity in some languages, such as Iaai (Ozanne-Rivierre 2004) and Yapese (Jensen 1977: 234), in which locative nouns form a paradigm with demonstrative bases. Yet, his attention to wordform and grammatical function does not mean that Ross disregards the semantics of the system itself. In fact, he concludes that though the wordforms of the POc demonstrative system have rapidly changed, its semantic organization has been relatively stable over the millennia (Ross 2004: 182).

According to Ross (2004: 182), “Proto Oceanic evidently had a person oriented demonstrative system of three members, with a possible fourth member denoting greater distance than [‘distal’] or invisibility. There was also perhaps a fifth, anaphoric, member.” Reconstructed terms includes *ni/ne ‘near speaker’, *na ‘near addressee’ and *(a)ra ‘distal’. The proto-forms of the entire demonstrative paradigm reconstructed by Lynch et al. (2002) are shown in Table 3.1.
have more commonly shifted from person to distance-oriented systems. Ross suspects that it may be due to the nature of their usage. Demonstratives more commonly used to locate referents in relation to speech act participants while directional particles are employed to narrate dynamic events. In narratives, the speaker’s position is usually more important than the addressee’s.

Rather than seek to reconstruct proto-spatial systems, several researchers use already-reconstructed etymologies to discuss the motivation for synchronic systems. François himself uses Ross’s etymologies to help explain the diversity of contemporary geocentric systems and to reconstruct that of POc. As shown in Figure 3.7, land-sea axes in Oceania, terms generally derive from the nouns meaning ‘land/bush’ and ‘sea’, or the directionals ‘up’ and ‘down’ or ‘in’ and ‘out’. The lexical items that make up the cardinal axis, nearly all derive from the terms ‘up’ and ‘down’. It is these etymologies that lead François to note the significant motivations of the tradewinds in the development of geocentric orientation systems.

On the other side of the Austronesian world, many Western Austronesian spatial systems are cardinal, but their etymologies tell a story of the geographic and cultural motivations for their development and of the historical locations in which they came into use (Adelaar 1997). Much of this has already been discussed in §2.2.6, but it will briefly be addressed here. A famous example in which the past informs the present occurs in Malay, which has a cardinal system that was historically rooted in geography. Its eight-point system (see Figure 2.12 in Chapter 2) does not appear to have any relation to geography until one looks into the past and the historical population center of the Malay people until the fourteenth century: Srivijaya. Malay’s east-west axis is lexified with wind terms, timur (< PMP *timuR ‘southeast monsoon’) and barat

<table>
<thead>
<tr>
<th>LAND-SEA AXIS</th>
<th>etymology</th>
<th>CARDINAL AXIS</th>
<th>etymology</th>
<th>orientation</th>
<th>motivation</th>
<th>CALS®</th>
<th>UTLS®</th>
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<tr>
<td>Balinese WMP</td>
<td>-jia - loc</td>
<td>land - sea</td>
<td>-nah * a&lt;in</td>
<td>(?) - wind</td>
<td>→ east</td>
<td>monsoon</td>
<td>+</td>
</tr>
<tr>
<td>Tafa SHWNG</td>
<td>le - la</td>
<td>land - sea</td>
<td>ya - po</td>
<td>up - down</td>
<td>→ south [east]</td>
<td>?</td>
<td>-</td>
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<tr>
<td>Sabda PT</td>
<td>sae - debi</td>
<td>up - down</td>
<td>sae - debi</td>
<td>up - down</td>
<td>→ east</td>
<td>sun [?]</td>
<td>-</td>
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<tr>
<td>Yabena NNG</td>
<td>-sū - sa</td>
<td>in - out</td>
<td>gi - selp</td>
<td>up - down</td>
<td>→ west [*sun]</td>
<td>+</td>
<td>-</td>
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<tr>
<td>Kokoro MM</td>
<td>rhimu - rauwu</td>
<td>(?) - (?)</td>
<td>firi - puha</td>
<td>(?) - (?)</td>
<td>→ [south] east sun [?]</td>
<td>+</td>
<td>-</td>
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<tr>
<td>Longgu SES</td>
<td>langa - ast</td>
<td>[bush] - sea</td>
<td>ahi - todi</td>
<td>up - down</td>
<td>→ [south] east sun [?]</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Kwaio SES</td>
<td>fataia - ast</td>
<td>bush - sea</td>
<td>ahi - sato</td>
<td>up - down</td>
<td>→ southeast</td>
<td>?</td>
<td>+</td>
</tr>
<tr>
<td>Mwotlap NCV</td>
<td>hay - yow</td>
<td>in - out</td>
<td>hai - hōw</td>
<td>up - down</td>
<td>→ southeast</td>
<td>wind</td>
<td>+</td>
</tr>
<tr>
<td>Ambua NCV</td>
<td>hape - hino</td>
<td>up - down</td>
<td>hape - hino</td>
<td>up - down</td>
<td>→ southeast</td>
<td>wind</td>
<td>-</td>
</tr>
<tr>
<td>Aneqort[1] SV</td>
<td>-musth - s(ah)</td>
<td>(?) - (?)</td>
<td>-jai - seth(ah)</td>
<td>up - down</td>
<td>→ southeast</td>
<td>?</td>
<td>+</td>
</tr>
<tr>
<td>Xirixi NC</td>
<td>asew - anil</td>
<td>up - down</td>
<td>asew - anil</td>
<td>up - down</td>
<td>→ southeast</td>
<td>wind</td>
<td>-</td>
</tr>
<tr>
<td>Nenu NC</td>
<td>-la - dich</td>
<td>up - down</td>
<td>-la - dich</td>
<td>up - down</td>
<td>→ southeast</td>
<td>wind</td>
<td>-</td>
</tr>
<tr>
<td>Imai Loy</td>
<td>-li - ñi</td>
<td>up - down</td>
<td>-li - ñi</td>
<td>up - down</td>
<td>→ east sun [?]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ponapean Mic</td>
<td>-long - eli</td>
<td>bush - sea</td>
<td>-lak - eli</td>
<td>up - down</td>
<td>→ windward</td>
<td>wind</td>
<td>?</td>
</tr>
<tr>
<td>Samouk Ph</td>
<td>i tata - i hal</td>
<td>bush - sea</td>
<td>i tata - i stiTo</td>
<td>up - down</td>
<td>→ east</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Marquesan Ph</td>
<td>i tata - i hai</td>
<td>bush - sea</td>
<td>i tata - i hait</td>
<td>up - down</td>
<td>→ wind</td>
<td>wind</td>
<td>?</td>
</tr>
</tbody>
</table>

* C.A.L.S. = Cardinal Axis used on Local Scale.
** U.T.L.S. = Undifferentiated Traverse axis used on Local (and navigational?) Scale.

Table 3.1: Proto-Oceanic spatial deixis (Lynch et al. 2002)

Figure 3.7: Etymologies of lexical items in land-sea axes throughout Oceania (François 2004: 7)
Figure 3.8: Approximate locations of Srivijaya and Malacca kingdoms (dark gray), showing differing orientations toward the water.

(< PMP 'habaRat 'northwest monsoon’) (Blust & Trussel 2010). However, the intercardinal points suggest an original system in which the north-south axis was aligned with a seaward-landward axis; barat-laut ‘northwest’ and timur-laut ‘northeast’ suggest that the original term denoting ‘north’ was laut (< PAN *lahud). Similarly, barat-daya ‘southwest’ suggests that the original term denoting ‘south’ was daya (< PAN *daya). Indeed, such a situation is geographically consistent with what we know of the location of the Srivijaya Kingdom. In this region, the sea is located to the north while the interior of the island is located to the south (Adelaar 1992: 115). The original seaward-landward terms were presumably replaced when the center of power moved to Malacca on the Malay peninsula. There the sea lies to the south, potentially leading to some confusion with a term laut for ‘north’ which may have retained traces of its original semantics meaning ‘seaward’ (see Figure 3.8). The terms that replaced the seaward-landward items are also consistent with this explanation. The modern term selatan ‘south’ is derived from selat ‘strait’, and the Strait of Malacca would have been to the south from Malacca. The innovated term utara ‘north’ is a loan from Sanskrit uttara ‘north(ern)’. The term tenggara ‘southeast’ is ostensibly a loan, possibly from Tamil ten kara ‘south bank’ (Adelaar 1992: 115).

A similar approach is taken by Gallego (2018) who seeks to make sense of the cardinal systems of the Philippines. She does not seek to reconstruct a proto-system; she simply uses etymologies of lexical items and observes modern reflexes of PAN *daya and *lahud to outline a historical origin for contemporary cardinal systems. For instance, Ilokano is spoken primarily on the west coast of Luzon Island where the seaward direction is to the west. In its cardinal system laud < PAN *lahud has grammaticized as ‘west’ and daya < PAN *daya as ‘east’. Monsoon wind terms are used for the north-south axis. In contrast, Madurese is spoken primarily along the south coast of Madura Island, where the seaward direction is to the south. Hence, laoʔ has grammaticized as ‘south’ and dhájá as ‘north’. Wind terms are used for the east-west axis (Adelaar 1997). In both examples, the cardinal systems originated from an original land-sea system that coincides with local geography. This is similar to the Malay system except it is not necessary to look to
a historical center of power for explanation. Pan *daya and *lahud may also be adapted to a non-coastal context. For instance, in Borneo, where riverine directional systems are common, reflexes of *lahud tend to mean ‘upriver, upriver area’, and those of *daya tend to be ‘downriver, downriver area’ (Adelaar 1997: 69). This is a natural extension from a land-sea axis since in coastal contexts, ‘upriver’ tends to coincide with ‘inland’.

The approaches adopted by Adelaar, Gallego, and others does little to clarify the contemporary use of the spatial system, but they paint a clearer picture of the historical origins of the system. This historical picture sheds light on how genetic relationships interact with geography and how each group of speakers adapts their language to satisfy their needs within their specific environment. It simultaneously shows that languages can also retain aspects of their inherited system. Though Pan had a land-sea system that is attested all throughout the language family, it has evolved into riverine systems, wind systems, coastal systems, elevation systems, and cardinal systems. As such, we can conclude that genetics do play a role determining spatial orientation strategies, but they do not play the only role. Yet, the information we can obtain from a historical perspective can be quite useful. As François states, “the final discussion […] will recapitulate our findings from a historical perspective, and propose a unified scenario to account for the diversity attested today” (François 2015: 142), indicating the critical role that a historical perspective may play in fully understanding contemporary spatial systems.

3.6 A gestural lens

Although the study of gesture in Austronesian languages remains in its nascent stages, some researchers in the Pacific have noted the valuable information that gesture can provide to the study spatial language. However, much—though not all—of this work has yet to be undertaken in a systematic manner and is instead based on the researcher’s observations and impressions during fieldwork. Because of this lack of gesture work on Austronesian languages, in this section, I also refer to studies conducted on the non-Austronesian languages of the Pacific since many linguistic and cultural features are shared across language families in the region (see e.g. Klamer & Ewing (2010)). Most of the research on language, space and gesture in the Pacific has focused on pointing, and these studies seem to have three broad foci. There are studies that look at the coordination between spoken and gestured deictic reference, those that look at pointing form, and those that observe the frame in which the pointing is conducted. As such, this section is organized around these three research traditions.

As mentioned in Chapter 2, demonstrative systems are closely intertwined with gesture (Cooperrider 2016, Levinson et al. 2018), so pointing is increasingly becoming incorporated into descriptions of demonstrative systems in the Pacific, though it has yet to be done so in an empirically-studied manner. Pointing is a tool to help disambiguate referents, and sometimes the form of the demonstrative may necessitate an accompanying gesture. For instance in Samoan, touch and gesture are integrated within the demonstrative paradigm. There is an expectation that a gesture usually accompanies the terms lele ‘near speaker (+gesture)’, nale ‘near addressee (+gesture)’, and lale ‘not too far (+gesture)’ (Mosel 2004). In Kilivila, gestures are often required to refer to referents indexed by the medial demonstrative beyo. The pointing gesture is meant to narrow the search domain for a referent that is not near the speaker but still within sight. In Lavukaleve, an accompanying point can influence the form of the demonstrative. Speakers will add the presentative suffix -ri to the end of the demonstrative if they also point (Terrill 2018). As an example, as speakers point to fish in pictures and state their names, they utter the question in (3.4). Here, the presentative suffix, -ri, is affixed to the proximal demonstrative root, -o-, which also includes an initial modifier, h-, and agreement information, -na-.
Similarly, the presence of a gesture may serve to alter boundaries between demonstratives. In Saliba the presence of gesture may influence the choice between ‘near speaker’ and ‘near addressee’ demonstratives. A finger point, touch, head nod, or eye gaze usually accompanies ‘near speaker’ demonstratives (Margetts 2004: 41), but they tend not to accompany ‘near addressee’ and ‘distal’ demonstratives. For example, the utterance in (3.5) is not accompanied by a gesture, and the speaker chooses the ‘near addressee’ demonstrative form temeta to position the addressee’s finger. However, even if the referent is located near the addressee or far from the speech event, if speaker points to the referent, it may motivate them to use the ‘near speaker’ demonstrative. In (3.6), the referent is nearer to the addressee, but because the speaker reaches out and touches the finger, the speaker chooses the ‘near speaker’ demonstrative teina, thus extending the speaker’s personal space to include that of the addressee.

<table>
<thead>
<tr>
<th>Free demonstrative</th>
<th>Near speaker</th>
<th>Near addressee</th>
<th>Distal</th>
</tr>
</thead>
<tbody>
<tr>
<td>teina</td>
<td>temeta</td>
<td>temem (also tem)</td>
<td></td>
</tr>
<tr>
<td>ina</td>
<td>meta</td>
<td>nem</td>
<td></td>
</tr>
<tr>
<td>(te)ina-i</td>
<td>(te)mela-i</td>
<td>(te)mena-i</td>
<td></td>
</tr>
<tr>
<td>te (also ta)</td>
<td>me</td>
<td>ne</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.2: Saliba demonstrative system (Margetts 2004: 39)

(3.5) Temeta nima-m gibu-na me ye kamkamna?
ADDR hand-2SG finger-3SG ADDR 3SG hurt

‘That finger of yours (near you), does it hurt?’ (without touching finger) (Saliba; Margetts 2004: 41)

(3.6) Teina nima-m gibu-na te ye kamkamna?
SPKR hand-2SG finger-3SG SPRK 3SG hurt

‘That finger of yours (near me), does it hurt?’ (touching finger) (Saliba; Margetts 2004: 41)

Gesture form and its variation across language groups and regions has also been a focus of study. Even pointing, which is thought to be the most basic and universal gesture is culturally-rooted (Wilkins 2003). Finger pointing is taboo in Samoan, so speakers instead tend to point with other hand forms or with their head (Mosel 2004). In fact, pointing with the head or specific facial features is quite common in Pacific communities and is sometimes the preferred method of pointing (Cooperrider et al. 2018b). One such form is lip pointing. Lip pointing has been documented in languages around the world (see e.g. Sherzer (1973), Dixon (2003), Enfield (2001)), and speakers of several languages in Island Southeast Asia and Oceania also tend to use it. Lip pointing is used as a gesture by signers of Kata Kolok in Bali (De Vos 2014) and has also been documented in Yélî Dnye in Papua (Levinson & Majid 2013). Among the people of Papua, nose-pointing seems to be an areal feature (Kendon 1980, Cooperrider & Núñez 2012). This type of pointing is similar to lip pointing except there is no lip protrusion, and the nose is the primary indicator of the referent.

Referents of these pointing gestures have also been a topic of interest. Pointing can be structured in a variety of ways, and in this dissertation, I distinguish absolute space (Levinson 2003) and narrational space (Haviland 1993). When speakers point in narrational space, they construct a three-dimensional representation of physical space in front of them and they assign positions to referents within this
constructed space. When speakers point in absolute space—also referred to as cardinal or geo-based space (Levinson 2003)—points are directed to the actual locations of objects in space around the speaker. Speakers of several languages in the region tend to point to referents in absolute space rather than to relative or narrational space. For instance, speakers of Balinese tend to direct points towards the physical location of the referent, and this has been translated into Kata Kolok, a sign language of Bali, in which signers use an absolute spatial system of reference that corresponds to the spontaneous gestures that Balinese speakers produce as they speak. It is hypothesized that this relationship originated from shared cultural and gestural norms between users of Balinese and Kata Kolok (De Vos 2014, 2015).

Much of the research on pointing in the Pacific has been conducted in reference to space-time mapping. Space and time are connected in that spatial language is often used to talk about temporal concepts (Boroditsky & Gaby 2010), and the language used to talk about space can influence how people gesture when they talk about time (Núñez & Sweetser 2006). In some language groups, speakers orient time egocentrically which may related to writing direction (Fuhrman & Boroditsky 2007) or conceptions of the body moving forwards, backwards, up, or down through space as time progresses. English speakers tend to orient the past to the left and the future to the right or the back to the past and the future to the front (Boroditsky 2001). Ayamara speakers, in contrast, tend to orient the past in front of the body and the future behind, and this aligns with the use of spatial language in temporal metaphors (Núñez & Sweetser 2006). Some Pacific languages also adopt an egocentric conception of time, such as Tongan. But in some cultures, these egocentric conceptions are associated with education level. In Mian (mpt), speakers with higher levels of education tend to use more egocentric terminology such as ‘left’ and ‘right’ (Fedden and Boroditsky 2012a). Speakers with relatively little formal education, however, instead employ geocentric axes based on the river flow and the sun as absolute temporal frames (Fedden & Boroditsky 2012). In another example, gestures suggest overlap between the conceptual co-organization of space and time among the Yupno of Papua New Guinea (Núñez et al. 2012). When speakers produce temporal expressions related to the past, present, and future, they point to locations that coordinate with their geocentric system which is based on the elevational changes in their valley. They point downhill when referring to the past, towards the ground when referring to the present, and uphill when referring to the future (Núñez et al. 2012). In contrast, in Yélî Dnye, a language isolate of Papua New Guinea, terminology used to describe time has little overlap with space. Speakers employ an absolute spatial system with a land-sea axis and a wind axis. But temporal gestures are absolute in their own way. Speakers point to the positions of the heavenly bodies at certain times of day to make reference to those times (Levinson & Majid 2013).

This section has highlighted several important currents within research on gesture and space in the Pacific. Much of this study has focused on pointing and its relationship to several broader foci of spatial language including demonstratives and FoR. Pointing has been shown to elucidate spatial language in several ways. First, pointing can be grammaticalized within the demonstrative system. It can influence the boundaries between demonstratives and ultimately affect which are used. Second, pointing form matters for what is being said. Pointing has been documented to have a diversity of forms that vary cross-linguistically. Points can be created by several different body parts—including the hands, head, and lips—and these may be employed by speakers for different purposes. Certain morphological properties of the point can also reflect the speaker’s intentions. Finally, pointing may be a tool to explore abstract concepts such as FoR and temporal mapping. In the following chapters, I observe how these currents might also be realized in Hawu.
3.7 A sociotopographic lens

Thus far in the discussion, two topics have been central to nearly all approaches: culture and geography. Many researchers have noted their critical role in influencing the structure and usage of orientation systems. As an example, surveying the grammaticization of locatives across a sample of 104 Oceanic languages, Bowden (1992: 131) notes the “ability for culture and geography to determine what can be linguistically significant.” Similarly, Blust (1997) says that the linguistic expression of spatial relationships is “a product of culture acting upon experience” (Blust 1997: 50). Beyond linguistics, the relation between social status and spatial orientation has figured prominently in anthropological research. Bubandt describes the “upcoast” region in Buli as a domain which is “both socially and morally distinct from the rest of social space” (1997: 147). This leads Senft to suggest that spatial systems transcend linguistic knowledge through the important role of cultural, historical, and geographical knowledge in organizing space and that description of spatial language can only be completed using “interdisciplinary anthropological linguistic approaches” (1997: 32). This connection between culture and geography has forced researchers to ask questions about the relationships between language, space, culture, and the environment. It has only been in recent years, however, with the development of the Sociotopographic Model (STM) (Palmer et al. 2017), that the concept of sociotopography—socially and culturally-mediated landscape—has become a popular topic of inquiry among those studying language and space. The STM has since become one of the most popular points of inquiry into social and geographic influence on linguistic and cognitive spatial systems.

In 2015 Palmer developed the Topographic Correspondence Hypothesis (THC), an earlier instantiation of the STM, which posits that the spatial orientation systems in use by linguistic communities are motivated at least in part by the surrounding landscape. This hypothesis highlights the crucial role of geography in shaping linguistic and cognitive faculties, though it does not suggest that geography is the only motivating factor. It makes two primary predictions 1) that languages spoken in diverse topographies will have different absolute spatial reference systems even if they’re closely related and 2) that languages in similar topographies will have similar systems even if unrelated. To support this hypothesis, Palmer (2015) compares the geocentric systems of several atoll-based Austronesian languages: Marshallese, Kiribati, Tokelauan, and Iaai. Though all are Oceanic languages, their spatial orientation systems differ from other Oceanic languages in ways that make them ideally suited to the atoll environment in which they are spoken. On a navigational scale, all employ a cardinal system based on the path of the sun and the tradewinds. Marshallese and Tokelauan both also employ a second system on a navigational scale that is used for sailing in the lagoon or when in sight of the land. On land the languages contrast ‘oceanward’ from ‘lagoonward’, and those languages spoken on atolls with wilderness also have ‘wildernessward’ (Palmer 2015). Palmer also references the literature on urban-dwelling populations to note that topography may not simply influence the nature of geocentric orientation but also which FoR is chosen. Although urban absolute systems (e.g. ‘uptown’ and ‘downtown’) can sometimes arise, relative FoR is generally preferred by urban-dwelling populations, and absolute FoR is preferred by those living in rural areas, such as hunter-gatherer populations. This widespread difference in spatial orientation between urban and rural populations, however, highlights a weakness in the THC. Clearly, topography cannot entirely be disassociated from culture. An urban culture is different from a hunter-gatherer culture. A fishing culture differs from a farming culture. Even a mountain-dwelling agricultural community will differ in ways from a mountain-dwelling hunter-gatherer community.

Thus, in order to account for cultural factors, two years later in 2017, Palmer et al. proposed the Sociotopographic Model. This model recognizes the important role of society and culture in determining which aspects of the environment are salient and should be encoded in absolute spatial reference systems. It suggests that there is not a direct relationship between landscape and language. Social and cultural factors mediate the two so that any linguistic expression of the environment is influenced by society and culture. The STM offers a sophisticated modeling of the relationship between language, space,
A sociotopographic lens

environment, and culture. Yet, while it is precise in its predictions about topography, which mirror those of the THC, it is, perhaps necessarily, vague in its discussion of social predictors. This offers nuance that accounts for both cultural and linguistic diversity. However it also hinders scientific inquiry through the lack of explicit hypotheses. These hurdles are acknowledged by the developers of the model as well. Schlossberg (2018: 340) states:

The STM is an attempt to model how spatial referencing preferences emerge from the interaction of a variety of factors. No doubt, there is room for its further development, but in foregrounding the role of the environment, acknowledging the potential for intra-community variation in frame of referencing preferences, and in emphasising the importance of not just language qua language as an important variable, but also language use, the STM represents an acknowledgment of the complex, multifaceted motivations behind diversity in spatial referencing and spatial cognition.”

A comparison of urban and rural populations in Marshallese and Dhivehi nicely demonstrates the validity of the two ideas proposed in the Sociotopographic Model; related languages spoken in different topographies will have different absolute spatial reference systems, and unrelated languages in similar topographies will have similar systems. Marshallese is an Austronesian language spoken in Micronesia, and Dhivehi an Indo-European language spoken in the Maldives. Both can be considered to be spoken on atolls, and both languages have terms distinguishing ‘lagoonward’ from ‘oceanward’ as well as cardinal systems. These seem to be motivated by similar sociocultural values. For instance, the lagoon side of the atolls are the inhabited sides; they are safe and controllable. Meanwhile the ocean side is uninhabited and considered to be dangerous and outside of social control (Palmer 2015, Palmer et al. 2017). Evidently, sociocultural values are themselves motivated by cultural interaction with the environment. Similarly, urban populations of both languages employ different spatial models than rural ones. There is a strong preference for egocentric FoR in urban settings and absolute in rural.

Concurrently or directly as a result of Palmer (2015) and Palmer et al. (2017), a plethora of studies have recently been published exploring the connection between sociotopography and space in language. In this section, I observe the crucial topics in the published literature thus far. I discuss the various approaches to the study to sociotopography and the many scales on which sociotopographic factors may influence spatial language and cognition.

3.7.1 Quantitative approaches to the Sociotopographic Model

Most works published on the STM have been case studies on languages with spatial systems that have been described in relative detail. The prevalence of this descriptive or qualitative approach may be in part due to the nature of the model which initially seems poorly-suited for quantitative analysis due to the way in which the multitudinous and often unique ways in which culture can influence spatial language are emphasized. In this way, the STM is all-encompassing in that it may be ideally-suited to account for the idiosyncrasies of each individual language, but it also renders large-scale typological comparison difficult. However, in an exploratory quantitative survey of 132 Malayo-Polynesian languages, Pappas & Holton (2022) examine four sociotopographic features that can be associated with all language communities and thus are comparable across a diverse sample of Malayo-Polynesian languages. These features include: geographic distribution, economy, geography (proximity to the sea), and ruggedness of terrain. Distribution refers to the geographic spread of a language. This factor captures both social and topographic features as a greater language distribution often leads to a less-intimate relationship with the land. Economy, a social factor, is the primary economic activity of a language group. This is meant to capture speakers’ relationship to the land through their daily activities. Geography, a topographic factor, in this study refers to a language’s proximity to the ocean. While many aspects of geography
may potentially interact with spatial orientation systems, the distance to the coast is particularly highly relevant for Austronesian speaking communities, both due to the archipelagic environment of the family and the widely-documented prevalence of orientation systems based on the land-sea distinction in these languages. Finally, terrain is a measure of the degree of topographic relief of the land, meaning in this case, the relative variation in altitude—or ruggedness of the landscape—rather than absolute altitude (e.g., height above sea level).

The absolute systems observed in Pappas & Holton (2022) largely coincide with those described in Chapter 2. There are only two differences in the typologies. First, in Pappas & Holton (2022) wind systems are grouped together with cardinal systems as neither are rooted in topography. Thus, cardinal systems represent wind systems, systems based on the path of the sun, and those that have been conventionalized to a point where they are no longer rooted in the landscape. Second, systems in which it is impossible to distinguish the land-sea axis from an elevational axis—usually because a land-sea axis is lexified with elevational terms so that ‘up’ and ‘landward’ correspond to the same direction just as ‘down’ and ‘seaward’ overlap—are treated as land-sea* systems in Pappas & Holton (2022). These systems, as well as a brief description, are shown in Table 3.3. The authors use two methods of exploratory multifactorial analysis. In the first approach, called the “combined” method, primary and secondary axes are combined into a hybrid system type, yielding three additional classifications: riverine+cardinal, land-sea+elevation, and land-sea+cardinal. These three hybrid systems represent the most common types of combinations of orientation systems in the sample. The other method, called the “doubled” method, treats languages with hybrid systems as two separate languages that only vary in the type of system.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>land-sea</td>
<td>axis oriented orthogonal to the coast, based on opposition between landward (inland) and seaward (toward the coast)</td>
</tr>
<tr>
<td>land-sea*</td>
<td>land-sea systems in which the land-sea opposition is indistinguishable from geophysical elevation</td>
</tr>
<tr>
<td>coastal</td>
<td>axis oriented parallel to the coast, often, but not necessarily, co-lexified with vertical ‘up’ and ‘down’</td>
</tr>
<tr>
<td>elevation</td>
<td>axis that distinguishes global or geophysical elevation with respect to a deictic center (in the sense of Burenhult 2008)</td>
</tr>
<tr>
<td>riverine</td>
<td>axis oriented parallel to the river, typically with a secondary axis orientated orthogonal to the river</td>
</tr>
<tr>
<td>cardinal</td>
<td>axis fixed according to conventions which do not vary with local geography (although they may be motivated by environmental factors such as wind and the sun)</td>
</tr>
</tbody>
</table>

Table 3.3: Typology of orientation axes (from Pappas & Holton (2022))

Pappas & Holton find evidence supporting a weak version of the Sociotopographic hypothesis. Two factors in particular—economy and geography—show statistically significant correlations with spatial orientation. In other words, geography alone is not sufficient to explain the distribution of spatial orientation systems: “even the simplest environmental influence is either supported or transformed by social forces” (Sapir 1912: 226). However, it is also clear that neither culture nor geography fully determines the choice of orientation system. Rather, spatial cognition is the result of the “complex interplay of language structure, local environment, cultural practices, and language use” (Palmer et al. 2017: 488). As such, it is relatively easy to find counter-examples to the Sociotopographic Model. But such exceptions do not invalidate sociotopographic approaches. While cultural and geographic factors do not completely determine orientation systems, significant correlations do exist between at least some sociotopographic
The following sections detail the ways in which Pappas & Holton (2022) observe these factors to correlate with absolute orientation system type. The discussion of their work is supplemented with some additional observations, discussions, and analyses.

3.7.1.1 Geography

Pappas & Holton find geography to exhibit significant correlations with almost all types of orientation systems. Inland geography shows particularly strong positive correlations with cardinal, elevation and riverine systems and negative correlations with coastal and land-sea* systems. The only system types represented by inland geography include cardinal, elevation, riverine, and riverine+cardinal. Meanwhile, land-sea, coastal, land-sea*, and land-sea+cardinal clearly tend to be employed by coastal communities. These results suggest that orientation systems that are anchored in geographic features other than the land-sea distinction are more likely to be found in inland environments while orientation systems that are anchored in the sea or the coastline are more likely to be found in coastal environments.

Interestingly, although coastal systems are only found in language communities with access to the coast, among Malayo-Polynesian languages, coastal geography is not correlated with coastal orientation systems. In other words, while coastal geography may be a necessary condition for coastal orientation, it is clearly not sufficient. These correlations occur despite the fact that all but 3 of the 23 (or 86%) languages with coastal systems were coded as having coastal geography. This apparent mismatch is likely because land-sea systems are even more highly correlated with coastal geography (21 of 22 languages or 95% are spoken in coastal communities). This result also reflects the uneven distribution of orientation system types according to geography. As might be expected given the archipelagic nature of the Austronesian family, the vast majority (89 in combined model; 120 in doubled) of the languages in the sample were coded as having coastal geography, but only 23 (25 in doubled coding) of these exhibit coastal systems. In fact, all five systems of spatial orientation are represented among languages with coastal geography. In contrast, among languages with inland geography only four of these systems are represented, and the overwhelming majority of these are riverine (see Fig. 3.9).

Diversified geography shows strong negative correlations with elevation, land-sea*, land-sea+elevation and riverine+cardinal systems, and a slight positive correlation with cardinal systems. Table 3.4 shows diversified geography is most highly represented by languages with cardinal systems. This result suggests that languages that are spread across both coastal and inland environments will find it difficult to rely

<table>
<thead>
<tr>
<th>Geography</th>
<th>diversified</th>
<th>coast</th>
<th>inland</th>
</tr>
</thead>
<tbody>
<tr>
<td>land-sea</td>
<td>1</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>cardinal</td>
<td>10</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>coastal</td>
<td>3</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>elevation</td>
<td>0</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>land-sea*</td>
<td>0</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>land-sea+cardinal</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>land-sea+elevation</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>riverine</td>
<td>2</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>riverine+cardinal</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 3.4: Distribution of languages according to orientation system type and geography
on geographically anchored features for orientation. Hence, cardinal systems are more likely in such languages. Fully 10 of the 18 systems (55%) with diversified geography are cardinal. There is no correlation between diversified geography and cardinal systems using the doubled method, suggesting that several languages with village distribution and a secondary cardinal axis were picked up using this method.

These results pertaining to the geography factor suggest that two geographic factors play an essential role in determining the nature of an orientation system. Firstly, interaction with a homogeneous landscape is more likely to result in use of a geocentric system as opposed to a cardinal one. Secondly, the land-sea binary appears paramount. Predictably, if a language is spoken on the coast, the coast is likely (but not guaranteed) to be incorporated into the system, but if a language is spoken in the island interior, other geographic features will be used.
3.7.2 Economy

As previously noted, economy serves as a rough measure of sociocultural influence on the orientation system. A correlation between economy and orientation system suggests that the way in which the majority of speakers interact with the land for occupational purposes, may influence the realization or the lack of a geocentric orientation system. Subsistence economies are negatively correlated with cardinal (3 out of 19 or 16% subsistence), land-sea+cardinal (0 out of 3 or 0% subsistence), and riverine+cardinal (1 out of 4 or 25% subsistence) systems but positively correlated with land-sea+elevation systems (4 out of 4 or 100% subsistence). Table 3.5 also shows that land-sea (8 out of 13 or 62% subsistence), coastal (14 out of 18 or 78% subsistence), and riverine (17 out of 20 or 85% subsistence) systems are also primarily used by subsistence economies.

These results are quite striking in that the only system types that are negatively correlated with subsistence economy are those which have at least one cardinal axis. This suggests that geocentric systems are more likely to be employed by speakers living in subsistence economies. As will be further discussed in §3.7.4.2, this is a broader trend observed in communities throughout the world (e.g Majid et al. 2004, Dasen & Mishra 2010). Speakers in subsistence economies tend to have a closer relationship with the land rather than the built environment, and often people work directly on the land. In contrast, cardinal systems, which are removed from the landscape, seem to occur more often among languages spoken in more urban regions which will typically have diversified economies. Table 3.5 shows that diversified economy is found in 13 (68%) of the cardinal systems in the sample. Thus, the negative correlation of cardinal systems with subsistence economy is not surprising.

3.7.2.1 Distribution

The distribution factor presents a somewhat more interesting and less expected picture. Most notable is the strong correlation between distribution and both elevation and riverine+cardinal systems. As shown in Table 3.6, all six languages with a riverine+cardinal system have a village distribution. Moreover, both island and village distribution are strongly correlated with elevation systems, whereas distributed distribution is negatively correlated. Overall, 4 of the 7 (57%) elevation systems in the sample were coded as having a village distribution. In part, riverine+cardinal and elevation’s negative correlations with distributed distribution may be a product of the areal concentration of riverine+cardinal systems in Borneo and elevation systems in Sulawesi (see Figure 3.10 for the distribution of elevation systems)—both large, linguistically-diverse islands where languages are usually localized to a small part of the island (cf. Holton & Pappas 2022).

In contrast, Table 3.6 shows that cardinal systems tend to be slightly more likely than other languages to have a distributed distribution. Because Pappas & Holton (2022) coded a language to have a cardinal system if there was no documentation of a geocentric orientation system, the existence of a cardinal system suggests the lack of a geocentric orientation system. However, although cardinal systems are not rooted in geography, they tend to evolve from systems that were originally geocentric (cf. Adelaar 1997, Gallego 2018). This is evidenced most clearly in the etymological sources for the cardinal axes, which commonly include topographic (e.g. land-sea) and environmental (e.g. path of the sun or wind) terms. The positive correlation between cardinal systems and distribution may thus suggest that as language communities grow and become spread across large regions with diversified economies, geocentric axes tend to become conventionalized and reinterpreted as cardinal systems.

3.7.2.2 Terrain

Surprisingly, sociotopographic factors show almost no correlation with the terrain factor. However, some (non-significant) correlations do indeed exist: nearly half (19 of 41) of languages spoken in non-
mountainous environments have cardinal systems. However, all other types of systems are more-commonly found in mountainous environments (see Figure 3.11 and Table 3.7). This lack of correlation is likely due to the terrain of Island Southeast Asia and Oceania. Many of the islands are volcanic, and therefore, most islands are quite mountainous. As a result, because less than a third of languages in the sample are spoken in non-mountainous regions, there is not enough variation within the sample to observe correlations among languages.

3.7.3 Summary of Quantitative analysis

The study by Pappas & Holton provides typological and quantitative evidence for the Sociotopographic Model, showing that both topographic and sociocultural factors can influence the orientation system in use by a community. The authors observe that, in particular, economy and geography show statistically significant correlations with spatial orientation. Despite the limitations of a small sample size, and the challenges of coding sociotopographic features, this preliminary work shows the potential for quantitative investigation of the Sociotopographic Model. Results broadly suggest that languages make use of a salient,
A sociotopographic lens

Figure 3.11: Frequency of mountainous and non-mountainous terrain according to orientation system type.

<table>
<thead>
<tr>
<th>Terrain</th>
<th>mountainous</th>
<th>non-mountainous</th>
</tr>
</thead>
<tbody>
<tr>
<td>land-sea</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>cardinal</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>coastal</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>elevation</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>land-sea*</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>land-sea+cardinal</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>land-sea+elevation</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>riverine</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>riverine+cardinal</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3.7: Distribution of languages according to orientation system type and Terrain

Culturally-important landscape feature for spatial orientation. Non-geocentric or cardinal systems tend to arise in situations that result in a less intimate relationship with the environment, such as in diversified economies and geographies.

However, it also appears that sociotopographic features alone cannot completely predict the type of spatial orientation system in a language. To the extent that languages are constrained by grammar just as much as they are by culture and environment, spatial orientation systems are unlikely to be fully determined by language-external factors. This finding supports the discussion thus far in this chapter, suggesting that sociotopographic features alone cannot completely predict the type of spatial orientation system in a language—likely a complex interplay of historical, genetic, language contact, and other factors also play a role—but they may well be able to explain at least part of the observed variation in the anchoring of geocentric orientation systems in Austronesian languages.
3.7.4 Variation within a language community

There are, of course, drawbacks to typological studies. In particular, they necessarily simplify and categorize concepts that are inherently complex. Thus, though quantitative typological analysis may offer insight into orientation systems on a broad scale, it obviously cannot account for the nuances and complexity of a single language community. However, some sociotopographic research suggests that even the case studies that were introduced in §3.7 make broad generalizations by assuming all people in a community employ the same orientation strategies.

Studies have shown that there is even variation in culturally-mediated topological influence within a single language community and even between speakers. The variety between individual speakers may be as diverse as that between language communities (Majid et al. 2004: 111). Research suggests that speakers’ use of spatial reference relies on their ability to navigate the world by drawing on axes that are linked to our bodies and are developed by our experience in the world (Bourdieu 1979). With this in mind, the STM may not simply explain the nature of spatial language at the community level but also at the individual level. In this way, it is “environmental experience in itself [that] bridges cultural and natural domains in the sense that it represents a habitual and social pattern of practice that involves a spatially and temporally particular type of engagement with the environment” (Shapero 2017: 1293). Sociocultural factors that are part of environmental experience and that mediate relationships and interactions with the land may include profession, gender, age, and urbanization, among others. Often, these factors are impossible to disentangle; in many communities, one’s profession is related to one’s gender, for instance.

The following sections will discuss several of these sociocultural variables—including profession, gender, urbanization, age, and language contact—that may lead to intra-community variation in spatial orientation strategies.

3.7.4.1 Profession and gender

Pappas & Holton (2022) generalize profession across an entire language group by observing correlations between a language community’s primary economic activity and spatial orientation system. However, there can also be variation in the use of spatial language on an even smaller scale because of profession. For instance, in a non-Pacific example, Ancash Quechua speakers who are herders in the surrounding highlands are more likely to make use of the absolute FoR than other speakers of the language. Shapero (2017: 1293) hypothesizes that this tendency may be connected to the speakers’ experiential interactions with the landscape stating that “[t]he factor of environmental experience in itself bridges cultural and natural domains in the sense that it represents a habitual and social pattern of practice that involves a spatially and temporally particular type of engagement with the environment.” This particular type of engagement seems to be motivated by the range of land that people are familiar with, meaning that a shepherd, who covers an area of over 9km each day with their flock, has familiarity with a more land than a farmer, who tends to stay in their fields. This difference in intimacy with the land between pastoralists and the agriculturalists results in different ways of talking about space (Shapero 2017).

Similarly, among the Yucatec Maya, profession motivates the use of spatial orientation systems, and because profession varies based on gender, men and women use different spatial orientation strategies. Men use cardinal directional terms, but women do not (Le Guen 2011). Men tend to work in the gardens which are aligned cardinally. Their daily interaction with a cardinally-aligned space causes them to categorize and talk about the world cardinally. The same phenomenon is seen in Mopan, a language of Belize and Guatemala (Danziger 1999). More generally, in many language groups, including English, women have been found to use more landmarks than men (Wolbers & Hegarty 2010, Halpern 2012, Schlossberg 2018).

In a similar example in the Pacific, navigators, who have traditionally been men, appear to have
unique ways of knowing, interacting with, and talking about the environment. Research has suggested that successful navigation at sea is deeply rooted in cultural practices, requiring multiple models of experiential and cognitive ways of knowing and engaging with sea spaces (Kitchin & Blades 2002, Feinberg & Genz 2012), and this knowledge may influence how people talk about space while at sea. Though cognitive, celestial, and wind systems are important (Osmond 2000), an embeddedness in the voyage itself as experiential or embodied knowledge is also critical (Lauer & Aswani 2009). Intriguingly, it may not always be possible for navigators to put into words the cues they are reading from the environment (Feinberg & Genz 2012). Rather, anthropological research suggests that the navigator ‘feels his way’ using a combination of egocentric and allocentric interpretations of orientation and location (Genz 2014). A navigator in some traditions may sense the pitch and roll of the vessel to discern the pattern of the swells and to map these onto their knowledge of the stars, winds, and known islands to maintain a sense of orientation. Among the Marshallese, experiential knowledge, such as a constant awareness of the swells of the ocean, the pitch of the boat, and the wind and water currents is essential to a successful voyage (Genz 2014). Similarly, the Taumako use extensive knowledge of wind patterns and ocean swells to navigate to their destination (Feinberg 2014). The Carolinians of Micronesia, in contrast, use a sidereal star compass to guide their navigation (Goodenough & Thomas 1987). All techniques make use of the navigator’s experience in the environment.

Navigators’ experiences and learned ways of interacting with and navigating the land have led to differing ways of talking about the land. The intangible is sometimes tangible and much of what seems intangible to speakers of other languages can be demonstrated as tangible within the speech practices of a particular language. For instance, linguistically encoded wave forms transmitted in Marshallese (mah) through a ‘teaching and learning’ framework that cannot easily be made legible using state of the art wave detection and processing equipment have been shown by physicists to be entirely ‘real’ (Genz et al. 2009). Similarly, as discussed in §3.2, fishermen may have more complex radial models at sea than non-fishermen (Feinberg 2014). Further, navigators categorize the seascape and its spatialities in more detail than non-navigators, such as in the use of particular referential frames or orienting devices during navigation. They also engage with other lexically-encoded environmental features—such as sea life or disrupted swell patterns which may be used to sense land before it becomes visible—which have all been documented in various languages of the region (Gladwin 1970, Lewis 1972, Feinberg 1988, 1991, Ammarell 1999). As a result, navigators and fishermen can express a more intimate knowledge of the sea and its patterns, and similar to the Ancash Quechua pastoralists, also have an in-depth knowledge of a broader area than nonsailors. Unfortunately, this intriguing idea has not been investigated nearly enough, but further research into sociotopographic variation on the individual professional level may add useful nuance to current understandings of how both personal and societal interactions with the landscape can influence spatial orientation strategies.

### 3.7.4.2 Urbanization

As mentioned previously, several authors have found correlations between urbanization and FoR use. Research in populations all around the world suggests that urban populations are more likely to employ an egocentric FoR than rural populations. For instance, in a study by Dasen & Mishra (2010), which observes speakers of Balinese (Austronesian, Indonesia), Nepali (nep; Indo-Aryan, Nepal), and Hindi (hin; Indo-Aryan, India), results suggest that urban living correlates with egocentric FoR preference. Majid et al. (2004) similarly find urbanization to be the only factor—from a group of factors including environment, urbanization, subsistence mode, and collectivity—that influences spatial reference in language. They observe that rural societies are not guaranteed to use an absolute FoR, but urban languages seem to universally use a relative FoR (Majid et al. 2004: 113). Similarly, Palmer et al. (2017) report that in both Marshallese (Austronesian, Micronesia) and Dhivehi, while the rural populations employ absolute FoR
A sociotopographic lens based on a distinction between the open ocean, the lagoon, and the land, the urban populations employ an egocentric FoR. Even Pappas & Holton (2022) tangentially observe this phenomenon; cardinal systems are more commonly used in more urban populations, which, based on their coding choices, suggests a more pervasive use of egocentric terms in daily communication (e.g. Malay, Javanese, Tagalog).

This relatively widespread phenomenon may be motivated by several factors. Levinson (2008: 136) suggests that “[t]he Western mode of navigation, based on turns to the left or right, is adapted to dense systems of existing streets, roads and paths. Hunter-gatherers and others who live in less constructed landscapes tend to use non-egocentric systems of navigation, e.g., absolute directions such as north, south, east and west.” Thus, the frequent use of a dense network of pre-established roads and paths may encourage speakers to adopt an egocentric frame of mind. Meanwhile, hunter-gatherers may have more intimate daily interaction with the land and thus necessarily rely on environmental phenomena to maintain spatial awareness. It may also be that urban environments, particularly densely-populated urban environments with high skyscrapers, do not allow their inhabitants easy visual access to the surrounding environment (Dasen & Mishra 2010, Palmer 2015). Thus, the use of geographic features for orientation may not be useful since speakers do not always have access to those features. Regardless, these studies suggest that even within language groups, spatial language and cognition may vary simply by population density and proximity to a city center.

3.7.4.3 Age, education, and language shift

Finally, spatial reference strategies seem to be shifting in large part due to language endangerment, globalization, and modernization. Because spatial language is culturally and environmentally-rooted and often below the threshold of speaker awareness, it can easily become endangered. Thus, in many languages, the foundations of spatial cognition may be changing. As a result, many communities seem to have a split in use of spatial language that corresponds with age and education level. Older and less-educated speakers tend to use more traditional patterns of FoR use and spatial orientation strategies while younger and more educated speakers tend to use more European-influenced strategies, leading to age-motivated spatial language variation.

Jürg Wassmann (1994) observes that Yupno (yut; Trans-New Guinea; PNG) speakers conceptualize the layout of their valley differently depending on whether they have received a Western education. Those who have gone to school use more right angles than those who have not. Similarly, spatio-temporal mapping in Tongan and Tahitian seems to be changing due to influence from English and French. In Tahitian, there has been a shift in the spatio-temporal mapping of muri ‘behind’ as the future, a well-entrenched, culturally-rooted meaning, to the European-influenced meaning of muri ‘behind’ as the past (Raapoto 2005). Further, space-time mapping in Tongan is shifting because of English influence (Beller et al. 2005, Bender & Beller 2014).

Changes in conceptualization about space also result in changes in spatial language. Mawyer (2014) observes a state of disconnection in Mangerevan in which the younger generations may no longer inherit prior Mangerevan ways of talking about or conceiving their island spaces. In many languages—such as Gurindji (gue; Pama–Nyungan, Australia; Meakins 2011), Iwaidja (ibd; Iwaidjan, Australia Edmonds-Wathen 2013), and Mangareva (mrv; Austronesian, French Polynesia Mawyer 2014)—older speakers are more likely to use absolute FoR. The inter-generational changes appear to be motivated by language contact and the introduction of Western schooling and ideologies. As a result, diversity in linguistic representations of spatial and temporal concepts may potentially be decreasing across the region (Kape 2005), and absolute FoR systems appear to be more in danger than other types.
3.7.5 Discussion of sociotopography

The STM has proven to be a generative focus for research. It suggests that spatial orientation strategies do indeed result from the interaction of culture, landscape, and individual experience (Blust 1997). It has been supported by both detailed case studies of individual languages as well as broader quantitative studies of feature correspondence. Yet, further study on the various facets of the model are necessary.

While sociotopography has been the leading lens in contemporary spatial research, no study has concluded that a strong version of the Sociotopographic Model must exist. Pappas & Holton (2022) conclude a weak version may be true, and Schlossberg (2018) also offers counterevidence to a strong interpretation of the Sociotopographic Model. These conclusions may be reached for a variety of reasons. Perhaps the study simply does not delve deeply enough into the cultural factors that could potentially influence spatial language, as Pappas & Holton admit is a drawback to their study. A culture is complex, and even an in-depth study would be hard-pressed to identify all of the cultural factors that might impact models of social space due to the fact that spatial orientation strategies can vary even at the individual level. This may suggest that perhaps the STM requires another layer. It is not simply culturally-mediated topography but rather culturally-mediated topography delivered through individual environmental experience that shapes spatial cognition and thus the use of spatial language. If this is the case, then Sociotopographic studies on larger groups than the individual will certainly only find weak support for the model.

Another possible explanation may be that, as the discussion in the first few sections of this chapter has thus far suggested, there are other factors beyond the geographic and the sociocultural—such as grammatical code, genetic affiliation, language contact, individual identity, language shift—that may have bearing on spatial language. The role of these other factors becomes evident in seeming exceptions to the model in which languages in similar environments might choose entirely different spatial orientation strategies. For instance, Tongan and CHamoru share all of the sociotopographic factors used in Pappas & Holton (2022). They have a distributed distribution and are spoken in diversified economies, in coastal Geographies, and in diversified terrain. However, CHamoru speakers make use of a cardinal system while Tongan speakers make use of land-sea geocentric orientation. This difference is thus unlikely to be motivated by any of the sociotopographic features in this study, suggesting instead that genetic affiliation, historical, language contact, or some other feature is motivating this variation. Similarly, the homogeneity in Oceanic spatial orientation systems may hint at inherited systems while the elevational systems of Near Oceania and East Nusantara may be the results of contact. This is further supported by significant areal patterns revealing shared features of spatial orientation among linguistically-related or geographically-near groups.

Regardless of these other potential factors, there is still evidence that sociotopographic features at both the community and individual level have bearing on spatial orientation, and more data exploring the nature of this relationship are warranted. Case studies from a broader range of languages and more quantitative studies that echo the methods of Pappas & Holton would benefit the study of the Sociotopographic Model.

3.8 Discussion

This chapter has introduced a variety of approaches or language-external lenses that researchers in the Pacific have adopted to study spatial language. Many researchers, particularly those with an anthropological background, have observed spatial language through a cultural lens. One notable result of this work has been the emergence of models of radiality in Oceania developed through observations that social structure and humans’ use of and interaction with an island landscape motivate the structure of spatial language. Other researchers have observed space through a multiplicity perspective in which an understanding of spatial systems arises from the very fact that many systems simultaneously exist
and are constantly navigated and mediated by speakers. Thus, researchers in this area recognize the complexity of spatial language, and several have focused explicitly on how these systems are managed in everyday communication. An identity perspective notes that space is inseparable from identity, which encompasses time, culture, and relationships. In other words, space is inseparable from a sense of place. This perspective has not been widely adopted by linguists but may prove to be a useful point of inquiry, especially as linguistics becomes a more inclusive field. In a historical perspective, researchers use the framework of the comparative method to reconstruct both spatial terminology and spatial orientation systems, researchers are able disentangle contemporary spatial systems by painting a picture of how they developed. A perspective that has yet to be widely adopted is the study of gesture in order to understand spatial language. Some research has been conducted on pointing and its relationship to temporal models and demonstratives, but additional research is needed. Finally, the sociotopographic perspective has been the most generative area of research of late with a plethora of recent papers exploring the topic. This model claims that socially-mediated topography motivates FoR choice and determines the structure of geocentric orientation. Its simple and systematic claims pertaining to complex ideas offers a reliable basis for hypothesis.

Certainly, this discussion is not comprehensive. By discussing these approaches and perspectives, I only hope to offer some examples that may help explain the Hawu data that are discussed later in this dissertation. There are various other possible approaches that researchers may adopt to understand how and why spatial language is manifested across languages, many of which have yet to be studied. For instance, as my modest engagement with intra-community variation in spatial language suggests, researchers may look at spatial language through various social or cultural factors such as age, gender, profession, in-group, urbanization, and social class, among others. Similarly, spatial language may be observed through the lenses of language contact or language shift and endangerment. These are just some other possible approaches, and researchers may identify other factors that interact with spatial language. However, it is more likely, that there are even more approaches and perspectives that have not yet been adopted or that have only marginally been adopted.

Similarly, while this discussion could potentially be expanded, it is also important to note that despite—or perhaps because of—the informative results of research in all of these areas, it is clear that no single approach can fully explain spatial language. Perhaps only when all approaches are considered simultaneously is it possible to obtain a comprehensive depiction of spatial language. Throughout the remainder of this dissertation, I explore spatial language in Hawu, with reference to several of these approaches. However, I focus on what the study of gesture can reveal. I do not suggest that gesture is the ideal lens through which to study language and space, nor do I suggest that gesture fully answers the as yet unanswered questions presented throughout this chapter. Rather, as with the other approaches discussed here, gesture offers another point of inquiry into space and language. It may present new answers to unsolved problems, and it may challenge the theories thus far discussed.
Chapter 4: The Hawu language, Data Collection, and Archiving

4.1 Introduction

In this chapter, I introduce the Hawu language and people, and I describe the work I have conducted with the community. I explain the sources of the data that are used for the description of Hawu phonology, grammar, and spatial language in the following chapter. I discuss how primary data were collected, processed, and archived. Finally, I provide information about the use and presentation of these data throughout the remainder of this dissertation.

4.2 Hawu

Hawu is a Central Malayo-Polynesian language that is most-closely related to Dhao of Rote island and the languages of Sumba. Due to an early endeavor by S.J. Esser into subgrouping the languages of Indonesia, Hawu was long considered to be part of a Bima-Sumba subgroup of Central Malayo-Polynesian, a group that was comprised of languages in Sumbawa, Flores, Sumba, and Sabu (Esser 1938). However, Blust (2008) demonstrates that there is not enough clear evidence of exclusively-shared innovations among these languages to comfortably support a Bima-Sumba subgroup. Rather, he proposes a Sumba-Hawu subgroup—comprised of Hawu, Dhao (nfa), Anakalangu (nfg), Wanukaka (wnk), Kambera (xbr), Mamboru (mvw), Lamboya (lmy), Wewewa (wew), and Kodi-Gaura (kod)—for which, there is ample evidence of exclusively-shared innovations.

An alternative but now rejected hypothesis posited that Hawu and Dhao were non-Austronesian languages largely due to the low number of Austronesian cognates and the distinctly non-Austronesian syntactic patterns in the two languages (Capell 1975). Capell noted that though the languages did not closely resemble their Austronesian neighbors, they also did not resemble the nearby non-Austronesian Alor-Timor languages, so he classified them as unrelated non-Austronesian languages. Because a sufficient number of Austronesian cognates have now been identified, Hawu and Dhao are now classified as Austronesian. However, Capell’s hypothesis highlights a significant feature of Hawu. Many aspects of its syntax and discourse structure resemble non-Austronesian languages rather than Austronesian ones. Thus, contact with non-Austronesian languages seems likely, but, especially since no non-Austronesian languages are spoken on Sabu or the neighboring islands of Rote and Sumba, the nature of this contact must still be researched.

Dhao was initially considered to be a dialect of Hawu (Jonker 1903, Fox 1977) due to the high percentage of shared vocabulary between the two languages; a few lexical items with varying degrees of difference are shown in Table 4.1. However, recent study has revealed little mutual intelligibility. Grimes (2010) reports that there is very little contact between speakers of the languages, and the few Hawu speakers he has found who have interacted with Dhao speakers cannot understand Dhao, and vice versa. This is likely due to the fact that beyond phonology and lexicon, the two languages show extensive differences, particularly
### 4.2.1 On names and nomenclature

Hawu has been named several times by several different stakeholders. Over the centuries throughout which Hawu appears in texts, the language and the island have been designated as Hawu, Havu, Hawoe, Savu, Sawu, Sabu, Sawoe. In part, the issues in naming are due to recent sound changes within the language that have complicated the labels given in past publications. Since the first writings, Hawu /s/ has shifted to /h/. However, until Blust (2008) and Grimes (2010), publications continued to use the spelling Savu to refer to the language. Variation between v and w are due to pronunciation variation among speakers. There are also spelling conventions that vary based on the native language of the interested party. The earliest work by Dutch linguists used the spelling Sawoe, a reflection of Dutch spelling conventions. In the Indonesian era, the oe changed to u, but the initial s prevailed. Throughout this work, the language will be referred to as Hawu, reflecting local pronunciation and spelling conventions. The island will be referred to as Sabu, as the name that Indonesians—both Hawu and non-Hawu—use to refer to the geographic and political region of Indonesia.

### 4.2.2 People, Environment, and History

The Hawu language is spoken on the Sabu islands, which lie in the southern Sabu sea halfway between Rote and Sumba. The archipelago is comprised of three islands: Sabu, Rajjua, and Raidana. Only Sabu and Raijua are inhabited. Most of the population of Hawu speakers live on Sabu, the largest island which has an area of approximately 379.9 km². Raijua, is the next-largest island, of 36km² located just west of Sabu. The islands are located on a subduction zone where the Eurasian and the Indo-Australian plates meet, and the latter is moving under the former, forcing the islands to rise about 1mm a year (Vorkink & Harris 2004). The Sabu islands, though formed by volcanic activity, are no longer volcanically active. The land is characterized by rolling hills and sloping valleys. The highest point on the island is 366 meters. The Sabu islands have a wet season and a dry season. The wet season lasts only a few months, from November to March, while the dry season, fueled by dry winds from the south, prevails throughout the rest of the year. The climate has shaped the lifestyle of the people. The Sabu landscape is filled with terraced slopes. For the few months in which there is enough rainfall to farm, these serve to grow peanuts, water spinach, mung beans, rice, and corn. In the dry season, they lay brown and unusable, except the rice fields in the valleys near Seba that use reservoirs to sustain their crops year-round.

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<table>
<thead>
<tr>
<th>Dhao form</th>
<th>Dhao meaning</th>
<th>Hawu form</th>
<th>Hawu meaning</th>
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<tbody>
<tr>
<td>aʄu</td>
<td>'tree, wood'</td>
<td>aʄu</td>
<td>'tree, wood'</td>
</tr>
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<td>ama</td>
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<td>'father (classifier), father'</td>
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<td>'root (of plant)'</td>
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<td>are</td>
<td>'rice (on stalk)'</td>
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<td>əfjì</td>
<td>'one'</td>
<td>əhi</td>
<td>'one'</td>
</tr>
<tr>
<td>subha</td>
<td>'swear on an oath'</td>
<td>hupa</td>
<td>'swear on an oath'</td>
</tr>
</tbody>
</table>

Table 4.1: Selected shared lexical items between Hawu and Dhao
(after Grimes 2010)

in lexical paradigms and grammatical features. Many of the differences that can be observed in the syntax is a result of Dhao speakers’ intense contact with speakers of Rote (also spoken on Timor) and Kupang Malay (Fox 1987).

---
Rice has only been introduced as a staple food in the past few decades. Before rice, the Hawu people subsisted on mung beans, known in Hawu as terae, a legume common to Southeast Asia. Despite their dependence on terae, the Hawu people have earned the regional designation as the “non-eating people” because of how little they eat during the dry season (Fox 1977). Their other food staple is palm wine, harvested from the lontar palm. It can be drunk as is or distilled into a liquor called hopi in Hawu. It can also be cooked into a syrupy sugar called donahu which can be either dried into sugar crystals, distilled into a liquor, or fermented even longer into a vinegar. The harvesting of the palm wine generally sustains farmers nutritionally and financially (when traded for cash) during the dry season.

Modern Hawu culture is characterized by the simultaneous and passionate maintenance of traditional ways and the adoption of new cultural influences. Today, most Hawu people are Christian, though, despite centuries of contact with Europeans, Christianity did not take hold until the 20th century. The ancestral religion, called jingi tiu—jingi thought to derive from Portuguese genti ‘pagan’ and tiu from deo ‘god’—even today has a strong cultural hold (Duggan & Hägerdal 2018). Though most jingi tiu people are elderly, the younger community members still learn the jingi tiu traditions out of respect for the older members. For instance, when a jingi tiu person passes away, there is a seven-day ceremony that includes a complex series of rituals for honoring the body, burying it, and then honoring the person’s life. Community members must learn where the body should be placed, how to treat it, how to dance the Ledo dance, and how to host the ceremonies throughout the week (see LP1-061). Most of these tasks are physically demanding and can therefore only be carried out by the younger generations. Further, the jingi tiu ways determine clan structure, genealogical relevance, land division, and other cultural constructs (Duggan & Hägerdal 2018). This strong sense of tradition co-exists with recent and dramatic lifestyle changes in Sabu. As trade with other Indonesian islands increases, people have access to food and home goods that were previously unavailable on Sabu. In the last five years, inhabitants have been introduced to cell phones, electricity— which is now in every home—paved roads, and free modern health services. In addition, Sabu has become very well-connected with nearby islands. While slow ferries have existed for decades and still exist at a very affordable price, there are now several speed boats a week, which can reach neighboring islands in about 4–6 hours, and one flight a day going to Sumba, Ende, and Kupang. The introduction of extreme lifestyle changes has been met with varying degrees of enthusiasm and skepticism, but young people in particular have been receptive of the opportunity to connect to a global population.

### 4.2.3 Linguistic ecology

Hawu is spoken by roughly 110,000 speakers as reported in 1997, but it is estimated that about 30% of speakers live outside of the Sabu Regency (Simons & Fennig 2019). Many expatriates live in Kupang, Flores, and Sumba. Despite a relatively large speaker population, the Endangered Languages Project lists the language as “threatened” or “vulnerable.” Because of social and political pressure, many Hawu speakers only speak to their children in Kupang Malay. This phenomenon is occurring particularly quickly in the town of Seba, the largest and most diverse town in the archipelago. Even those who speak Hawu, except for very few, usually older village members, are bilingual in Kupang Malay. Speaking the lingua franca is an essential skill due to the complex dialectal situation on Sabu island in which five quite distinct dialects are spoken. These dialects are called: Meb’a (Seba), Dimu, Liae, Mehara, and Raijua. While the Meb’a and Dimu dialects are quite similar, the Liae and Mehara dialects are phonologically and intonationally distinct. Raijua, spoken on the island of Raijua, is the most-divergent dialect with different phonemes and lexical items. Examples of a few words in each dialect are exhibited in Table 4.2. As a result of dialectal differences such as these and a growing population of non-Hawu speaking migrants, many people choose to speak Kupang Malay as a lingua franca.

All children minimally attend primary school, which is taught in Indonesian. In the villages, children generally only speak Hawu until attending school, so they are first exposed to Indonesian around the age
of five. As such, the younger population also speaks Indonesian fluently. Students also compulsorily learn English in school, so all younger people have some exposure to English, but very few can speak it at all. Nevertheless, it has become cool to use English on social media, so its usage is continually growing.

Because of this high degree of multilingualism, Malay loanwords for very common words are entering into Hawu among speakers of all ages. Some examples include terima kasih ‘thank you,’ bisa ‘to be able,’ musta ‘must,’ keluarga ‘family’. Even older speakers, most of which grew up monolingual in Hawu, extensively use these loanwords. This is occurring despite a widespread and deep pride of history, culture, and language.

### 4.3 Data sources

In the following chapters, I make use of both primary data and secondary data. Primary data were collected by myself, Naomi, and Leonardo between 2019 and 2022. Secondary data may be categorized into two sources: published data and archival data. Published data include journal articles, books, and conference papers published on Hawu. Archival data were deposited by two researchers: Alan Walker (Walker 2015) and Yanti (Yanti 2018). In the following section, I describe these data sources and how they are used in this dissertation.

#### 4.3.1 Primary data collection and the Hawu Documentation Project

Primary data were collected over the course of two and a half years between 2019 and 2022 through what I call the Hawu Documentation Project (HDP) which was funded by the U.S. National Science Foundation (NSF) and the Bilinski Foundation. I began working with the Hawu language community in 2018 during a language documentation training workshop in Kupang hosted by The University of Hawai’i, Universiteit Leiden, Universitas Kristen Artha Wacana, and the Language Documentation Training Center. At this time, I met two Hawu speakers: Naomi Thomas Mare and Jacklin Bunga. Throughout the following year, I built these relationships and became familiar with the Hawu language and culture.

I returned to Indonesia in 2019 for a two-month field trip to Sabu island. During this period, I traveled to Sabu and worked closely with Naomi and another Hawu speaker named Leonardo Lede Lay. Both are Hawu speakers in their 20s, and they were both trained in basic language documentation techniques previous to the onset of our work in 2019. As a result, they took an active and largely independent role in the documentation process. In 2020 I received a grant from the National Science Foundation to return to Sabu for four months in 2020 and 2021. However, because of travel restrictions due to the ongoing global pandemic, I was forced to cancel those plans. Instead, I redirected the funds to support Naomi and Leonardo as they conducted documentation work in my absence. They set up recording sessions, collected data, and transcribed and translated recordings in ELAN. They then sent data to me in order to

<table>
<thead>
<tr>
<th>Mèb’a</th>
<th>Dimu</th>
<th>Liae</th>
<th>Mehara</th>
<th>Raijua</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>yaa</td>
<td>j’aa</td>
<td>yaa</td>
<td>j’a</td>
<td>ja, o</td>
<td>1SG</td>
</tr>
<tr>
<td>j’i</td>
<td>j’ii</td>
<td>j’i</td>
<td>j’ii</td>
<td>jii</td>
<td>1PL.EXCL</td>
</tr>
<tr>
<td>ri</td>
<td>ro</td>
<td>ri</td>
<td>ri</td>
<td>li</td>
<td>‘by’</td>
</tr>
<tr>
<td>do</td>
<td>do</td>
<td>do</td>
<td>do</td>
<td>ro</td>
<td>‘which’</td>
</tr>
<tr>
<td>hiamu</td>
<td>ihiammu</td>
<td>hiammu</td>
<td>hiemmu</td>
<td>la’i</td>
<td>‘spouse’</td>
</tr>
<tr>
<td>terae</td>
<td>terae</td>
<td>terae</td>
<td>terae</td>
<td>terae</td>
<td>‘mung bean’</td>
</tr>
</tbody>
</table>

Table 4.2: A lexical comparison across five Hawu dialects: Mèb’a, Dimu, Liae, Mehara, and Raijua
be annotated, translated into English, and archived. We began this work in November 2020, and it is still continuing.

Data in the HDP corpus derive mostly from the Seba-speaking region of Sabu. Villages from which data were collected are shown in Figure 4.1. Villages where the Seba dialect is spoken include: Seba, Tulaika, Raedewa, Ledeana, Ledekapaka, Depe, Titinalede, and Raimud’e. Villages where the Mehara dialect was collected include Molie and Teriwu. Although all speakers lived in one of the villages in Figure 4.1, some grew up in other areas of Sabu and are representative of the Dimu and Liae dialects. A total of 45 speakers shared their voices. They were both male and female, and they ranged in age from 19 to 87. While all had grown up in Sabu speaking Hawu, they had varying degrees of bilingualism and education. All speakers were fluent minimally in Hawu and Kupang Malay, the local Malay variety. Younger speakers grew up speaking both languages rather simultaneously while older speakers learned Kupang Malay later in life. Most had also been introduced to Indonesian in grade school. In terms of education, older speakers had maximally completed grade school, though a few were uneducated. Many, younger people, like their parents and grandparents had only completed grade school while a few had their bachelor’s degree from a university in Kupang. Most speakers, young and old, were farmers, a reflection of the Hawu population, but some were government workers, construction workers, weavers, housewives, and businessmen.

Figure 4.1: Villages from which data were collected in Sabu

The HDP corpus contains three primary types of data: natural speech, elicitation, and task completion. Natural speech data, which include several different genres, make up the vast majority of the corpus. The majority of the natural speech data are narratives; these may be traditional Hawu narratives or stories about events, daily activities, trips, or the speaker’s life. Another large portion of the natural speech data is comprised of interview-style conversations. In recordings of this genre, either Leonardo or Naomi ask an older Hawu speaker about some aspect of Hawu culture or about events in their lives. While these conversations are somewhat formulaic, they still provide valuable interactional data in a setting in which a less-knowledgeable speaker learns from a more-knowledgeable one. We have not yet found any speakers
who are willing to be recorded having a natural conversation.

Natural speech data are biased towards middle-aged and elderly speakers. Of a total of 45 recorded speakers, 36 of them fit into this demographic. Because of recent cultural change, older members of the community are seen as knowledge-keepers of more traditional Hawu culture. Younger speakers view them as the ones who have the expertise and experience to share cultural knowledge. However, the corpus does contain some narratives told by younger speakers in their 20s, 30s, and 40s. The corpus is also biased towards men. Some women were willing to share their knowledge and stories, but women tended to be more timid at the idea of being recorded. In total 35 men were recorded and just 8 women. This bias towards male speakers may also be a result of the primary role that Leonardo played in finding speakers. In future documentation, we hope to target more women. This is particularly pertinent because while both men and women shared narratives, there is a difference in the kind of cultural content that men and women discussed. Women tended to prefer talking about about weaving—a traditionally female activity—and their daily activities farming and taking care of their children. Men tended to prefer talking about collecting palm wine—a traditionally male activity—and about other cultural domains such as farming, building houses, and funeral and wedding traditions. As such, we hope to established a more balanced representation of male and female cultural experiences.

Elicitation data consist of direct translations of Indonesian sentences into Hawu and speakers’ acceptability judgements of those translations. Most data collected by other researchers are elicitation data, so Naomi, Leonardo, and I were more interested in recording natural speech. As a result, elicitation data make up a very small part of the HDP corpus, and only Naomi and Leonardo engaged in elicitation sessions. These sessions were meant to elucidate murky patterns in natural speech and give us a better understanding of speakers’ perceptions of the language. The resulting sessions thus provide a baseline for comparison with natural speech. Some elicitation also occurred over WhatsApp, which was our primary means of communication when I was not in Sabu. All results of elicitation—both recorded and over text—have been copied into a single, typed document of elicitation notes that has been archived along with the rest of the data in Kaipuleohone.

Finally, speakers completed several tasks that have been designed to target specific aspects of spatial language. These include the “Man and Tree” task for frames of reference (Levinson et al. 1992), the “Topological Relations Toolkit” for topological relations (Bowerman & Pederson 1992), “Time in Space” which outlines spatial metaphor in temporal expression (Boroditsky et al. 2008), and “Route Description Elicitation” which elicits direction-giving interactions (Wilkins 1992). Several speakers also completed a phonological elicitation task where they responded to a randomized list of words presented as a Powerpoint presentation. In this task they looked at pictures of common objects in Sabu that were oriented to the left or right of the computer screen, and they stated the pre-determined sentence “___ is on the right/left.” This elicitation task was meant to capture each critical word in a sentence, leading to a controlled yet relatively natural pronunciation of the word for phonological analysis. Speakers who were willing to participate in these tasks were speakers under 30, and they were mostly male. Naomi was the only female to participate. As a result, the data from these tasks are representative of the younger population of Hawu speakers.

All data were collected using a stereo H4N Zoom microphone at a sampling rate of 44.1kHz. In 2019, speakers also wore lapel microphones, which resulted in two .wav files per recording: one that clearly captured the speaker’s voice with little outside noise, and one that captured more of the environment. Most of the data were recorded with a Canon HD video camcorder.

4.3.2 Alan Walker’s grammar and archive

Alan Walker conducted documentation work on Hawu for nine months in 1975–1976 for his dissertation at the Australia National University (Walker 1980). This work was largely completed with Hawu speakers living in Kupang although Walker conducted a two-week field trip to Sabu in the summer of 1975. In total,
he collected 13 hours of recordings which include wordlists, elicitation, and narratives. Walker worked most closely with consultants that represented the Mehara and Seba dialects, but he did collect data on all five Hawu dialects and wrote a sketch grammar of the language that acknowledges this diverse corpus (Walker 1980(diss.), 1982(published)).

This sketch grammar has been an invaluable resource to me for information on both the Hawu language and the history of research on Hawu. Foreign researchers have been documenting Hawu since 1838 (Francis 1838). Walker has an intimate understanding of this research history, and I make extensive use of his analyses of others’ work. Part of the reason for this is that Walker had increased access to these texts. Most are in Dutch, a language I do not read, and though Google Translate has allowed limited me to access these earlier works, the language barrier has undoubtedly kept me from fully interacting with and understanding them. Further, some work on Hawu was never published, and I was not able to obtain these works. In particular, Johann Jonker wrote a grammar and wordlist of Hawu (Jonker m.s.) in the late 1800s with a Hawu speaker who was living in Makassar at the same time that he was living there. I have not been able to obtain these works or a few of the older publications on Hawu, so I rely on Walker’s interpretations of them.

Walker’s data are archived with open-access with PARADISEC (Walker 2015). This data primarily consist of images of handwritten fieldnotes and audio recordings of elicitation sessions and narratives. A thesis by Vaughan (2016, 2020) provides a useful annotation of Walker’s collection that makes it much more accessible to the public, and I relied heavily on Vaughan’s work as I navigated the collection.

4.3.3 Yanti collection

In the summer of 2018 Leonardo, Jacklin Bunga, and Marielle Butters conducted documentation on Hawu (Yanti 2018). This work was took place over a month as part of a language documentation training workshop hosted by the University of Delaware. The collection is archived with open-access with PARADISEC and contains audio recordings of wordlists, elicitation, and narratives. There are also a few video recordings of interviews in which speakers share cultural knowledge.

My relationship with this data is much more intimate than with Walker’s because I worked with Leonardo to transcribe some outstanding recordings from the workshop. The HDP team has also adopted many of the transcription and annotation methods that Leonardo cultivated during this workshop. Therefore, the work has been largely transcribed using the same methods as the primary data collected through the HDP. I repeatedly reference several of their recordings throughout my discussion of Hawu.

4.3.4 Geneviève Duggan’s anthropological work

Geneviève Duggan is an anthropologist who has worked with the Hawu people since 1994. She has largely centered her research on the production of and culture around Hawu textiles (Duggan 2010, 2015). After working with the Hawu people for nearly three decades, she has a deep understanding of the Hawu language, especially in how it relates to culture and and society. Her works show an unmatched understanding of Hawu culture and history, and I reference these works extensively. In particular, her co-authored book on Sabu history has been an invaluable resource for my own research (Duggan & Hägerdal 2018). It provides detailed clan genealogies and describes the movement of people around the island, notable historical events, religious practices, and much more. These works and my personal discussions with Duggan have been crucial in helping me understand the cultural context around the language.
4.4 Data Transcription

As much of the data as possible, given the available time, were transcribed using the Hawu orthography that has been adopted in past publications on Hawu and the ongoing Bible translation. The orthography used by Hawu speakers in everyday communication is quite variable, so after extensive discussion, Naomi and Leonardo agreed that we should continue the standard that was set by other researchers (see §4.7.1 for more information). All data were given a time-aligned transcription in ELAN (Sloetjes & Wittenburg 2008). Separate annotation tiers were created for each speaker in the recording and included the following information: transcription, transcription with discourse marking, morpheme-by-morpheme glossing, free Indonesian translation, free English translation (based on Indonesian translation), free English translation (based on discourse transcription), and additional notes about the utterance (Himmelmann 2018). There were further tiers dedicated to gesture annotation and analysis which will be addressed in detail in Chapter 6. A typical ELAN file can be observed in Figure 4.2.

Naomi and Leonardo segmented speech, transcribed it, and translated it into Indonesian. The discourse transcription tier differs from the regular transcription tier because basic discourse transcription based on conventions described in Du Bois et al. (1992). There is a tokenized word tier, and then three translation tiers. The first contains the Indonesian free translation and the second the English free translation which is based on the Indonesian translation. The final translation tier is aligned with the intonation units demarcated on the discourse transcription tier and contains a more literal translation of the Hawu speech.

Naomi and Leonardo segmented speech, transcribed it, and translated it into Indonesian. The discourse transcription tier differs from the regular transcription tier because basic discourse transcription conventions were adopted (Du Bois et al. 1992). We marked non-linguistic vocalizations such a laughter and coughing, and we also indicated large intakes of breath. Segmentation boundaries surround intonation
units (IU), and punctuation indicates the type of IU based on the criteria outlined by Du Bois et al. (1992: 100). Commas are used to mark continuing intonations. These were usually identifiable through a contour ending in an even or slightly raised pitch, and often the final vowel of the final word of the intonation unit was elongated. Question marks indicate intonation units of appeal. In such IUs, the intonation raises at the end of the unit, and the speaker is seeking some sort of validation or response from the listener. These types of IUs are rare in Hawu, and they tend to only occur after confirmational tags, such as to which means ‘right?’. Finally, the period marks IUs which indicate finality. No sense of continuation is encoded in the intonation. Such IUs in Hawu have falling intonation. The final vowel is not elongated but rather, often truncated. Speakers’ voices also tend to become breathy and quieter at the end of final IUs. While aspects of discourse analysis methodologies have been adopted in data transcription, they are meant to be guiding tools rather than frameworks for annotation and analysis.

When I was in Sabu, Naomi and I translated the data from Indonesian to English together which allowed us to discuss aspects of the Hawu speech as we worked, but during the pandemic, the English translation is my own work. I created two different English translation tiers. One is a direct translation from the Indonesian translation. This is the translation that we use for subtitling and other public sharing of the data. The second tier contains a more literal translation of the Hawu. This is based on the Indonesian translation, my own knowledge of the Hawu language, and discussion over WhatsApp with Naomi and Leonardo.

4.5 Coding spatial deixis

The analysis of spatial deixis in the following chapter (§5.7, §5.8, and §5.9) is based on a corpus of 2,194 words which were coded for their semantic, grammatical, and gestural properties.

I initially explored spatial deixis by asking Naomi and Leonardo to complete a task based on Levinson (1999) which provides an overview of deixis and demonstratives and methods for eliciting them. While it was not possible to truly set up the tasks that are described in this document, I used this as inspiration to create a similar document. I illustrated various conversational situations between Naomi and Leonardo in which they needed to locate referents that were as small as a stone and as large as the sea. The referents varied based on their number, distance from different conversation participants, and visibility. I sent these documents to Naomi and Leonardo who filmed themselves reenacting many of the situations and indicating the referents using the appropriate deictic terms. Afterwards, we discussed why they chose certain terms. These manufactured situations allowed us to identify certain boundaries between terms which I then used to inform my analysis of the patterns observed in the natural speech of the HDP corpus.

Every instantiation of a demonstrative, deictic existential verb, and demonstrative adverb in the HDP corpus was added to a database where I coded them for semantic properties such as the distance, spread, plurality, visibility and speaker’s/addressee’s knowledge about the referent. I coded grammatical properties such as the word’s syntactic role within the clause and the utterance itself. I coded information about whether the referent had already been introduced to the discourse or not. I also coded temporal information, whether the demonstrative was used to refer to time and if so, whether it was the past, present or future. Finally, I coded gestural information which included whether a gesture occurred with the uttered deictic term and how the gesture related to the speech. I also coded the features of the gesture such as the hand shape, palm orientation, movement, location, arm extension and duration.

4.6 Data archiving and dissemination

All data have been archived in the Kaipuleohone Language Archive. In total 24.5 hours of audio and video data have been added to the Kaipuleohone Language Archive (https://scholarspace.manoa.hawaii. 102
4.7 Presentation of data throughout the dissertation

In the following sections, I provide information about how I present Hawu data throughout the remainder of this dissertation.

4.7.1 Orthography

The orthography used in this dissertation is based on that used in most publications on Hawu in the past few decades. This orthography has also been adopted by the team who is in the process of translating the Bible into Hawu. The orthographic symbols largely align with the IPA and the associated phonetic values, but they differ from the IPA in the following contexts.

- Glottal stop /ʔ/ is represented by an apostrophe ‘
- Implosive consonants are distinguished from their oral counterparts by a following apostrophe; /ɓ, ɗ, ʄ, ɠ/ are represented as b’, d’, j’, g’.
- Nasals /ɲ/ and /ŋ/ are represented as ny and ng respectively.
• Schwa /ə/ is written as an ‘e’ with a grave accent è.

For more information, the Hawu consonant system is given in Table 5.1 and the Hawu vowel system is in Figure 5.1 in Chapter 5. Phonemes with orthographic symbols that differ from their phonetic one have the orthographic symbol contained in brackets < > adjacent to the phonetic symbol.

4.7.2 Glossing

Morpheme-by-morpheme glossing follows the standard glossing practices set by the Leipzig Glossing rules (https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf). Glossing conventions that are not in the Leipzig Glossing rules are based on the most-widespread glossing conventions for that item (e.g. ‘directional’ is commonly glossed as DIR), and they are clearly communicated in the abbreviation list at the beginning of the dissertation.

A standard gloss contains the following information:

(4.1) Orthographic representation (with morpheme boundaries, and IU marking)

Morphemic glossing

‘Free translation’ (‘literal or alternate translation or translation note’)

The following is a sample of how glossing is presented throughout the remainder of this dissertation:

(4.2) era do d’ue mumone do titu nga ami kaj’i, do titu pe-hed’apa.
exist STAT two man REL stand with staff REL stand REL REFLEXIVE-face

‘There are two men standing holding staffs that are standing facing each other.’

he-dèu mengad’a la b’o-d’ae he-dèu mengad’a la b’olou.
one-person face TRANS toward-south one-person face TRANS toward-north

‘One of them is facing towards the south (and) one is facing towards the north.’

(LP1-046; Speaker: Bastianto 00:02:04.290–00:02:09.850)

The first line of the example includes the Hawu transcription. Affixes are separated by dashes, and IUs are separated by punctuation. Because of the prevalence of one or two-word continuing IUs, in glossing there is only a carriage return after final and appeal IUs. Continuing IUs remain on the same line as the previous.

Beneath the Hawu representation is the interlinearized glossing of each word, and then there is a free English translation. In some examples there are ellipses ([...]) on all three lines of the glossing which mark instances where some of the speech is not included in the gloss. This might be a non-content vocalization, such as ‘umm’ or ‘hmm’, or I may have chosen not to include an IU if it unnecessarily complicated the example. Further, some free translations, such as the first line of the above example (4.2), include words in parentheses. These are words that are not included in speech but are necessary to understanding the example. Words and phrases are frequently dropped in Hawu natural speech and are implied only through discourse cues. In order for the reader to understand the examples and also in order to achieve more natural English glosses, I have included these elements in parentheses within the gloss, which is enclosed in single quotes. Following the free translation, a literal translation, alternate translation, or note may be enclosed in parenthesis.

The citation, which is right-aligned after the free translation, includes the name of the recording, the speaker’s first name, and the time points during which the utterance was spoken. With this information, all examples are fully traceable within the archived material.


Chapter 5: A Sketch Grammar of Hawu

5.1 Introduction

Drawing on the primary and secondary data sources described in Chapter 4, in this chapter, I present a sketch grammar of the Hawu language. Compared to other minority languages in Indonesia, Hawu might be considered relatively well documented. Several dictionaries, a grammar, and a handful of papers have been written on the language over the span of more than a century, and these publications serve as a useful reference for analysis of contemporary Hawu. However, much of this description is surface level, and my own analysis sometimes differs from these previous ones, either because of my academic training, differences in Hawu dialect, or, perhaps, changes in the language over time. In my analysis, I employ a basic descriptive framework (as in Dixon 2009a,b). This grammar sketch is meant solely to describe enough Hawu features so that the reader can understand the description of spatial language and the discussion of gesture in Chapter 6. The chapter has a particular focus on spatial language, and gesture data are incorporated when appropriate. Readers may also reference the grammar by Walker (1982) for more information or alternate analyses of Hawu.

5.2 Phonological properties of Hawu

Table 5.1 depicts the phoneme inventory of the Mèb’a dialect of Hawu. Hawu has a series of voiced and voiceless stops. It also has four nasals and four implosive stops that correspond to the bilabial, alveolar, palatal, and velar places of articulation. Hawu has one fricative (/h/), one tap/trill (/r/), one lateral (/l/), and one approximant (/w/). The phoneme /y/ is marked in gray as a marginal phoneme because in the primary dataset, it only occurs in one non-borrowed word: *yaa* `1sg. For the reader’s reference, when orthography differs from IPA, the orthographic symbol is marked in brackets (< >).

<table>
<thead>
<tr>
<th></th>
<th>Bilabial</th>
<th>Alveolar</th>
<th>Palatal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop</td>
<td>p  b</td>
<td>t  d</td>
<td>j</td>
<td>k  g</td>
<td>?&lt;’&gt;</td>
</tr>
<tr>
<td>Nasal</td>
<td>m  n</td>
<td>η&lt;ny&gt;</td>
<td>η&lt;ng&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implosive stop</td>
<td>ɓ&lt;b’&gt;</td>
<td>ɗ&lt;d’&gt;</td>
<td>ʄ&lt;j’&gt;</td>
<td>ɠ&lt;g’&gt;</td>
<td>h</td>
</tr>
<tr>
<td>Fricative</td>
<td>w  h</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tap/trill</td>
<td>r</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lateral</td>
<td>l</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approximant</td>
<td>w  y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hawu has a system of six vowels, typical of the languages of Indonesia. Schwa is restricted to the penultimate syllable. The other five vowels may occur in both ultimate and penultimate syllable. In prepenultimate syllables, the most common vowel to occur is /e/, but occasionally, syllables contain /o/.
Vowel length in Hawu is marginally phonemic. Long vowels only occur in ultimate syllables, and in a few words the long vowel is contrastive. Within the corpus, minimal pairs based on vowel length have only been identified between non-back vowels. Some minimal pairs include nga ‘with, and’ vs. ngaa ‘what’; melaa ‘gold, silver’ vs. mela ‘trace’; meaa ‘thick’ vs. mea ‘red’; pekee ‘neigh’ vs. peke ‘tell’; pari ‘some, when’ vs. pari ‘how long’; and mi ‘like, such as’ vs. mii ‘where’. Because of these marginal yet existing minimal pairs, long vowels are tentatively included in Figure 5.1, but they are in gray to indicate their potentially marginal status. Further acoustic and phonological analysis is necessary to better understand their classification within the vowel system.

5.2.0.1 Syllable structure and phonotactics

Hawu syllables never take a coda consonant, and there are no consonant clusters. The syllable structures that occur in Hawu include: V, VV, CV, and CVV. Examples of each syllable type are given in (5.1).

(5.1) V: ab’o ‘mourn’, ëki ‘tie’, ub’a ‘mouth’
VV: ai ‘fire, light’, ei ‘water, sarong’, ou ‘2sg’
CV: la ‘trans’, pa ‘loc’, ta ‘prt’, wala ‘different’
CVV: peræ ‘run’, d’ai ‘then’, hei ‘exist.dist’, j’èu ‘far’

Words may have one, two, three, four, or (extremely rarely) five syllables. Examples are given in (5.2). The vast majority of Hawu words have two syllables. Even the attested one syllable words tend have to the same weight as two syllable words; usually one syllable words have long vowels or CVV syllable structure. CV one-syllable words are only acceptable among commonly-used grammatical particles such as prepositions and verb particles. Words with three or more syllables, if not compound words, usually contain affixes. The words with three or more syllables that are included in (5.2) are only those that could not clearly be broken down into several morphemes, but this does not assume that future study may reveal their morphological complexity. Several of these longer words also include obsolete affixes. For instance, me- and ke- may have once been productive affixes at one point, but today they are simply part of the root of several lexical items, such as menyaha ‘ashamed’ and kewore ‘round’.

(5.2) One syllable: baa ‘tire’, hee ‘exist.dist.pl’, d’o ‘neg’, maa ‘fields’


Four syllables: ihilaka ‘accident’, kewihawa ‘to pay’, manumad’i ‘funeral worship’

Five syllables: mengulud’ara ‘happy’
5.2.0.2 Stress

Stress has been an engaged area of investigation among Indonesian languages due to its high degree of variability within the region (Goedemans & Zanten 2007). Several patterns have been observed: fixed word-level stress, fixed phrase level stress, and variable stress (e.g. Goedemans & van Zanten 2014, Maskikit-Essed & Gussenhoven 2016, McDonnell 2016). This variability at both the word and phrase level means that the study of stress requires intensive and targeted elicitation and analysis. As such, I only offer very preliminary observations, and notably, my assumption that there even is word-level stress should be questioned.

Hawu appears to have fixed word-level stress on the penultimate syllable, regardless of how many syllables are in the word. Stress is indicated by a slightly higher pitch and intensity which is very consistently on the penultimate vowel. Vowel length does not indicate stress; generally, the vowel in the ultimate syllable is longer than those in other syllables. Similarly, vowel length can be contrastive in ultimate syllable, and even long vowels do not appear to attract stress. Walker (1982: 7) expresses uncertainty as to whether this is contrastive length or contrastive stress, but because I consistently observe penultimate vowels to attract a higher pitch and intensity, I suggest this is contrastive vowel length. Even penultimate schwa—which is usually much shorter than other vowels—has a higher pitch and intensity than the ultimate-syllable vowel.

5.3 Morphology

Hawu is a largely isolating language. All words may occur in their base root form, and base forms may be fluid across word classes. What little morphology there is in Hawu is largely agglutinative with only occasional fusional properties (Comrie 1989). Hawu has a very strong preference for prefixes; no suffixes have been identified, but the final vowels of verb stems do alternate.

Affixes fall into two broad categories: nominal and verbal morphology. Nominal morphology includes several reduced-form nominal classifiers that occur as prefixes on nouns; this is discussed in §5.3.1. Verbal morphology includes a single, multifunctional prefix and verb stem voice alternations which are discussed in §5.3.2. As in other Austronesian languages (Blust 2013), reduplication is quite pervasive and productive in Hawu. Nouns, verbs, and other word classes may be reduplicated, so reduplication is discussed as its own entity in §5.3.3.

5.3.1 Nominal Morphology

Nouns are not marked for case, gender, or number. Some may, however, receive nominal morphology which includes reduced form nominal classifiers such as wo-, from wue ‘fruit’; ru-, from rèu ‘leaf’; and do- from dèu ‘person’. Examples of nouns with all of these affixes are shown in Table 5.2.

Wo- has several functions. Firstly, as the word’s etymology may suggest, it may indicate fruits, such as wo-kèli ‘lontar fruit’ which derives from kèli ‘lontar palm’. In fact the word for generic ‘fruit’ is simply wo-aj’u from aj’u ‘tree, wood’. Wo- can also indicate a small and often round part of a whole. For instance, wo-lahalae ‘grain of sand’ derives from lahala’e ‘expanse of sand, beach’ or wo-wadu ‘stone, pebble’ derives from wadu ‘rock’. Finally, wo- may serve a derivational function. It can affix to verbs or property words¹ to create nouns that are the physical manifestation of the base word. For instance, bèni describes something

¹Hawu, similar to other languages in the region (see e.g. Kambera; Klamer 1998), does not seem to have a defined class of adjectives. Words that describe properties of the noun tend to occur as stative verbs or within relative clauses after the noun. To encompass these words of various classes that are used to describe nouns, I use the term ‘property words’ (Haspelmath 2012, Van Lier 2017)
### Table 5.2: Hawu nominal morphology

<table>
<thead>
<tr>
<th>wo-</th>
<th>ru-</th>
<th>do-</th>
</tr>
</thead>
<tbody>
<tr>
<td>kēli  'wood from the lontar palm'</td>
<td>ru-kētu  'hair'</td>
<td>do-hawu  'hawu person'</td>
</tr>
<tr>
<td>aj’u  'tree, wood'</td>
<td>ru-aj’u  'leaf'</td>
<td>do-pedoa  'guest'</td>
</tr>
<tr>
<td>rai  'land, earth'</td>
<td>ru-ému  'roof'</td>
<td>do-pepua  'helper, servant'</td>
</tr>
<tr>
<td>wadu  'rock'</td>
<td>ru-kepoke  'spear handle'</td>
<td>do-d’ue  'pair of people'</td>
</tr>
<tr>
<td>lahalaæ  'expanse of sand, beach'</td>
<td>ru-wèngu  'thread'</td>
<td>do-oha  'owner'</td>
</tr>
<tr>
<td>kewore  'round'</td>
<td>ru-wèngu  'thread'</td>
<td></td>
</tr>
<tr>
<td>bèni  'female'</td>
<td>ru-èmu  'roof'</td>
<td></td>
</tr>
<tr>
<td>mone  'male'</td>
<td>ru-èmu  'roof'</td>
<td></td>
</tr>
<tr>
<td>b’uri  'cut'</td>
<td>ru-ub’a  'moustache'</td>
<td></td>
</tr>
<tr>
<td>dèlu  'egg'</td>
<td>ru-ub’a  'moustache'</td>
<td></td>
</tr>
<tr>
<td>ie  'good, kind'</td>
<td>ru-ub’a  'moustache'</td>
<td></td>
</tr>
<tr>
<td>wèngu  'cotton'</td>
<td>ru-ub’a  'moustache'</td>
<td></td>
</tr>
<tr>
<td>nyo  'coconut'</td>
<td>ru-ub’a  'moustache'</td>
<td></td>
</tr>
<tr>
<td>luji  'measure, evaluate'</td>
<td>ru-ub’a  'moustache'</td>
<td></td>
</tr>
</tbody>
</table>

The prefix wo- marks long, thin objects that tend to appear in bundles or groups such as wo-kēli  'lontar fruit', wo-aj’u  'fruit', wo-rai  'land', and wo-wadu  'stone, pebble'. While wo- tends to affix to nouns, it can also serve to derive nouns from non-nouns. For instance, with the prefix wo-, the verb luji  'measure evaluate' becomes wo-luji  'instrument for measuring (e.g. ruler)'.

The prefix ru- marks long, thin objects that tend to appear in bundles or groups such as ru-kētu  'hair', from kētu  'head'; ru-aj’u  'leaf' from aj’u  'wood'; or ru-wèngu  'yarn' from wèngu  'cotton'. While ru- tends to affix to nouns, it can also serve to derive nouns from non-nouns. For instance, with the prefix ru-, the verb luji  'measure evaluate' becomes ru-luji  'instrument for measuring (e.g. ruler)'.

Do- refers to people. It can prefix to verbs, nouns, or property words to create words that refer to types of people or their professions. For instance do-oha  'owner' derives from oha  'possess'. Do-hawu  'Hawu person' derives from the endonym hawu. Do-kehia  'poor person' derives from kehia  'poor'.

The final nominal affix is he- which indicates singularity; it affixes to nouns to create classifiers (see §5.4.2.1 for more information): he-ngi’u wawi  'one pig' from ngi’u  'tail', he-dèu mone  'one man' from dèu  'person'.

While these affixes frequently occur in speech, none appear to be productive.

#### 5.3.2 Verbal morphology

Verbs in Hawu often simply consist of a verb stem, but they may take morphology in certain contexts. There is no obligatory verbal morphology in Hawu, but there is an optional verbal prefix and verb stem
morphology. No suffixes have been thus far documented. Unlike many Austronesian languages in NTT, Hawu does not exhibit pronominal marking on the verb (Himmelmann 2005, Donohue 2007).

The sole verbal prefix in Hawu is pe- which may have a variety of functions depending on context. The construction èla..pe- marks perfective aspect. Èla is a free form that precedes the verb and sometimes verbal particles such as ta and ke. Pe- directly affixes to the verb. An example is shown in (5.3), but this construction will be discussed in more detail in §5.4.1.1.

(5.3) “ta èla ke muu pe-nga’a, we d’o ana yaa’.
prf prf prf 2pl prf-eat imp neg child sg
“Have you eaten or not, my children’?”

(LP1-105; Speaker:Paulina
00:02:03.350–00:02:04.930)

Without èla, the prefix pe- may act as a causative (5.4) or a reciprocal (5.5).

(5.4) raji wo-wadu loko ae?
hit clf-stone river many
‘We hit pebbles from streams’.
pe-wie ngara doi?
caus-give for money
‘(We) sell (them) for money’.

(LP1-028; Speaker:Dorkas
00:00:44.040–00:00:47.355)

(5.5) parii j’ii ne pe-hengèd’u?
when 1pl med.sg rec-kiss.nose
‘When do we kiss noses’?

(LP1-094; Speaker: Naomi)

Some Hawu transitive verbs exhibit a morphophonological change on the verb stem in which the final vowel becomes /e/ or /o/. Hawu does not have any codas; as such, all verbs end in one of five vowels /i, e, a, o, u/. Final /a/, /i/, or /o/ become /e/. Examples include: nga’a-nga’e ‘eat,’ hero’o-hero’e ‘carry on arm,’ and hib’i-hib’e ‘bite’. If the verb ends in /u/, the final vowel will instead lower to /o/ as in tèb’u-tèb’o ‘pierce, stab’. If the verb ends in /e/, there is no change to the verb stem, resulting in ambiguity as to whether the verb shows agreement or not, such as in kedake-kedake ‘hug.’

This alternation occurs in a certain subset of transitive verbs in ri-constructions, which will be further discussed in §5.5.2. Appendix 7.2 includes Tables 7.1 and 7.2 which contain those transitive verbs which have been identified to exhibit this alternation in this dataset and those which do not appear to show this alternation. There is no clear semantic difference between transitive verbs that alternate and transitive verbs that do not. There may be a slightly higher frequency of verbs that alternate in which the patient is strongly affected. Some examples include tèb’u-tèb’e ‘to stab,’ b’ui-b’ue ‘to spray,’ nyèka-nyèke ‘to reject,’ aki-ake ‘to tie’. Meanwhile, a higher proportion of verbs that do not show an alternation are those in which the patient is not highly affected, such as meg’i-g’i ‘to worry about something,’ rab’a ‘to help,’ heleo ‘to see,’ and henata ‘to greet’. However, there are a plethora of exceptions. Kelapu-kelapo ‘to sew’ alternates while ènyo ‘to weave’ does not. Similarly, ami-ame ‘to ask’ alternates while lita ‘to tell’ does not. As a result, the exact reason behind why these verbs alternate remains unclear.
5.3.3 Reduplication

As in most Austronesian languages (Blust 2013), Hawu speakers extensively make use of reduplication. Reduplication is not restricted to a particular word class; content words of any class can be reduplicated. Reduplication may be used to fulfill a variety of functions that are shown in Table 5.3. The three most common and productive functions of reduplication are to indicate number, a continuous action, or a repetitive action or occurrence. Reduplication may also be used to indicate a variety, such as *henga-henga* ‘many kinds’. Finally, reduplication may mark the superlative, such as *j’èu-j’èu* ‘very far’, or add emphasis to a command such as *mate-mate* ‘wait!’ or *kewaru-waru* ‘take it quickly’. There are finally some uses of reduplication that do not nicely fit into these categories, such as *hela’u-hela’u* ‘together’, *bohe-bohe* ‘smooth’, and *mii-mii* ‘anywhere’.

Full reduplication is most common in Hawu, regardless of morphological complexity or the number of syllables. Table 5.3 gives fully reduplicated words with one (mii-mii ‘anywhere’), two (bohe-bohe ‘smooth’), and three (keb’ali-keb’ali ‘to ask around’) syllables. Partial reduplication only occurs in morphologically complex words such as compound words or those with affixes. For instance, when a word with a prefix is reduplicated, sometimes only the stem occurs in the reduplicant as in *pekupeku* ‘to save’. *Pe-* is the causative prefix and is not included in the reduplicant. Usually, though, inclusion of the prefix is optional and, according to speakers’ judgements, does not change the meaning of the reduplicated word; *helod’o* ‘day’ which contains the singular prefix *he-* on *lod’o* ‘day’ can take the reduplicated forms *helod’o-helod’o* or *helod’o-helod’o*, both of which mean ‘everyday’.

Just as affixes are often reduplicated, verbs that reduplicate carry verb stem morphology into both
reduplicated forms. Thus, *penga’a-nga’a* ‘to feed someone or something’ is the plain form of the reduplicated verb while *penga’e-nga’e* is the ri-construction form. An example of each in context is given in (5.6) and (5.7).

(5.6)  
\[
\begin{align*}
  &\text{ta} \quad \text{do} \quad \text{wie} \quad \text{ma} \quad \text{pe-nga’a-nga’a} \quad \text{ri} \quad \text{èpu} \quad \text{d’e}.
  \\
  &\text{PRT} \quad \text{STAT} \quad \text{give} \quad \text{CIS} \quad \text{CAUS-eat.rep} \quad \text{AGT} \quad \text{grandmother} \quad \text{PROX.SG}
\end{align*}
\]

‘That old woman always feeds them’.

(LP1-105; Speaker: Paulina 00:03:42.960–00:03:44.440)

(5.7)  
\[
\begin{align*}
  &\text{hèku} \quad \text{do} \quad \text{era-era} \quad \text{ma} \quad \text{dèu} \quad \text{pe-ara} \quad \text{meo} \quad \text{pe-nga’e-nga’e} \quad \text{la} \quad \text{d’èmu},
  \\
  &\text{so} \quad \text{STAT} \quad \text{EXIST.CONT} \quad \text{CIS} \quad \text{PERSON} \quad \text{CAUS-take.care} \quad \text{cat} \quad \text{CAUS-eat.rep} \quad \text{TRANS} \quad \text{loft}
\end{align*}
\]

‘There is a person who raised a cat that fed it up in the attic’.

(LP1-113; Speaker: Hendrik 00:24:02.690–00:24:05.540)

There is just one example of a reduplicated compound word in the current dataset. *La’arui* ‘effort’ is a combination of *la’a* ‘to possess’ and *rui* ‘strong’. In the reduplicated form *la’a-la’arui* only the first stem is reduplicated. This may suggest that *la’arui* is not a compound word at all but rather two separate words. Alternatively, although affixation can be included in the reduplicated form, only one stem of a compound word can be reduplicated. Further examples are necessary to better understand compound word reduplication.

5.4 Word classes

As in many Austronesian languages, Hawu words are quite fluid; they can belong to a variety of word classes (Blust 2013). While words within closed classes are easier to distinguish, nouns and verbs are particularly interchangeable. Words may cross word class boundaries based on affixation and position within the sentence or phrase. This section will thus detail the morpho-syntactic parameters that can be used to classify a word within one word class or another. It will include the open word classes of nouns and verbs and the closed word classes of pronouns, prepositions, demonstratives, classifiers, and numerals. This section is split into two main sections: the verb phrase (§5.4.1) and the noun phrase (§5.4.2). Word classes are discussed based on their position and function within the phrase.

5.4.1 Verb Phrase

Verbs commonly occur clause-initially, but their position is flexible. Verbs are the only words to take TAM information (§5.4.1.1) and a variety of verbal particles. Particles such as *ta* *prt*,\(^2\) *do* *‘stat’*, *la* *‘trans’*, and *ma* *‘cis’* tend to precede the verb. Particles such as *ke* *‘prt’* and *we* *‘imp’* tend to follow the verb. Verbal negation, *d’o* *‘neg’*, also follows the verb.

The presence of TAM information or these particles are reliable factors to identify the verb in the clause. As an example, the word *nga*, which means ‘with’ or ‘and’ (5.8) can act as a verb when preceded by *ta* and followed by *ke* (5.9). In its verbal interpretation, it roughly means ‘do with’.

\(^2\)Because the functions of *ta* and *ke* have not yet been identified, they are glossed as generic verbal particles, ‘*prt’’, throughout this dissertation. See §5.4.1.3 for more information.
Word classes

(5.8) *nad’e, nga nad’e a’a ari.*
PROX.SG with PROX.SG older.sibling younger.sibling
'This one and this one are siblings'.

((Yanti 2018) 2018hvn_CON-006; Speaker: Margarita
00:05:30.825–00:05:32.448)

(5.9) *ta nga ke ne, ngapi d’e.*
PRT with PRT ART k.o.tool PROX.SG
'What is done with this ngapi'? 

((Yanti 2018) 2018hvn_CON-006; Speaker: Leonardo
00:01:38.638–00:01:39.598)

5.4.1.1 Tense and aspect

Hawu largely marks aspect and mood rather than tense. The following sections describe Hawu marking of continuous aspect, perfective aspect, and irrealsis mood. These are the aspects and mood that occur most frequently, but I do not attest that these are the only ones.

5.4.1.1.1 Nei do & pa d’ara: Continuous aspect

There are two possible ways to mark continuous aspect: *nei do* and *pa d’ara*. The first is demonstrated in (5.10). The speaker is talking about her son and his efforts to help pay for school. To indicate that he is in the process of earning money for school, *nei do* precedes the verb *usahaan* ‘try’.

(5.10) *nei do, usaha lema noo kale murinamad’a, ta ma’i hekola noo,*
CONT try also 3SG look.for lifestyle PRT pay school 3SG
'He is also trying to make money to pay for his school'

(LP1-028; Speaker: Dorkas
00:02:51:760–00:02:56:075)

A less common way of expressing continuous aspect is through the phrase *pa d’ara* which literally means 'located in' or 'inside'. This is shown in (5.11). Similar to *nei do*, *pa d’ara* directly precedes the verb. In this example the reduplication of *pemanga* ‘play’ also indicates continuous action.

(5.11) *ta d’ai pa d’ara pemanga-pemanga ne naiki he.*
PRT then LOC in play.CONT ART child PROX.PL
'The children were in the middle of playing'.

(LP1-105; Speaker: Paulina
00:00:43.462–00:00:47.655)

3Usaha is a Malay borrowing meaning 'try, attempt'.
As described in §5.3.3, continuous aspect can also be indicated by reduplication of the verb. In (5.12), both j’èga ‘work’ and menènu ‘weave’ are reduplicated to indicate that the agent is in the process of weaving the belt.

(5.12) j’èga-j’èga ri dèu d’e, ta menènu-nènu na, b’èla do tao dari wake.

work.cont agt person prox.sg prf weave.cont rel weaving rel make cord belt

‘This person continues to work. (He) is weaving the cloth that will make the belt’.

(LP1-114; Speaker: Ruben
00:02:43.090–00:02:44.680)

5.4.1.1.2. Èla...pe: perfective aspect

Reference to a completed event is indicated by èla pe-. Èla is a free form that precedes the verb while pe- is affixed to the verb. A typical example of èla...pe- is shown in (5.13).

(5.13) do èla pe-d’ote ma ke oha dèu ne.

stat prf prf-eat cis prf crocodile person art

‘He had already eaten the crocodile’.

(LP1-107; Speaker: Jonathan
00:11:02.867–00:11:04.489)

The terms èla and pe- nearly always co-occur, although pe- can sometimes be dropped, leaving just èla to mark perfective aspect, shown in (5.14). Èla is never dropped, possibly because pe- has causative and reciprocal functions when it occurs without èla.

(5.14) èla d’enge ri noo hari-hari.

prf finish agt 3sg all.pl

‘He already finished everything’.

(LP1-109; Speaker: Hendrik
00:00:48.370–00:00:49.400)

Particles such as ke, ta, and ma can intervene between èla and the verb (whether or not pe- occurs) as shown in (5.15) and (5.16). However, this seems to be more common when pe- is not affixed to the verb.

(5.15) hèku ne nad’e, èla ke pe-peke ri a’a?

so det prox.sg prf prf-tell agt older.brother

‘So you have already talked about this’.

(LP1-061; Speaker: Leonardo
00:09:16.994–00:09:20.930)

(5.16) do èla ke ma ta hilu ta ej’i.

stat prf prf cis prf wear.cloth prf rain

‘We are already redeemed’. (lit: We already wear the cloth. It rains’.)

(LP1-041; Speaker: Paulina
00:12:09.194–00:12:10.876)
Quite commonly, even NPs can occur between èla and the verb, (5.17 & 5.18).

(5.17) ta èla ke muu pe-ngà’a we ad’o ana yaa
     PRT PRF PR 2SG PRF-eat OR NEG child 1SG
   'Have you already eaten, my children’?

(LP1-105; Speaker: Paulina
  00:02:03.350–00:02:04.930)

(5.18) ta do èla ke naiki hed’e ta nga’a.
     PRT STAT PRF PRT child PROX.PL.KN PRT eat
   'The children had already eaten’.

(LP1-105; Speaker: Paulina
  00:01:56.391–00:01:57.691)

5.4.1.1.3. Nèb’o: irrealis

The word nèb’o marks irrealis mode. It is used when the speaker wants to make no claims as to whether an event truly took place. Commonly, nèb’o is used to mark actions that are expected to take place in the future (5.19) or to mark the conditional (5.20).

(5.19) mata we muu ki moko nèb’.o.
     wait IMP 2PL if finish FUT
   'Just wait until it’s finished’. (lit. ‘You wait if it finishes’).

(LP1-109; Speaker: Hendrik
  00:22:43:451–00:22:45:290)

(5.20) made ma ou nèb’o ri naa.
     dead CIS 2SG FUT ri 3PL
   'You could be in danger of them’.

(LP1-109; Speaker: Hendrik
  00:07:23:721–00:07:25:230)

The use of nèb’o is not restricted to events that may or may not happen in the future. It can also be used to refer to past events. Two such examples are given in (5.21) and (5.22). In both, the speaker is talking about events in the past, and he is establishing a situation that must be true in order for the following information to be true.

(5.21) pa Wa nèb’o pa Waga.
     LOC W. IRR LOC W.
   'If (I would be) in Sumba, (I was) in Waga’. (‘When I was in Sumba, I lived in Waga’).

(LP1-157: Speaker: Ridolof
  00:02:39.588–00:02:40.629)

(5.22) ki donahu nèb’o, do harus ta j’ore pa, kab’a do mi-hed’e.
     if sugar IRR STAT MUST PRT eat.sugar LOC K.O.bowl REL like-PROX.PL.KN
   'If there is sugar, it must be eaten in a bowl that’s like this’. (‘If there is sugar, (we) have to eat it in a bowl like this’.)
Nèb’o occurs after the verb, but nearly anything can intervene between the verb and nèb’o. In many instances, the patient, agent (5.19), or both can intervene (5.20). In some cases, a verb is not even necessary; the utterance in (5.21) does not contain a verb, and nèb’o instead follows a prepositional phrase.

5.4.1.2 Particles ma & la

Particles *ma* and *la* are directionals. These particles tend to appear before the verb. They may denote a physical or deictic vector towards or away from the speaker. A physical vector is created by the movement indicated by the verb. For instance, in (5.23), the speaker uses both *ma* and *la*. The particle *ma* precedes the verb ègo 'take' to indicate that the speaker is bringing the boy toward him. Later, *la* precedes èta 'slice, collect palm wine'. Here, the use of *la* indicates that the speaker and the boy are moving away to do the work.

(5.23)  
```
(5.23) ta ma ègo noo j’e ri yaa ta la èta due ta pe-ngino ina noo
PRT CIS bring 3SG then AGT 1SG PRT TRANS slice palm.fruit PRT CAUS-drink mother 3SG
```

'I brought him with me to go collect palm wine and provide for his mother'.

A deictic vector can be created by the exchange of non-physical referents (5.24) or simply a “mental pathway” between the speaker and the referent (François 2003: 409). An example of a deictic vector is shown in (5.24). Here, the speaker is receiving assistance from the government. This assistance can come in a variety of forms, but most commonly, the speaker is entitled to some free sacks of rice each month. Although there is no physical movement between the government and the speaker, the speaker uses *ma* to indicate that the help is originating with the government and coming toward him.

(5.24)  
```
(5.24) era ma batua ri do pereda,
EXIST CIS help AGT person government
```

'There is help from the government officials'.

The particles *ma* and *la* are particularly important in contrasting the various directional meanings of ègu 'take'. *Ma ègu* means ‘bring’ (5.23) while *la ègu* means ‘take’ (5.25).

(5.25)  
```
(5.25) ta la ègo yaa ngati kota ri.
PRT TRANS bring 1SG SOURCE city AGT
```

'(They) arrived to take me from Kupang'.

Directionals are a semantic class of words that function to orient a referent on an axis. The axis may be denoted by either physical motion (if the object is in motion) or a deictic vector based on the position of the ego (if the object is stationary) (François 2003). Syntactically, the function of directionals varies across Oceanic languages from verbal modifiers in Mwotlap (François 2003) to affixes on motion verbs such as in Nañu (Lober & Boerger 2009).
5.4.1.3 Particles ke & ta

The function of the particles *ke* and *ta* is not entirely clear. These particles occur quite frequently, and in many instances, they seem to appear randomly and unexpectedly.

Capell (1975) suggests that *ta* is a particle that identifies that the immediately following morpheme is a verb. This is a possible interpretation, but similar to Walker (1982), I note that *ta* is not a requirement before verbs. There may also be intervening particles, such as directional information, between *ta* and the verb. The following example (5.26) exhibits all of these scenarios. In the first command, *kako ke we ana yaa yaa*, there is no *ta* before the verb. In the following three commands, *ta* occurs, but directional information occurs between *ta* and the verb.

(5.26) "kako ke we ana yaa e' mihane.

<table>
<thead>
<tr>
<th>go</th>
<th>PRT IMP child 1SG TAG say</th>
</tr>
</thead>
<tbody>
<tr>
<td>ta la èbe ko ne ai.</td>
<td>PRT TRANS take PRT ART fire</td>
</tr>
</tbody>
</table>

"Please go, my child,' she says'.

(5.27) *yaa ta nga'a terae*  

| 1SG PRT eat | mungbean |

'I eat mungbean'.

(5.28) *terae nga'e ri yaa*  

| mungbean eat | AGENT 1SG |

'I eat mungbean'.

(5.29) *terae ta nga'e ri yaa*  

| mungbean PRT eat | AGENT 1SG |

(5.30) *terae nani ta nga'e ri yaa*  

| mungbean DIST.SG PRT eat | AGENT 1SG |

The particle is further related to the definiteness of the patient in *ri*-constructions. Take, for instance, the following elicited examples. The first example, (5.27), demonstrates a plain construction clause that is subject-initial. The patient follows the verb, and *ta* is used before the verb. The following example, (5.28), demonstrates a patient voice example. The clause is patient-initial, the verb shows *ri*-construction morphology, and the agent follows the verb and the agent marker *ri*. *Ta* is unacceptable in this instance, as shown by (5.29). However, if the patient is definite, as indicated by an accompanying demonstrative, *ta* becomes acceptable (5.30).
Walker (1982) suggests that ta marks non-past events, meaning that it only precedes verbs of continuous, unfinished, or yet-to-be-initiated events. This view is shared by Lee & DeVore (1968) and Wijngaarden (1896). While this is a pattern in this dataset as well, there are exceptions. Ta can sometimes precede verbs that describe finished events. Often, in these cases, ta co-occurs with perfective èla pe-, as shown in (5.31), an excerpt from a folktale. The death of the two main characters is a finite and finished event, as marked by èla..pe-. However, if ta is solely a non-past marker, its occurrence in this utterance is unexplained. A second example of this same phenomenon is given in (5.32).

(5.31) èla ke ta pe-made.
PRF PRT PRT PRF-die
'They died'.
(LP1-124; Speaker: Data 00:02:31.230–00:02:3.260)

(5.32) kan do èla ta pe-uj'e ke ngine ne to.
TAG STAT PRF PRT PRF-tie PRT earlier ART TAG
'It’s already tied'.
(LP1-034; Speaker: Rihi 00:02:54.109–00:02:55.639)

These exceptions seem to support the analysis offered by Kern (1892), in which he suggests that ta could indicate a future action or that "someone or something has come into a certain state of affairs" (Walker 1982: 30). While this explanation is certainly possible, it suggests an extremely broad function for ta and begs the question as to whether ta has just one or several functions.

A second frequently-occurring but elusive verbal particle is ke. Similar to ta, ke can occur in a variety of locations and contexts. In some ways, ke seems to be somewhat the opposite of ta. While ta more commonly occurs with non-perfective events, ke more frequently occurs with non-irrealis events. Nowhere in the dataset does ke co-occur with nèb'o nor does it ever occur in imperative sentences.

Ke very commonly occurs in perfective clauses, and when it does, it must directly follow èla (5.33). This is the only context in which ke’s position in the clause must be fixed. However, ke is not required in every perfective clause (5.34).

(5.33) èla ke ina pe-b’ale ne kolo lii yaa
PRF PRT woman PRF-return DET top say 1SG
'You have responded to what I have said'.
(LP1-155; Speaker: Leonardo 00:11:52.852–00:11:56.832)

(5.34) èla pe-èke pa laa due ne,
PRF PRF-tie LOC trunk lontar ART
'After (it) is already tied to the trunk of the lontar palm…'
(LP1-033; Speaker: Rihi 00:01:10.499–00:01:11.860)

Walker reports that ke seems to add very little semantic information, and in some cases, this also seems to be the case in the HDP corpus. There are instances where the inclusion of ke is optional with
little change in meaning as shown in the elicited examples (5.35) and (5.36). The former is an example in which \textit{ke} is optional in a perfective sentence while the latter is an example in which \textit{ke} is optional in a sentence unmarked for aspect.

(5.35) \textit{roo èla (ke) pe-wêli buku wie ou.} \\
\textit{3PL PRF PRT PRF-buy book give 2SG} \\
‘They bought a book for you’. \\
(LP1-058; Speaker: Naomi)

(5.36) \textit{ta kedake (ke) yaa ri ina ama yaa.} \\
\textit{PRT hug PRT 1SG AGENT mother father 1SG} \\
‘My parents hug me’. \\
(LP1-058; Speaker: Naomi)

However, in some cases, \textit{ke} itself acts as a perfective marker. Take, for example, the elicited clause in (5.37). This sentence implies that the speaker has already fallen asleep and is still sleeping. There is no \textit{èla pe-} to mark perfective. Instead, perfective aspect is marked by the \textit{ke} following the verb. The particle \textit{ke} has the same function in (5.38)

(5.37) \textit{yaa luu ke.} \\
\textit{1SG asleep PRT} \\
‘I am already asleep’. (implying that the speaker has already fallen into a state of sleep) \\
(LP1-058; Speaker: Naomi)

(5.38) \textit{do lodo la wala ke dêu ne,} \\
\textit{STAT go TRANS different PRT person ART} \\
‘(He) had already gone with a different woman’. \\
(LP1-158; Speaker: Marten 00:05:02.398–00:05:04.881)

Although \textit{ke} must follow \textit{èla} in perfective clauses, its position is otherwise quite variable. In non-perfective clauses, however, \textit{ke} usually directly follows the verb and precedes a following NP regardless as to whether the clause is a plain or \textit{ri}-construction ((5.39) and (5.40)).

(5.39) \textit{pe-doa ke hari-hari a’ara} \\
\textit{CAUS-call PRT all.PL older.sibling younger.sibling} \\
‘(We) invite the entire family’. \\
(LP1-036 00:01:34.738–00:01:36.005)

(5.40) \textit{ta wèro ke ri j’ii.} \\
\textit{PRT spin PRT AGT 1PL.EXCL} \\
‘(It) is rolled by us’. \\
(LP1-039; Speaker: Paulina 00:03:02.785–00:03:04.078)

For these reasons, I come to the conclusion that disentangling the exact nature of \textit{ta} and \textit{ke} is beyond the scope of this study. Their functions remain unidentified in this dissertation, and they are glossed as generic particles, ‘PRT’.

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Word classes

Classifier | Category | Examples
---|---|---
dèu | humans | men, women, kings
ngi’u | animals | buffalo, squirrels, snakes
b’èla | sheets | cloth, paper
b’engu | small, long, thin items, used as tools | pencils, sticks, spoons, pens, knives
èta | long, thin items used for tying | string, rope
kepue | whole trees | trees, stumps
lää | large, long, thin items for support | tree trunks, poles, limbs (body), fingers, toes
kewudi | long, thin weapons | rifles, sticks
wae (sg), b’ue (pl) | small, round items | fruits, eggs, stones
humanmade items that enclose others | buildings, beams, pots
locations that can encompass other things | enclosures, the sea
units of time | weeks, years
g’uti | cloth | clothing, blankets
kedèli | certain types of food | meat, cake
lua | long, thin items that occur in groups | cotton, hair, palm leaf
winga | spices | salt, pepper
kejanga | large, long, thin parts of a tree | boards, branches

Table 5.4: Hawu numeral classifiers

5.4.2 Noun Phrase

Nouns are an open class of words that serve as heads of noun phrases which consist minimally of a noun as the head but may also optionally include articles, demonstratives, prepositions, question words, numerals, pronouns and classifiers. Nouns can be preceded by the article *ne* (see §5.7.3.5) and can be followed by demonstratives (see §5.7). They may also be preceded by prepositions (see §5.5.3) and classifiers (see §5.4.2.1). Nouns (and sometimes pronouns) are the only word class that can be classified, counted, or serve as the head of a relative clause. Nouns are negated by *ad’o* (see 5.6.6).

5.4.2.1 Numeral classifiers

When counted, nouns in Hawu may be preceded by a number of classifiers that describe the object based on various features including humanness, animacy, shape, use, material, edibility, and texture. Classifiers that have been thus far identified are shown in Table 5.4.

Classifiers may precede both singular and plural nouns. When preceding a singular noun, classifiers take the singular prefix *he-*, as shown in (5.41). When classifying a plural noun, classifiers occur directly after the number and before the noun (if present), as shown in (5.42) and (5.43).

(5.41) *Haru do tago ri, pihak momone, he-nga’u keb’ao.*
must STAT contribute AGT family man one-CLF buffalo

‘The man’s family’s contributes a buffalo’.

ne * nga’u keb’ao nad’e, keb’ao unu deo.*
ART name buffalo PROX.SG buffalo POSS God

‘The name of this buffalo is God’s buffalo.’
(5.42)  \textit{nara heo b’ue ade.}  
get nine CLF liver  
‘He got nine livers’.  

(LP1-056; Speaker: Noh  
00:09:10.322–00:09:11.741)

(5.43)  \textit{d’ue b’ue migu d’e jad’i ta heb’ala.}  
two CLF week PROX.SG become PRT finish  
‘It take two weeks to finish one (weaving)’  

((Yanti 2018) 2018hvn_CON-006; Speaker: Margarita  
00:03:08.140–00:03:09.580)

Often, classifiers occur in relative clauses after the noun. The utterance in (5.44) refers to three betel nut or \textit{keala}, but the phrase used is \textit{keala do têlu b’ue} or literally ‘betel nuts that are three pieces’. Speakers report no difference in meaning whether the classifier precedes the noun or follows in a relative clause.

(5.44)  \textit{ne keala do têlu b’ue do muri nahère.}  
ART betel.nut REL three CLF REL live MED.PL.UNK  
‘Three betel nuts grew’. (lit: ‘The betel nuts that are three pieces that have life’.)  

(LP1-067; Speaker: Albertina  
00:09.12.851–00:09:16.023)

Nouns are often dropped in speech, and sometimes the classifier is all that indicates the position and semantic content of a dropped noun. This is the case in (5.45) where the the speaker is explaining how much money he received for cutting down a tree to be used as wood. He never explicitly states what is worth five thousand rupiah; he is referring to a tree, but the word \textit{naaj’u ‘tree’} does not appear. Only the classifier, \textit{kepue}, is explicit. \textit{Kepue} is a classifier that can only refer to an entire tree or to a stump (wood that is still rooted in the ground). Because of this, although the speaker does not explicitly say the word for tree, the listener can clearly understand what is being sold, thus giving the addressee information about the nature of the referent.

(5.45)  \textit{lèmi nguru rupiah he-kepue.}  
five thousand rupiah one-CLF  
‘(I got) five thousand rupiah for one tree’.  

(LP1-057; Speaker: Noh  
00:12:17.080–00:12:18.397)

Sometimes the classifier can change the meaning of the noun . This is especially prominent with the word \textit{aj’u ‘wood’}. Depending on the classifier, this noun can refer to many different types of wood: an entire tree, a branch, a stump, a board, a log, so the classifier is all that distinguishes the different types. For instance, \textit{he-kejanga aj’u} refers to a branch. \textit{Kejanga} is a classifier that only classifies branches. \textit{He-kewudi aj’u} refers to a stick. \textit{Kewudi} classifies long, thin objects. \textit{He-laa aj’u} refers to a board or a pole (wood that has been manufactured into a long object to be used for building).

Usually, once the noun is established in discourse, it can later be dropped, as shown in example (5.46). The first clause explicitly introduces the referent \textit{wawi ‘pig’}. Note that in this case the classifier occurs after the noun. The following clause refers back to the referent, but because the referent is already established, the speaker does not include the full noun, only the number \textit{èna ‘six’} and the classifier \textit{ngi’u for animals} occur.
**Word classes**

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>yaa</em> 1sg</td>
<td><em>dii</em> 1PL.INCL</td>
</tr>
<tr>
<td><em>j’ii</em> 1PL.EXCL</td>
<td></td>
</tr>
<tr>
<td><em>ou</em> 2sg</td>
<td><em>muu</em> 2PL</td>
</tr>
<tr>
<td><em>noo</em> 3sg</td>
<td><em>roo</em> 3PL.NEAR</td>
</tr>
<tr>
<td><em>naa</em> 3PL.DIST</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.5: Hawu personal pronominal paradigm

(5.46) *era  wawi èna ng’u.*

'There are six pigs'.

(5.48) " *wo-a’a  *yaa"  mihane yaa.

"My brother," I said'.

(5.49) *takewure ke pa yaa,*

'He whispered to me,'
As is common among the languages of Indonesia, second person pronouns are only used in very familiar settings, with close friends or siblings. Options to more formally refer to the second person singular include *ina* for women, young or old; *ama* for men, young or old; *mama* for older women; *nenek* for elderly women, *bapa* for elderly men, *a’a* for men or women who are older but not by too much, and *ari* for men or women who are younger but not by too much. More formal alternatives to the second person plural, *muu*, include *ina ama* or *a’a ari*. The first refers to the gender of the listeners and may be the equivalent to ‘ladies and gentlemen’ while the second refers to the age of the listeners (older and younger).

As in many Austronesian languages (Blust 2013: 315), Hawu distinguishes inclusive and exclusive first-person plural pronouns. Inclusive *dii* includes the addressee in the group while exclusive *j’ii* excludes the addressee from the group. Inclusive *dii* is demonstrated in (5.50). The speaker is talking directly to the addressee as he tells the story of how people arrived in the world. He is referring to all of humanity, which includes both the speaker and the addressee, so he uses *dii*. In contrast, use of exclusive *j’ii* is shown in (5.51). The speaker, who is a weaver, is describing the weaving process to a man who does not weave. Therefore, she uses the exclusive *j’ii* to refer to all weavers but to exclude the addressee since he himself is not one.

(5.50) **dii** 1PL.INCL *dèu rai wawa*.

*1PL.INCL both earth*

*heee pa rai wawa do bêla lema.*

*prox.pl.ukn loc earth rel wide also*

*‘We are located in this vast world’.*

(5.51) **pe-dute nad’e, ri j’ii mihare**.

*caus-follow prox.sg agent 1PL.EXCL like.that*

*‘We follow this picture, like that’.*

A more unique aspect of Hawu’s pronominal system occurs among third person plural pronouns which distinguish personal distance from the referent. The third person plural distal pronoun, *naa*, refers to distant referents while the third person plural proximal pronoun, *roo*, refers to close referents. Personal distance as used here refers to several characteristics of the referent: its specificity, its animacy, or the relationship between speaker and referent. It does not refer to the referent’s physical distance from the speaker.

*Naa* may refer to a generic ‘they’ which references no one in particular. This is an example of a referent with low specificity. Examples are given in (5.52) and (5.53). In (5.52), the man speaks of a job he worked and the pay rate of the job. In this instance, the *naa* he refers to could be any person who decides to carry a sack; it refers to no one in particular. Similarly, (5.53) shows a very common utterance where speakers will say ‘that’s what they say’ or ‘that’s what they call it’. In this example, the speaker talks about a village called Eiwou village, and because he is talking to someone who is not familiar with this village, he explains...
it by saying *desa Eiwou ma ane naa* ‘what they call Eiwou village’. This ‘they’ is no one in particular, so the speaker uses *naa* rather than *roo*.

(5.52) *hengahu rupia, pa naa dëu do mëka hape karo hed’e.*

One hundred rupiah LOC 3PL.DIST person REL carry until sack NEAR.SPEAKER.PL

‘One hundred rupiah for those who carry a sack’.

(LP1-057; Speaker: Noh

(5.53) *b’èri rai d’e, ina e.*

tomorrow PROX.SG woman TAG

‘Tomorrow, my sister,’

*la, desa Eiwou ma ane, naa ari yaa.*

TRANS village E. CIS say 3PL.DIST younger.sibling 1SG

‘(We) will go to what they call Eiwou village’.

(LP1-095; Speaker: Leonardo

The 3PL *naa* may also be used to refer to deceased referents as in (5.54). Here, the speaker talks about his deceased siblings. Though they are closely related and at one point, he knew them quite well, he uses *naa* because they are no longer around.

(5.54) *made ke naa hari-hari.*

die PRT 3PL all

‘All of them have passed away’.

*hiha yaa ke.*

only 1SG PRT

‘I am still alive’.

(LP1-052; Speaker: Minggus
00:00:57.714–00:00:59.668)

Finally, *naa* may be used to distance a speaker from the referents even if they are physically close. Take, for example, the following two excerpts from a story in which the speaker is recounting events from a recent trip. The speaker’s car broke down, and as he tells the story, he refers to the mechanics as *roo*, shown in (5.55). However, whenever he quotes himself asking a friend for money to pay for the broken car, he changes to *naa* (5.56). This seems to be a tactic in order to distance himself from the people who are actually asking for the money. Asking for money is a sensitive topic, so by using *naa*, he wants to convey that he is in no way asking for this money.

(5.55) *d’e, keb’ale ri roo.*

PROX.SG reply AGT 3PL.NEAR

‘Then they asked,’

*“era muu nga doi we ad’o’’ mihane.*

EXIST 2PL with money IMP NEG

‘Do you have the money?’."
Word classes

(5.56)  
*ane yaa pa, ihianga yaa.*
say 1SG LOC friend 1SG
'I said to my friend,'
*"era nga ègu doi we ad’o ina.*
EXIST with bring money IMP NEG 2SG
"Did you bring money?"
*ne do ami doi naa’.*
ART CONT ask money 3PL.DIST
'They are asking for the money.'

5.4.2.3 Numerals and other quantifiers

Hawu has a base-ten numeral system. Notable numerals up to one million are shown in Table 5.6. As mentioned in §5.4.2.1, numerals most commonly precede nominal classifiers, regardless as to whether the referent noun is present. However, the inclusion of the classifier is not always necessary. Numerals and quantifiers may be the only element of the NP (5.57), or they can occur directly before the noun without a classifier (5.58).

(5.57)  
*èhi d’ue tèlu dèto ri, aj’u dahi d’e.*
one two three knock.down AGT wood sea PROX.SG
'One, two, three (crocodiles) were knocked down with the fishing rod'.

(5.58)  
*pili èhi b’ara*
choose one thing
'Choose one thing'.

Quantifiers—which provide information about the general number or amount of the referent—are given in Table 5.7. Quantifiers usually occur directly before the head noun (5.59).

(5.59)  
*pe-doa ke hari-hari.*
CAUS-say prt all.PL
'(We) invite all'
a’a ari.
older.sibling younger.sibling
'of them'.
<table>
<thead>
<tr>
<th>Hauv</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>èhi</td>
<td>one</td>
</tr>
<tr>
<td>d’ue</td>
<td>two</td>
</tr>
<tr>
<td>tèlu</td>
<td>three</td>
</tr>
<tr>
<td>èpa</td>
<td>four</td>
</tr>
<tr>
<td>lèmi</td>
<td>five</td>
</tr>
<tr>
<td>èna</td>
<td>six</td>
</tr>
<tr>
<td>pidu</td>
<td>seven</td>
</tr>
<tr>
<td>aru</td>
<td>eight</td>
</tr>
<tr>
<td>heo</td>
<td>nine</td>
</tr>
<tr>
<td>henguru</td>
<td>ten</td>
</tr>
<tr>
<td>henguru èhi</td>
<td>eleven</td>
</tr>
<tr>
<td>henguru due</td>
<td>twelve</td>
</tr>
<tr>
<td>henguru tèlu</td>
<td>thirteen</td>
</tr>
<tr>
<td>henguru èpa</td>
<td>fourteen</td>
</tr>
<tr>
<td>henguru lèmi</td>
<td>fifteen</td>
</tr>
<tr>
<td>henguru èna</td>
<td>sixteen</td>
</tr>
<tr>
<td>henguru pidu</td>
<td>seventeen</td>
</tr>
<tr>
<td>henguru aru</td>
<td>eighteen</td>
</tr>
<tr>
<td>henguru heo</td>
<td>nineteen</td>
</tr>
<tr>
<td>d’ue nguru</td>
<td>twenty</td>
</tr>
<tr>
<td>d’ue nguru èhi</td>
<td>twenty one</td>
</tr>
<tr>
<td>tèlu nguru</td>
<td>thirty</td>
</tr>
<tr>
<td>èpa nguru</td>
<td>forty</td>
</tr>
<tr>
<td>lèmi nguru</td>
<td>fifty</td>
</tr>
<tr>
<td>èna nguru</td>
<td>sixty</td>
</tr>
<tr>
<td>pidu nguru</td>
<td>seventy</td>
</tr>
<tr>
<td>aru nguru</td>
<td>eighty</td>
</tr>
<tr>
<td>heo nguru</td>
<td>ninety</td>
</tr>
<tr>
<td>hengahu</td>
<td>one hundred</td>
</tr>
<tr>
<td>d’ue ngahu</td>
<td>two hundred</td>
</tr>
<tr>
<td>tèlu ngahu</td>
<td>three hundred</td>
</tr>
<tr>
<td>èpa ngahu</td>
<td>four hundred</td>
</tr>
<tr>
<td>lèmi ngahu</td>
<td>five hundred</td>
</tr>
<tr>
<td>èna ngahu</td>
<td>six hundred</td>
</tr>
<tr>
<td>pidu ngahu</td>
<td>seven hundred</td>
</tr>
<tr>
<td>aru ngahu</td>
<td>eight hundred</td>
</tr>
<tr>
<td>heo ngahu</td>
<td>nine hundred</td>
</tr>
<tr>
<td>hetèba</td>
<td>one thousand</td>
</tr>
<tr>
<td>hejuta</td>
<td>one million</td>
</tr>
</tbody>
</table>

Table 5.6: Hauv numerals

However, they can also occur after the head noun and all of its property words (5.60).

(5.60) j’u’u make do made, had’è ri.
k.o.grass CIS PRT STAT dead some AGT
‘There is some dry grass’. (lit: ‘some grass that’s dead’)
Table 5.7: Hawu quantifiers

<table>
<thead>
<tr>
<th>Hawu word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>had’e</td>
<td>‘some, several’</td>
</tr>
<tr>
<td>hengaa-ngaa</td>
<td>‘many kinds’</td>
</tr>
<tr>
<td>hari</td>
<td>‘more’</td>
</tr>
<tr>
<td>hari-hari</td>
<td>‘all’</td>
</tr>
</tbody>
</table>

Table 5.8: Container quantifiers in Hawu

<table>
<thead>
<tr>
<th>Container quantifier</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>boto</td>
<td>‘a bottle of...’</td>
</tr>
<tr>
<td>jerege</td>
<td>‘a bottle of...’</td>
</tr>
<tr>
<td>èru</td>
<td>‘a pot of...’</td>
</tr>
<tr>
<td>hoke</td>
<td>‘a pod of...’</td>
</tr>
<tr>
<td>kab’a-huru</td>
<td>‘a spoonful of...’</td>
</tr>
<tr>
<td>hubi</td>
<td>‘a cluster of bananas’</td>
</tr>
<tr>
<td>jèpi</td>
<td>‘a hand of bananas’</td>
</tr>
<tr>
<td>j’ara</td>
<td>‘a row of string’</td>
</tr>
</tbody>
</table>

Nouns that can’t be counted or are often considered as a single mass are quantified based on the container holding them. Container quantifiers that have thus far been identified are given in Table 5.8. Container quantifiers precede the noun directly, and such nouns do not appear to take demonstratives. An example is shown in (5.61) in which the container èru ‘pot’ directly precedes the noun ngingu ei ‘drinking water’.

(5.61)  
\[ \begin{align*}  
\text{ta} & \overset{\text{PRT}}{\text{buka}},  
\overset{\text{PRT}}{\text{èru}} & \overset{\text{PRT}}{\text{nginu}} & \overset{\text{PRT}}{\text{e}i} & \overset{\text{PRT}}{\text{ke}},  
\overset{\text{PRT}}{\text{dèu}} & \overset{\text{LOC}}{\text{èmu}} \overset{\text{MAD}}{\text{made}}.  
\end{align*} \]

PRT open pot drink water PRT person LOC house dead

‘The people will open the pot of drinking water in that place of sorrow’.

As with classifiers, container counters may also be preceded by the affix he- which marks ‘one’ (5.62).

(5.62)  
\[ \begin{align*}  
\overset{\text{PRT}}{\text{he-jerege}} & \overset{\text{ART}}{\text{ne}} & \overset{\text{PROX.SG}}{\text{hogo}},  
\overset{\text{ART}}{\text{moke}} & \overset{\text{PROX.SG}}{\text{d’e}} & \overset{\text{PROX.SG}}{\text{pa}} & \overset{\text{PROX.SG}}{\text{d’e}}.  
\end{align*} \]

One-bottle ART cook palm.wine PROX.SG LOC PROX.SG

‘a bottle of this palm wine here’

5.4.2.4 Possession

There are three different strategies to express possession in Hawu: 1) postposed possessor, 2) postposed possessive relative clause, and 3) the use of an agent marker preceding the possessor.

In strategy 1, the possessor occurs directly after the possessed noun (5.63).
(5.63)  *ina ama, mubëni d’e.*
    mother father woman   PROX.SG
    'the woman’s parents’

(5.64)  *ta d’ute ke pa era b’è’i noo.*
    PRT pour PRT LOC location sleep 3SG
    '(The slave) pours it on his bed’.

In strategy 2, three possible possessive markers may be used: *oha* (5.65 & 5.66), *unu* (5.67 & 5.68), and *la’a* (5.69 & 5.70). In all instances, the possessed noun is followed by the possession marker which is then followed by the possessor.

(5.65)  *hèlè oha, kod’e.*
    plant POSS monkey
    'Monkey’s plants’

(5.66)  *peraba-raba nga’a oha wawi,*
    seize.rep food POSS pig
    '(He) always seizes the pig’s food’.

(5.67)  *ba oto unu j’ii.*
    tire car POSS 1PL.EXCL
    'the tire of our car’

(5.68)  *ei unu wawi d’e.*
    water POSS pig   PROX.SG
    'the pigs’ water’

(5.69)  *ba oto la’a j’ii.*
    tire car POSS 1PL.EXCL
    'the tire of our car’
5.5 Word order and diathesis

In the following sections I discuss the word order of Hawu clauses. Although word order within noun and verb phrases is relatively structured, the phrases themselves occur in a variety of orders within the clause. Word order is somewhat dependent on diathesis, so they are discussed together.

5.5.1 Intransitive clauses

Hawu intransitive clauses tend to be in VS word order. The verb and its verbal particles precede the agent, which is shown in the two examples below.\(^5\)

\(^5\)For ease of understanding, the verb is in boldface and underlined, the agent or subject is in boldface, and the patient is underlined.
5.5.2 Transitive clauses

Hawu has two transitive alternations: plain constructions and ri-constructions. In ri-constructions (5.75) the agent generally follows the verb, and the agent marker ri precedes the agent. In plain constructions (5.76), the agent more commonly precedes the verb, and there is no agent marker preceding the agent.

(5.75)  \[ \text{ta } \text{hengèd'u } \text{roo, ri yaa} \]
\[
\text{PRT kiss.nose 3PL.PROX AGT 1SG}
\]
'I kiss noses with them'.

(... Speaker: Naomi)

(5.76)  \[ \text{yaa } \text{ta } \text{hengèd'u } \text{roo} \]
\[
\text{1SG PRT kiss.nose 3PL.PROX}
\]
'I kiss noses with them'.

(... Speaker: Naomi)

Some verbs exhibit a verb stem alternation in ri-constructions. As discussed in section 5.3.2, this alternation occurs in the final vowel. The vowels /i/, /o/, and /a/ become /e/ while /u/ becomes /o/. Nga’a ‘eat’ is one such verb that alternates form in ri-constructions, and this is shown in examples (5.78) and (5.77). In (5.77), the verb nga’a ‘to eat’ occurs in its plain form. The agent Hae precedes the verb, and there is no agent marker preceding the agent. In (5.78), the verb has become nga’e, and the agent, Hae, follows the verb and is marked by ri. In this utterance, the patient, haj’o, precedes the verb.

(5.77)  \[ \text{Hae } \text{ta } \text{nga’e } \text{haj’o.} \]
\[
\text{H. PRT eat vegetable.}
\]
'Hae eats vegetables.'

(LP1-058; Speaker: Naomi)

Throughout this dissertation, I gloss verbs in both forms with a simple gloss of their meaning, so, for instance, both nga’a and nga’e are glossed simply as ‘eat’.
Word order and diathesis

(5.78)  
\[ \text{haj'o \ nga'e ri Hae.} \]

vegetable eat \ AGT H.

'Hae eats vegetables.'

(LP1-058; Speaker: Naomi)

An example of the \textit{nga'a}-\textit{nga'e} alternation in natural speech is shown in (5.79). The patient, \textit{ru-kehabe do mea ne} ‘the red leaves of the kehabe plant’ precedes the verb phrase \textit{ta hoge ta nga'e} in which both \textit{hogo} ‘cook’ and \textit{nga'a} ‘eat’ are in their e-final. The agent follows the verb phrase and is preceded by \textit{ri}.

(5.79)  
\[ \text{ru-kehabe do mea ne \ ... ta hoge ta nga'e.} \]

leaf-k.o.plant REL red ART ... PRT cook PRT eat

'Vee cook and eat the red leaves of the kehabe plant'.

(LP1-101; Speaker: Pelipus 00.05.05.480–00.05.11.86)

The agent marker is the most important indicator of a \textit{ri}-construction since not all verbs are marked for \textit{ri}-constructions and word order is very free in \textit{ri}-constructions. The following elicited examples (5.80, 5.81, and 5.82) show PVA, VAP, and VPA word order respectively. In (5.80) and (5.81), the e-final form of the verb \textit{nga'a} ‘eat’, \textit{nga'e}, may be observed, but because the verb \textit{kedake} ‘hug’ in (5.82) already ends in an /e/ in its unmarked form, it shows no clear alternation. The only indication of \textit{ri}-construction is that \textit{ri} precedes the agent.

(5.80)  
\[ \text{terae nga'e agt yaa.} \]

sorgum eat \ AGT 1SG

'I eat sorgum'.

(LP1-058; Speaker: Naomi)

(5.81)  
\[ \text{nga'e ri yaa terae nani.} \]

eat \ AGT 1SG sorgum DEM.

'I eat sorgum'.

(LP1-058; Speaker: Naomi)

(5.82)  
\[ \text{kedake ke yaa ri ou} \]

hug \ PRT 1SG AGT 2SG

'You hug me'.

(LP1-059; Speaker: Naomi)

Clausal elements are very often dropped in Hawu, so both the agent and patient may be dropped. The following is an example of a dropped patient in the \textit{ri}-construction (5.83).

(5.83)  
\[ \text{d'ai mi-hed'e, nga'e ri noo.} \]

then like-PROX.SG eat \ AGT 3SG

'Then it ate (the corn)'
When the agent is dropped in *ri*-constructions, there are two possibilities. Both the agent and agent marker *ri* can be dropped together (5.84). In such cases, the fact that it is a *ri*-construction is evident in the verb form.

(5.84) **hoge donahu.**

  *cook sugar*

  'The sugar is cooked (by us)'

(20190722_STORY-02_hvn; Speaker: Markus
00:02:28.680–00:02:31.990)

It is also possible for the agent to be dropped while the agent marker *ri* remains to mark the position of the non-overt agent. The following example (5.85) demonstrates this while also providing an example of a *ri*-construction without overt patient or agent. Note that *ri* follows the verb in the *ri*-construction, indicating where the agent would occur if overt.

(5.85) **ta nga’e ri.**

  *eat (by him)*

(LP1-109; Speaker: Hendrik
00:21:21:211–00:21:21.891)

In plain clauses, there is no marker preceding the agent, and the verb is unchanged. Word order in plain constructions is canonically AVP as Example (5.86) demonstrates. The subject, *yaa* '1sg', occurs before the verb, and the patient *ei mènyi* follows the verb.

(5.86) **yaa tuka pe-wie ei mènyi.**

  *sell water oil*

  'I sell oil'.

(LP1-158; Speaker: Marten
00:31:05.412–00:31:06.612)

However, in natural speech, this kind of construction occurs incredibly rarely. In most cases, the agent is dropped (5.87, 5.88), but the structure of a plain construction can still be indicated by the verb form and lack of agent marker, *ri*.

(5.87) **moko ta ègu, ... èpu Bèni Bèla Dìlu do na’dé nga ina noo.**

  *so bring grandmother B. B. D. with mother 3sg*

  'So (he) brings this Grandmother Bèni Bèla Dìlu and his mother to live together'.

(LP1-105; Speaker: Paulina
00:06:25.611–00:06:26.630)

(5.88) **d’ai, ma nginu kowi j’ii hela’u-hela’u.**

  *drink coffee 1pl.excl together.red*

  'So (we) drank our coffee together'.
The details of this system require more investigation. Previous researchers have labeled the Hawu system as an ergative one (Walker 1982, Grimes 2010). It might also be possible to analyze ri as a passive construction in which the agent is no longer a core argument and downgraded to an instrumental oblique. Finally, it remains possible that this system may exhibit traces of a symmetrical voice system, which has been observed among other languages in the region. Because the relationship between these two clause structures warrants further analysis in the future, I refrain from labeling the system.

5.5.3 Obliques

Verb stem alternation between plain and ri-constructions is the only marking on the verb. As a result, non-agent and non-patient thematic roles are introduced by a wide variety of prepositions. These are thus incorporated as obliques within the sentence. Prepositions always precede all elements of noun phrases and indicate their semantic role in the sentence. Table 5.9 displays the prepositions that have occurred in the HDP corpus.

<table>
<thead>
<tr>
<th>Preposition</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ri</td>
<td>‘instrumental’</td>
</tr>
<tr>
<td>pa</td>
<td>‘locative’</td>
</tr>
<tr>
<td>la</td>
<td>‘goal away from speaker’, ‘goal towards non-speaker’</td>
</tr>
<tr>
<td>ma</td>
<td>‘goal towards speaker’</td>
</tr>
<tr>
<td>(rai) (nga)ti</td>
<td>‘source’</td>
</tr>
<tr>
<td>wie</td>
<td>‘benefactive’</td>
</tr>
<tr>
<td>nga</td>
<td>‘comitative’</td>
</tr>
<tr>
<td>ngara</td>
<td>‘measure’</td>
</tr>
</tbody>
</table>

Table 5.9: Hawu prepositions

Although ri is usually an agent marker, it can also act as an instrumental preposition, indicating NPs that are used to accomplish a goal, as shown in (5.89). In this example the stone and the chalk are not agents but rather are tools that a person is using to write.

(5.89)  
\[ b’uke \text{ ri } \text{wowadu, ta } jad’i \text{ ma.} \]  
\[
\text{write INSTR CLF-stone PRT SO } \text{CIS} \\
\text{‘It can be written with a rock.} \\
\[ b’uke \text{ ri } \text{au, ta } jad’i \text{ ma.} \]  
\[
\text{write INSTR chalk PRT SO } \text{CIS} \\
\text{‘It can be written with chalk’.

The locative marker pa specifies the position or location of a physical object or action, as shown in (5.90) and (5.91), or it may specify the implied location of a non-physical referent 5.92. As an example of the latter, (5.92) is an instance where one person is giving another information. The information, although intangible, is located with the recipient, ina.
Word order and diathesis

(5.90)  do,  keb’ela do,  meng’ela pa èmu duae.
        STAT shine  STAT flash  LOC house king
        'The king’s house was extremely clean' (lit. 'It shone at the king’s house').
        (LP1-056; Speaker: Noh
        00:01:46.048–00:01:50.246)

(5.91)  era  pekaj’i boto pa ngidi ruj’ara ae ne.
        exist game  bottle LOC side  road  big ART
        'There was a bottle on the side of the road'.
        j’aga j’ii
        work 1PL.EXCL
        'We played (with it)'.
        (LP1-095; Speaker: Leonardo
        00:04:39.226–00:04:42.226)

(5.92)  la  pika pa ina d’e.
        TRANS tell  LOC mother PROX.SG
        '(The child) informs this mother.'
        (LP1-106; Speaker: Jonathan
        00:13:53.826–00:13:54.826)

The prepositions la 'translocative' and ma 'cislocative' have the same meaning as the synonymous verbal particles. They locate physical or non-physical referents via the delineation of a physical (5.93 & 5.94) or deictic (5.95 & 5.96) vector implying motion toward the speaker (ma) or away from the speaker (la). As stated in §5.4.1.2, a physical vector is created through physical movement while a deictic vector is an implied vector between the speaker and the referent (François 2003).

(5.93)  ta  ègo  ma èmu ke.
        PRT bring  CIS house PRT
        '(The palm wine) is brought to the house'.
        (LP1-034; Speaker: Rihi
        00:03:57.371–00:03:58.340)

(5.94)  ègo  la  kolo,
        bring TRANS top
        '(It) is taken to the top (of the tree)'.
        (LP1-034; Speaker: Rihi
        00:03:48.421–00:03:49.527)

(5.95)  frai  tj},  awe  ama èpu  j’ii,  tituju,  hape ma ngi’u  j’ii do  nad’e.
        SOURCE time father elder 1PL.EXCL stand until  CIS  self 1PL.EXCL REL PROX.SG
        'From the time of our ancestors, enduring until ourselves'.
        (LP1-026; Speaker: Pelipus
        00:03:13.108–00:03:16.545)
The preposition *(rai) (nga)*ti marks NP referents that are the source of an action or entity. Segments in parentheses may be optionally included, and from the available data there appears to be no motivation to use one form or another. It can be used in its long form, *(rai)* ngati, demonstrated in (5.97), but quite commonly, speakers employ one of the three shorter forms: ngati, shown in (5.98); *(rai)* ti, shown in (5.99); or *ti*, shown in (5.100). As example (5.99) demonstrates, this preposition can also be used in a temporal context with the meaning ‘since’.

(5.96) \*la* Menia *la* nii

\*TRANS M. \*TRANS DIST.SG

‘Menia over there’.

(LP1-0#; Speaker: Leonardo
00:03:30.090–00:02:31.101)

(5.97) ru-mu’u lara, *wale* *(rai)* ngati èmu, duae d’e,

leaf-banana yellow spread SOURCE house king PROX.SG

‘Yellow banana leaves were spread from the king’s castle’.

(LP1-056, Speaker: Noh
00:09:56.283–00:10:00.138)

(5.98) d’e d’ai ne b’ale ngati nii, nèb’o

PROX.SG then ART return SOURCE DIST.SG IRR

‘Then we return from there’.

(LP1-036
00:01:23.028–00:01:24.406)

(5.99) *(rai)* ti naiki do, peihiang a roo?

SOURCE child STAT CAUS-friend 3PL

‘They have been friends since childhood’.

(LP1-093; Speaker: Naomi
00:00:20.661–00:00:22.823)

(5.100) do-kehia d’e.

person-poor PROX.SG

‘This poor man’;

j’au d’o *ke* ti keraha.

far NEG PRT SOURCE wife

‘(He) was never far from his wife’.

(LP1-056, Speaker: Noh
00:16:11.007–00:16:14.411)

While *wie* is a verb meaning ‘to give’, it can also be a benefactive preposition. As a preposition, *wie* does not take any verbal particles, and it directly precedes a benefactive NP as shown in (5.101).

(5.101) tad’e, *ei* wie wawi do nga ngaka.

take water BEN pig REL with dog

‘(She) takes the water for the pigs that are with the dogs’.
The preposition *nga* ‘comitative’ indicates accompaniment. In the following example, the speaker is sitting with his interlocuter and introducing him to the camera.

(5.102)  
\[ \text{nee} \quad \text{ke} \quad \text{yaa} \quad \text{do} \quad \text{mejèd’i} \quad \text{nga} \quad \text{bapa} \quad \text{pa} \quad \text{d’e} \]  
\text{EXIST.PROX.SG}\text{ PRT}\text{ 1SG}\text{ STAT sit}\quad \text{COM}\text{ man}\text{ LOC}\text{ PROX.SG}  

‘Right now I am sitting with this man here.’

(LP1-157; Speaker: Leonardo  
00:00:09.893–00:00:11.879)

Finally, *ngara* indicates the referent that is gained through an exchange. In the following example (5.103), the speaker receives money in exchange for stones. They are thus introduced with the preposition *ngara*.

(5.103)  
\[ \text{raji} \quad \text{wowadu} \quad \text{loko} \quad \text{ae}? \]  
\text{hit}\quad \text{CLF-stone}\text{ river}\text{ water}  

‘We hit stones from the river’.

\[ \text{pe-wie} \quad \text{ngara} \quad \text{doi}? \]  
\text{CAUS-give}\text{ MEAS}\text{ money}  

‘(We) sell them for money’.

(LP1-028; Speaker: Dorkas  
00:00:44.040–00:00:47.355)

### 5.6 Clause types

This section will describe some different types of clauses in Hawu and the particles used in such clauses. Clauses discussed include stative clauses, imperative clauses, existential clauses, coordinated clauses, and relative clauses.

#### 5.6.1 Stative clauses

Stative clauses contain the particle *do* which always precedes the verb.

(5.104)  
\[ \text{rowi} \quad \text{do} \quad \text{rihi} \quad \text{mèngalud’ara} \quad \text{ke} \quad j’ii \quad \text{no’o}. \]  
\text{because}\text{ STAT}\text{ very happy}\text{ PRT}\text{ 1PL}  

‘Maybe we were very happy because’.

(LP1-095, Speaker: Leonardo  
00:02:29.700–00:02:32.491)

Statives may describe the appearance of an object, referring to features such as color, shape, and size.

(5.105)  
\[ \text{ne} \quad \text{nad’e} \quad \text{pa} \quad \text{do} \quad \text{mèdi} \quad \text{jad’i} \quad \text{ta} \quad \text{do} \quad \text{mèdi}. \]  
\text{ART}\text{ PROX.SG}\text{ LOC}\text{ STAT}\text{ black}\text{ so}\text{ PRT}\text{ STAT}\text{ black}  

‘This cooks in black dye and becomes black’.

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They may describe non-permanent states (5.106).

\[\begin{align*}
\text{(5.106) } & \text{do } b'ado \text{ pa } d'\text{'emu.} \\
& \text{STAT cage LOC loft} \\
& \text{‘(They were) caged in the loft’}. \\
\end{align*}\]

Even simply existing—evidenced by the verb *era* ‘exist’—warrants a stative in certain contexts.

\[\begin{align*}
\text{(5.107) } & \text{hab'u ne donahu, we ki do era donahu.} \\
& \text{eat.palm.sugar ART palm.sugar IMP if STAT exist palm.sugar} \\
& \text{‘They just ate palm sugar when there was palm sugar’}. \\
\end{align*}\]

### 5.6.2 Imperative clauses

In an elicitation context, imperative clauses do not drop the agent. They are largely distinguished by word order, and the presence of particle *we*. The verb occurs clause-initially, and *we* precedes the agent in plain clauses (5.108) or the agent-marker in *ri*-constructions, such as in (5.109).

\[\begin{align*}
\text{(5.108) } & \text{kako we ou.} \\
& \text{go IMP 2SG} \\
& \text{‘You go’}. \\
\end{align*}\]

\[\begin{align*}
\text{(5.109) } & \text{ègo we ri ou ne boto nad'e.} \\
& \text{take IMP AGENT 2SG ART bottle PROX.SG} \\
& \text{‘You take this bottle’}. \\
\end{align*}\]

In natural speech, there are also instances where *ou* is not dropped as the examples in (5.110) and (5.111) show. The former is a *ri*-construction that is uttered by a character in a folkstory. The latter is a plain clause also uttered by a character in a retelling of the Bible story Adam and Eve.

\[\begin{align*}
\text{(5.110) } & \text{had'i ta peino tèra we yaa ri ou.} \\
& \text{as.long.as PRT put true IMP 1SG AGT 2SG} \\
& \text{‘As long as you put it on me’}. \\
\end{align*}\]
Clause types

(5.111) *tapulara ta lii we ou, mi d’o b’ani nga ou.*  
however PRT say IMP 2SG like NEG evil  with 2SG  
‘But you must say it so that you don’t get scolded’.

(LP1-109; Speaker: Hendrik  
00:08:00:800–00:08:04:071)

However, in natural speech the agent can be dropped, so it is also possible to have imperatives without the agent in both plain (5.112) and *ri*-construction (5.113) utterances.

(5.112) *mai ko we ma èmu yaa,*  
come still WE CIS house 1SG  
‘Come to my house first’.

(LP1-111; Speaker: Ruben  
00:01:58:710–00:01:58:740)

(5.113) *ata la ked’anga we ri.*  
turn TRANS right IMP AGT  
‘Turn right’.

(LP1-054; Speaker: Dhanil  
00:02:46.028–00:02:47.455)

We may also be used in non-imperative contexts to add emphasis, translating roughly to ‘just, simply, only’. For instance, the common phrase *ad’o we ta èhi* meaning ‘more than one’ literally means ‘not just be one’. In this context, *we* marks a baseline that should be exceeded. Similarly (5.114) indicates the use of *we* where the speaker is emphasizing the simplicity of the marriage proposal. The latter example (5.115) indicates an emphasis on the short distance from the speaker’s location to the destination.

(5.114) *lii ne we ne nane*  
say ART IMP ART MED.SG  
‘We just say it’.

(LP1-047; Speaker: Pelipus  
00:03:29.370–00:03:31.980)

(5.115) *pa nahii d’ènge we ne ne’e.*  
LOC DIST.SG immediately IMP ART hmm  
‘(Monkey’s house) is just over there’.

(LP1-107; Speaker: Jonathan  
00:08:72.275–00:08:33.897)

5.6.3 Existential clauses

Existential clauses contain the existential verb *era* which can roughly be translated as ‘exist’ or ‘there is’. It precedes the agent-like argument and may occur as the entirety of the verb phrase (5.116). However, it commonly co-occurs with stative *do* (5.117), or one or all of the verb particles *ta* (5.119), *ke* (5.118), or *ma* (5.121).
(5.116) **era** tèra nangaka.
   EXIST true puppy
   ‘There are indeed puppies’.
   (LP1-123; Speaker: Data
   00:06:48.551–06:47:880)

(5.117) **ki do era** ne donahu.
   if STAT EXIST ART palm.sugar
   ‘If there is palm sugar
   (LP1-057; Speaker: Noh
   00:03:20.820–00:03:22.060)

(5.118) **era ke** dèu do liwa,
   EXIST PRT person REL pass
   ‘There were people passing by’.
   (LP1-095, Speaker: Leonardo
   00:04:33.446–00:04:34.804)

(5.119) **ta era, terae** ne murinamada j’ii?
   PRT EXIST mungbean ART lifestyle 1PL.EXCL
   ‘There are mung beans which we eat to live’.
   (LP1-026; Speaker: Pelipus
   00:04:51.281–00:04:54.254)

(5.120) **ta era ke** {meo ruba}.
   PRT EXIST PRT tiger
   ‘There is a tiger’.
   (LP1-138; Speaker: Malvinus
   00:12:02.210–00:12:03.850)

(5.121) **ta, era ma ke**, do dèu a’a pa d’e,
   PRT EXIST ma PRT ART REL person older.sibling LOC PROX.SG
   ‘There is her husband’.
   (LP1-095; Speaker: Leonardo
   00:08:20.216–00:08:23.410)

### 5.6.3.1 Negative existentials

There are several possible options to indicate that something does not exist: *pe’e d’o* (5.122 & 5.123), *pi’a d’o* (5.124), and *b’ule d’o* (5.125). The difference between these is unclear; additional research would be required to differentiate them.

As with *éra*, negative existentials tend to occur at the beginning of the clause.
(5.122) **pe’e d’o ke Luha?**
exist.neg neg prt L.
‘But Luha was not there’.

(LP1-093; Speaker: Naomi
00:04:59.201–00:05:01.634)

(5.123) **tèlu lod’o j’e kako.**
three day then go
‘Three days later (he) goes’.
**pe’e d’o.**
exist.neg neg
‘(His child) is not there’.

(LP1-107; Speaker: Jonathan
00:11:18.684–00:11:21.153)

(5.124) **pi’a d’o do hap’o hekola ina e.**
exist.neg neg rel fail school woman tag
‘None of my children have failed school’. (lit: ‘There are none that have failed school’.)

(LP1-034; Speaker: Dorkas
(00:02:35.413–00:02:47.027)

(5.125) **b’ule d’o ei nga’a.**
exist neg water food
‘There is no food or drink’.

(LP1-109; Speaker: Hendrik
00:01:22.591–00:01:23.461)

Negative existentials may also occasionally co-occur with verb particles. In the following example (5.126), **ta** precedes the negative existential. The ordering of the phrase elements is also inverse; **d’o** precedes **b’ule** which contrasts with (5.125).

(5.126) **ta d’o b’ule wie ri dèu.**
pRT neg exist give AGT person
‘You didn’t give me anything’.

(LP1-109; Speaker: Hendrik
00:23:11.910–00:23:12.710)

Negative existentials commonly occur after **ki(ri)** ‘if’ (5.127 & 5.128).

(5.127) **ki era do wèli pe-wie.**
if exist rel caus-give
‘If there (are people) who buy (the sugar), we sell it’.
**ki d’o pi’a dèu do wèli, nga’a.**
if neg exist.neg person rel buy eat
‘If there is no one that buys (it), we eat (it)’.
Clause types

(5.128) **ki d’o pe’e** yaa b’ule d’o nga hemanga rai d’e.

if NEG EXIST.NEG 1SG EXIST NEG with beauty land PROX.SG

‘If I wasn’t here, this island would not be as beautiful as it is’.

(LP1-113; Speaker: Hendrik
00:03:53.311–00:03:56.581)

The negation marker after pe’e and pi’a is extremely important since without it, both pe’e and pi’a are a means of asking ‘where?’ as demonstrated in (5.129) and (5.130).

(5.129) **pe’e ne duae nane.**

where ART king MED.SG

“‘Where is the king?’” mihane Bu

say woman

‘asks the woman’.

(LP1-138
00:28:00.654–00:28:01.910)

(5.130) **pi’a naiki he ri.**

where child PROX.PL AGT

‘Where are the children’?

(LP1-051; Speaker: Noh
00:15:04.451–00:15:05.895)

In contrast, b’ule without the negation marker is a rare alternative to the existential era ‘there is’.

(5.131) **ta wie, ta pe-b’agi d’ue nga pite ki, b’ule ta minamii.**

PRT give PRT CAUS-share two with P. if EXIST PRT how

‘If later it’s there, the money will be divided in two with Pite’.

(LP1-106; Speaker: Jonathan
00:09:30.686–00:09:34.486)

### 5.6.4 Reflexive clauses

Hawu employs two options for reflexive clauses. The vastly more common option is to use one or both of the terms: **ngi’u...miha** shown in (5.132). In the elicitation context, **ngi’u** and **miha** flank the reflexive pronoun. Thus, in (5.132), the idea of ‘himself’ is expressed with **ngi’u** and **miha** on either side of the 3sg pronoun **noo**.

(5.132) **Mèngi g’ète ngi’u noo miha.**

M. pinch REFL 3SG REFL

‘Mèngi pinches himself’.

(LP1-095; Speaker: Leonardo)
In natural speech, however, because nouns are so often dropped, both terms rarely occur with a noun and rather occur in succession as shown in (5.133).

(5.133)  
ad'o do henge  ngi’u miha.  

'He isn’t selfish’. (lit: ‘(He) does not just remember himself’.)

(LP1-093; Speaker: Naomi  
00:05:25.569–00.05.27.823)

More commonly, miha is not included at all. Speakers solely use ngi’u to refer to the self as shown in (5.134). In such instances, ngi’u still precedes the pronoun.

(5.134)  

j’e, la’arui roo hetenga made ta, pehelama ne  ngi’u roo?  
then effort  3PL half  die  PRT survive  ART  REFL  3PL  
‘Then they struggled to survive themselves’.

(LP1-093; Speaker: Naomi  
00:01:12.148–00.01.15.310)

Yet, sometimes it is possible to just use miha. In the following example (5.134), the full endonym for Sabu island is Rai Hawu Miha Ngara (Rai) literally meaning ‘land Hawu self named’ which generally translates to something along the lines of ‘the land named for the Hawu people themselves’. This same example also demonstrates another instance of ngi’u alone acting as a reflexive. Ng’i’u j’ii means ‘ourselves’.

(5.135)  
tima rowi  j’ii,  do, pa d’ara Rai Hawu Miha Ngara Rai do nad’e,  do nga’a  
often because 1PL.EXCL REL LOC in  land Hawu REFL name land REL PROX.SG REL eat  

j’ii.  
1PL.EXCL  
‘Often because we that live on this Sabu island, we eat (this)’

raitii, awe ama-èpu j’ii,  tituju hape ma  ngi’u j’ii do nad’e.  
SOURCE time ancestors 1PL.EXCL stand until CIS  REFL  1PL.EXCL REL PROX.SG  
‘since our ancestors until our ourselves’.

(LP1-026; Speaker: Pelipus  
00:03:06.417–00:03:19.318)

The second option to express the reflexive—werèni we—is only attested in elicitation. Thus, it does not seem to be commonly used, if at all, in natural speech. Nevertheless, speakers insist on its naturalness in the elicitation context.

(5.136)  
Mèngi ta  g’ete  werèni we.  
M. PRT pinch REFL  IMP  
‘Mèngi pinches himself’.

(LP1-094, Speaker: Leonardo)
5.6.5 Relative clauses

Relative clauses use the relative clause marker *do*. Walker (1982) reports that this particle derives from *dëu* ‘person,’ which is a relatively common derivation for relative clause markers (Kähler 1974). The relative clause marker is homophonous with the bound reduction of the person-marker prefix *do*- (see §5.3.1) as well as the stative marker *do*.

Walker (1982: 44) observes three primary qualities of relative clause phrases in Hawu that align with patterns in the current dataset. These include:

1. There is usually a head noun
2. There is usually a relative clause marker *do*
3. There is a postposed relative clause in which the NP that is co-referential with the head NP has been deleted

The relativized argument usually precedes *do* which introduces the relative clause. A simple example of a relativized S-argument may be observed in the following elicited examples (5.137). The relativized argument *dëu* ‘person’ is clause-initial, followed by the relative clause marker *do* which is then followed by the rest of the clause.

(5.137) *dëu* _do_ *kako d’ai ru-j’ara._

person REL go along CLF-road

‘The person that walks along the road...’

(Personal communication; Speaker: Naomi)

Agents (5.138), patients (5.139), and other types of NPs (5.140) may be relativized.

(5.138) _era_ *he-wue gaba?*_

exist one-CLF picture

‘There is a picture’

*do* _keto pa, didi._

REL hang LOC wall

‘that is hanging on the wall’

(LP1-049; Speaker: Naomi
00:07:24.940–00:07:29.480)

(5.139) *hudi we ne, do pe-dae ri yaa ina e._

little just ART REL CAUS-say AGT 1SG woman TAG

‘It’s just a little that I share with you’.

(LP1-028; Speaker: Dorkas
00:03:10.230–00:02:12.380)

(5.140) *ninga ke ne ei do, wie bëni a’a d’e._

what PRT ART sarong REL woman older.sibling PROX.SG

‘Which is the sarong that was given to the older sister’?

((Yanti 2018) 2018hvn_CON-006; Speaker: Leonardo
00:05:47.694–00:05:50.340)
Relativization is commonly used within a noun phrase to provide more information about the head noun. In such cases, _do_ may precede a deictic pronoun (5.141) or another qualifier (5.142).

(5.141) ne **duae do nad’e**, ta **pepu ke, ne naënu noo, la pe-doe, ne mone kehia do nad’e**.

‘This king asked his slave to call on this poor man’. (lit: ‘The king that is this one asked his slave to call on the poor man that is this one’.)

(LP1-056; Speaker: Noh 00:01:03.197–00:01:04.308)

(5.142) **ane dëu do d’ue dëu** he **ane Bëni, Dobo Dao nga, Bëni, Kaj’i Kabo ne,**

‘The two women Bëni Dobo Dao and Bëni Kaj’i Kabo said’. (lit: ‘Said the people, that were two people, Bëni Dobo Dao and Bëni Kaj’i Kabo’.)

(LP1-062; Speaker: Albertina 00:03:57.029–00:04:00.241)

5.6.6 Negation

Hawu has two different terms for negation: _ad’o_ negates nouns, _d’o_ negates verbs. _Ad’o_ tends to precede the noun that it is negating, as shown in (5.143) where _ad’o_ precedes _dëu_ ‘person’.

(5.143) **tapulara, ad’o dëu** he **ue lii we.**

‘But there was no person, only a voice...’

(LP1-093; Speaker: Naomi 00:03:21.729–00:03:23.850)

In contrast _d’o_ follows the verb that it negates as in (5.144) and (5.145).

(5.144) **Toi d’o ri j’ii ta do mehaka ne, ba oto d’e.**

‘We didn’t know that the tire was broken’.

(LP1-095; Speaker: Leonardo 00:04:58.469–00:05:00.757)

(5.145) **b’alu d’o rowi j’ii**

‘It is not forgotten because of us’.

(LP1-047; Speaker: Pelipus 00:06:12.637–00:06:13.372)

_Dae d’o ‘not yet’, negates an action that has yet to happen. There are few examples of the exact phrase _dae d’o_ in this dataset (5.146). Commonly, other words may intervene between the two terms (5.147)._
Clause types

(5.146) "j’è dae d’o j’è ou ri meo ta d’o, ma ta d’o abo" mihane.

then not.yet NEG then 2SG cat PRT NEG CIS PRT NEG capture say

"Surely the cat will get you," he says. (lit: "‘Then the cat is not yet here to find you' he says'.

(LP1-113; Speaker: Hendrik
00:04:22.251–00:04:26.351)

(5.147) bèni ke-èna dæ hudi ta d’o kéj’è.

woman PRT-six yet a-little PRT NEG take

‘The sixth princess goes a little further and is not yet taken’.

ta kéj’è.
PRT take

‘She is taken’.

(LP1-123; Speaker: Data
00:13:22.680–00:13:26.455)

It is also possible to express that a noun does ‘not yet’ exist with the phrase ad’o dæ. Words may intervene between ad’o and dæ. Both possibilities are shown in (5.148).

(5.148) Ad’o dæ.

NEG yet

‘Not yet’.

“ad’o ta pe-muri dæ”

NEG PRT CAUS-live yet

“‘They are not yet living,’”

ane muri dii.
say God 1PL.INCL

‘says our God’.

(LP1-041; Speaker: Tukahae
00:09:36.684–00:09:41.451)

A more in-depth study of negation can be found in Butters (2021).

5.6.7 Coordination

Speakers of Hawu have several ways in which they can coordinate events. In this section, I discuss just three of these possibilities: disjunctive, adversative, and cumulative coordination. Each of these types of coordination are largely achieved through parataxis or the juxtaposition of two near-identical clauses. Conjunctions are available as well, though they are largely used by younger speakers of Hawu.

5.6.7.1 Disjunctive coordination

Disjunctive coordination at the clause level is usually achieved via parataxis (5.149 & 5.150). Two identical or near-identical clauses are juxtaposed which emphasizes the disjunctive relationship between them. Note that in both (5.149) and (5.150), only one word changes between the clauses. In (5.149), this is the part of the meat that was eaten. In (5.150), this is the type of ship taken.
(5.149) *nga’e d’a’i, nga’e d’ida.*

eat bottom eat top

‘Was the bottom (or) the top (of the meat) eaten’? (lit: ‘Bottom eaten, top eaten’?)

(LP1-146; Speaker: Jonathan 00:13:03.445–00:13:05.200)

(5.150) *ta ha’e kowa, toi ta ha’e kapa.*

PRT climb boat know PRT climb ship

‘Whether to take a boat (or) ship’ (lit: ‘Take a boat. Take a ship’)

know NEG PRT

1PL.INCL

‘We don’t know’.

(LP1-041; Speaker: Tukahae 00:13:51.650–00:13:55.320)

The disjunctive conjunction we ‘or’ can be used to juxtapose two phrases (5.151) or clauses, but it is quite rare in both contexts and seems to be used more frequently by younger speakers. Clause-level disjunction is particularly rare with only one clear example in the dataset, shown in (5.152).

(5.151) *ked’anga we, la keriu.*

right or cis left

‘(Turn) to the right or left’?

(LP1-054; Speaker: Naomi 00:03:17.102–00:03:18.689)

(5.152) *èla d’ènge pedane j’e la hore, we mate ta èle pemou bapa.*

PRF immediately bury then TRANS discard or wait PRT PRF celebrate 2SG

‘Is it discarded right after the burial, or (do you) wait until after the ceremony’?

(LP1-146; Speaker: Leonardo 00:04:34.001–00:04:38.040)

Most occurrences of we as a disjunctive conjunction occur in the phrase we ad’o which literally means ‘or not’ and acts as a question marker in Yes/No questions.

(5.153) *tèra we ad’o,*

true or NEG

‘Is it true or not’?

(LP1-124; Speaker: Data 00:08:54.450–00:08:55.070)

(5.154) *era nga ègu doi we ad’o,*

exist with bring money or NEG

‘Did you bring the money or not’? (lit: ‘Was the money brought with (you) or not’?)

(LP1-095; Speaker: Leonardo 00:05:25.363–00:05:26.590)
(5.155) *nga’a awe, tui we, ad’o mama.*
  eat  time long or  NEG mama
  ‘How much time does it take, Mama’? (lit: ‘Does it eat a long time or not, Mama’?)

(LP1-039; Speaker: Leonardo
  00:07:39.034–00:07:41.810)

All of these occurrences of *we* as a disjunctive conjunction are uttered by speakers under 40, so it may be a more recently innovated form of disjunctive coordination, possibly due to contact with Malay.

Another option to express disjunctive coordination is the use of *ato*, which is very likely borrowed from Malay *atau*. This option is used by speakers that are both young and old.

(5.156) *lingo d’ue lod’o, ato télù lod’o, d’eitu pe-dane.*
  wake two day  or  three day  coffin CAUS-bury
  ‘The wake happens for two days or three days. Then (there is) the burial’.

(LP1-061; Speaker: Markus
  00:07:57.766–00:01:03.926)

(5.157) *Ki cara j’aga, hij’i ato heleda ato èi,…*
  if  way make blanket or  shawl or  sarong
  The way to make a blanket, shawl, or sarong…’

(LP1-039; Speaker: Paulina
  00:00:53.852–00:00:57.926)

5.6.7.2 **Adversative coordination**

It appears there is no native Hawu conjunction to connect two clauses via adversative coordination. Speakers young and old do so with the borrowed Malay words *tapulara* ‘however’ and *tapi* ‘but’.

(5.158) *j’e, hari-hari ne dèu pa kapa do nane made, tapulara era hedèu mubèni we do then all.pl ART person LOC ship REL MED.SG die but EXIST one-clf woman just REL helama, as.long.as
  ‘Everyone on the ship dies, but a girl survives’.

(LP1-093; Speaker: Naomi
  00:02:33.769–00:02:39.229)

(5.159) *b’ara pake ke leto nad’e.*
  clothes use  PRT later PROX.SG
  ‘Nowadays (we) use the clothes’.
  do  uru ne ru-kètu tara, tapi leto nad’e.
  STAT before ART leaf-head bring but  later PROX.SG
  ‘In the past (we) brought their hair, but now’
  b’ara pake hekewala ne na b’ara adi ngati toko,
  clothes use  group  ART which clothes little.brother from store
  ‘(We) just use the clothes from the store’.

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Native adversative coordination simply occurs with the juxtaposition of two clauses. Elderly speakers use this kind of coordination, but some young and middle-aged speakers will also occasionally employ this type.

\[(5.160)\]  
\[
d'\text{ai ne } \text{kale-kale}, \text{ pi'}a \text{ d'o.} \\
\text{then ART search.CONT exist NEG} \\
\text{Then (the men) searched everywhere, (but the women) weren’t there’. (lit: ‘Then search everywhere, not there’)}
\]

\[(5.161)\]  
\[
toi \text{ d'o ke pa yaa } \text{èhu d'e, do pudi ma ke ngadi ri yaa}. \\
\text{know NEG PRT LOC 1SG k.o.plant PROX.SG STAT white CIS PRT see AGT 1SG} \\
\text{‘I don’t know what } \text{èhu rai is, (but) I see it is white’}.
\]

**5.6.8 Cumulative coordination**

Cumulative coordination uses the conjunction *nga*. It can occur between two NPs such as (5.162).

\[(5.162)\]  
\[
nad'e, \text{ } \text{nga } \text{nad'e a'a ari.} \\
\text{PROX.SG and PROX.SG older.sibling younger.sibling} \\
\text{‘This and this are siblings’}.
\]

Cumulative coordination may also occur between two clauses.

\[(5.163)\]  
\[
he-ngi'\text{u, la } b'o-d'\text{ae, he-ngi'u la } \text{bara-wa, nga } \text{era } d'\text{ue kepue naaj'ju}. \\
\text{one-CLF CIS toward-north one-CLF CIS toward-west and EXIST two CLF tree} \\
\text{‘One is facing north. One is facing west, and there are two trees’}.
\]

However, similar to disjunction and adversative coordination, at the clause level, the cumulative conjunction is rarely used and seems to be more common among younger speakers. Instead coordination is usually expressed through parataxis, as shown in (5.164) and (5.165). The speaker achieves this through juxtaposed clauses that may have similar syntactic structure.

\[(5.164)\]  
\[
tapulara nad'e bëni a'a, nad'e bëni ari. \\
\text{but PROX.SG woman older.sibling PROX.SG woman younger.sibling} \\
\text{‘But this is the older sister, (and) this is the younger sister’}.
\]
5.7 The demonstrative system

In consideration of the the typology of Malayo-Polynesian demonstrative systems in Chapter 2, the demonstrative system of Hawu, shown in Table 5.10, has not been identified in any other Malayo-Polynesian languages. Table 5.10 shows the forms of the demonstratives that may be used as determiners and pronouns. Each demonstrative has a long form that includes na and a short form that does not.\(^7\) The medial singular term (na(pa))ne has three forms: ne, nane, and napane. Throughout the following sections, I will refer to forms that include na as 'long forms' and forms that do not as 'short forms'. The different forms seems to correlate slightly with whether the demonstrative occurs as a determiner or a pronoun.

\(^7\)The proximal, plural, unknown demonstrative, he, never occurs with na- except in its demonstrative adverb form mi-(na)he (see §5.9).
The demonstrative system which will be further discussed in §5.7.2. Speakers rely heavily on demonstratives for spatial reference, so they are used pervasively in conversation and narratives and can be used to indicate spatial, temporal, or discourse deictic reference. This section is focused on the spatial meaning of demonstratives, but temporal and anaphoric meanings are discussed when relevant.

The demonstrative system distinguishes proximal, medial, and distal. Notably, proximal and medial demonstratives have one singular and two plural demonstratives. Singular terms only mark distance from the deictic center. Plural terms, however, mark both distance and speaker knowledge. There are four distal demonstratives. Among distal demonstratives, number and knowledge are collapsed within the same categories so that singular distal demonstratives may refer to a single referent or a referent that the speaker is familiar with. Plural distal demonstratives may refer to plural referents or to a referent that the speaker is unfamiliar with. Distal demonstratives are also distinguished by specificity. The terms (na)nid’e and (na)hid’e tend to be used for individuation, meaning that they distinguish a referent from other possible referents.

Speakers tend to treat all of these factors opportunistically, meaning, for instance, that they can choose whether it is more important to convey the number of the referent or their knowledge about it. Because of this, I remain agnostic as to what the system “really is,” and despite my presentation of the system in a paradigmatic nature, I do not suggest that the use of the terms are restricted to those in the paradigm.

In the following sections I will describe the demonstrative system in detail. I will begin by discussing the morphosyntactic features of the demonstrative system (§5.7.1). I will then describe the semantic features. I will first define singular and plural in the context of the Hawu demonstrative system (§5.7.3.1). After, I will describe nature of the known versus unknown contrast (§5.7.3.2), and then I will discuss individuation (§5.7.3.3). Finally, I will address the three distance contrasts within the system: proximal (PROX) (§5.7.3.4), medial (MED) (§5.7.3.5), and distal (DIST) (§5.7.3.6). In later sections, I will then do the same for the paradigms of deictic existential verbs (§5.8) and demonstrative adverbs (§5.9).

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
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<tbody>
<tr>
<td></td>
<td>Known</td>
<td>Unknown</td>
</tr>
<tr>
<td>PROX</td>
<td>(na)d’e</td>
<td>(na)hed’e</td>
</tr>
<tr>
<td>MED</td>
<td>(na(pa))ne</td>
<td>(na)père</td>
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<td></td>
<td>(na)hère</td>
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<tr>
<td>DIST</td>
<td>(na)ni</td>
<td>(na)hii</td>
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<tr>
<td>Individuation</td>
<td>(na)nid’e</td>
<td>(na)hid’e</td>
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</tbody>
</table>

Table 5.10: Hawu demonstratives mark three degrees of distance. Demonstratives are also distinguished by the number of the referent (singular vs. plural), information about the speaker’s certainty about the existence or exact location of the referent (known vs. unknown), and whether the demonstrative is used to distinguish a referent from other possible candidates (individuation). These are structural labels that do not always reflect the demonstrative’s function in actual discourse.

### 5.7.1 Morphosyntactic features

Demonstratives may function as determiners or pronouns. The following sections discuss the morphosyntactic properties of demonstratives within both of these syntactic roles. Syntactic function seems to interact somewhat with whether the demonstrative occurs in short or long form, the nature of which will be discussed in § 5.7.2.
5.7.1.1 Demonstrative determiners

Determiners follow a head noun and indicate a definite referent. They may appear in any of the forms indicated in Table 5.10. All three forms for the medial, singular demonstrative, \((na)pane\), are shown in (5.168) and (5.169). In (5.168) the long form, \(napane\), follows the referent \(domad’a\) ‘squirrel’ while the shortest form, \(ne\), follows the referent \(èmu\) ‘house’. In (5.169), the mid-form, \(nane\), also follows the referent \(èmu\) ‘house’.

(5.168) \(t\a \ d’\i \ n\e, \ d\o m\a d’a \ n\a p\a n\e, \ t\a \ l\a \ p\e e, \ k\e \ p\a \ d\e n\i \ èm\u \ n\e.\)

\(\text{PRT when ART k.o.squirrel MED.SG} \quad \text{PRT TRANS STAY PRT LOC ROOF HOUSE MED.SG}\)

‘Then that squirrel stayed on top of that house’.

(Speaker: Albertina; LP1-062)

(5.169) \(p\e e \ w\e \ m\u u \ p\a \ èm\u \ n\a n\a n.\)

\(\text{stay just 2SG} \quad \text{LOC HOUSE MED.SG}\)

‘Just stay at that house’.

(LP1-062; Speaker: Albertina 00:04:30.201–00:02:31.363)

5.7.1.2 Demonstrative pronouns

When demonstratives are used as pronouns they serve as the head of the NP. They may occur as the agent (5.170) or patient (5.171) of the clause, and they may also occur in relative clauses and as locatives in prepositional phrases.

(5.170) \(n\a d’e \ a n\a \ k\e d’\i a.\)

\(\text{PROX.SG child k.o.weaving.tool}\)

‘This is a weaving peg’.

(LP1-039; Speaker: Paulina 00:01:03:999–00:01:05:170)

(5.171) \(m\i n\a m\i \ n\e \ t\a o \ n\a d’e.\)

\(\text{how MED.SG DO PROX}\)

‘How do you make this’?

((Yanti 2018) 2018hvn_CON-006; Speaker: Leonardo 00:01:00:924–00:01:01.844)

Demonstrative pronouns never take a determiner or classifier. However, they can take an article (5.172).

(5.172) \(t\i u i \ m\a k\e \ k\i r\i, \ m\e n\a n\u u \ n\e \ n\a d’e.\)

\(\text{long.time CIS PRT IF weave ART PROX.SG}\)

‘Does it take long if weaving this’?

((Yanti 2018) 2018hvn_CON-006; Speaker: Leonardo 00:03:03.370–00:03:05.670)
5.7.1.2.1. Demonstrative pronouns in relative clauses

Demonstrative pronouns commonly occur in relative clauses, in which case they are preceded by the relative clause marker \( do \) (5.173). When demonstratives are the head noun of a relative clause, though syntactically different, they serve the same purpose as a determiner; the construction serves to modify the head noun by indicating its definiteness and location. Speakers report no difference in meaning between constructions in which the demonstrative pronoun is preceded by the relative clause marker and those in which it is not. This construction is particularly common in reference to certain time periods (5.174).

(5.173) \( ne \ \text{duae do nad’e, ta pepu ke, ne naènu noo, la pe-doe, ne mone kehia do} \)
\( \text{ART king REL PROX.SG PRT ask PRT ART slave 3SG TRANS CAUS-call.on ART man POOR REL nad’e. PROX.SG} \)

‘This king asks his slave to call on this poor man’. (lit: ‘The king that was this one asks his slave to call upon the poor man that was this one’.)

(LP1-056; Speaker: Noh 00:01:03.197–00:01:11.505)

(5.174) \( pa \ \text{d’ara awe do nad’e?} \)
\( \text{LOC in TIME REL PROX.SG} \)

‘At this time’ (lit: ‘In the time that is this one’)

(LP1-060; Speaker: Leonardo 00:00:05.871–00:00:10.873)

5.7.1.2.2. Locative demonstrative pronouns

When demonstratives refer to a location rather than a referent, they are always preceded by a preposition. This preposition is commonly the locative \( pa \) (5.175). However, when marking movement towards a location, the goal prepositions \( ma \) 'towards speaker' (5.176) or \( la \) 'away from speaker' (5.177) precede the demonstrative, and when marking movement away from a location, the source preposition \( (nga)ti \) (5.178) is used.

(5.175) \( \text{hèku ad’o ke do era, déu, pe-mane nga’a nga’u pa d’e.} \)
\( \text{so NEG PRT REL EXIST person prepare food DRINK LOC PROX.SG} \)

‘So there was no one here to prepare the meal’.

(LP1-095; Speaker: Leonardo 00:08:15.677–00:08:19.145)

(5.176) \( \text{dèka roo ma d’e, ma nga’u hela’u lema nga j’ii.} \)
\( \text{so 3PL CIS PROX.SG CIS DRINK TOGETHER ALSO WITH 1PL} \)

‘So they came here and drank with us’.

(LP1-095; Speaker: Leonardo 00:09:29.339–00:09:31.452)

(5.177) \( ta \ la \ \text{hùd’e-hud’e la nani, ma ke la hore.} \)
\( \text{PRT TRANS definitely.EMPH TRANS DIST.SG CIS PRT TRANS THROW.AWAY} \)

‘(They are) definitely discarded over there’.
As these examples show, locatives may be in long form (5.177 and 5.178) or short form (5.175 and 5.176). It is also possible to include other relational information within the prepositional phrase, as in 5.179. Here, d’ida ‘on’ is included in the prepositional phrase to provide more specific information about how the referent relates to the location.

(5.179) ne ke hèhi, līi ta Rai D’ewa ne ngara.

‘There is one more place called Rai D’ewa,’

ki pa d’ida nani.

‘the place up there’.

5.7.2 Demonstrative forms and syntactic function

Syntactic function may influence which form a speaker will choose to employ. Table 5.11 demonstrates the distribution of short and long forms of demonstratives based on their syntactic function. While the use of both long and short forms of demonstratives is relatively evenly distributed, overall, the short forms of demonstratives are used more frequently at about 56% of the time while long forms are used about 43% of the time; within the corpus, short forms occur 1,110 times while long forms occur 839 times.

<table>
<thead>
<tr>
<th>Type</th>
<th>Long form</th>
<th>Short form</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determiner</td>
<td>338</td>
<td>890</td>
<td>1,228</td>
</tr>
<tr>
<td>Pronoun</td>
<td>265</td>
<td>4</td>
<td>269</td>
</tr>
<tr>
<td>Relative</td>
<td>139</td>
<td>0</td>
<td>139</td>
</tr>
<tr>
<td>Locative</td>
<td>97</td>
<td>216</td>
<td>313</td>
</tr>
<tr>
<td>Total</td>
<td>839</td>
<td>1,110</td>
<td>1,949</td>
</tr>
</tbody>
</table>

Table 5.11: Distribution of Hawu demonstratives based on their syntactic function.

Because of the striking patterns in form distribution, here I separate the various syntactic positions of pronouns: pronoun, pronoun in a relative clause (relative), and pronoun in a prepositional phrase (locative).

Table 5.11 shows that in general, demonstratives are most commonly used as determiners with 1,228 total occurrences. Among determiners, shortened forms are vastly more common; 890 of a total of 1,228 determiners (or 72%) occur in short form. Just 338 determiners occur in long form. Locatives show a remarkably similar pattern. Of a total of 313 locatives, 216 (or 69%) occur in short form.
A strikingly opposite pattern is seen among pronouns and pronouns in relative clauses. While short forms are more common among determiners and locatives, they are almost never used as pronouns with just four of 269 pronouns (or 1%) occurring in short form. Even more strikingly, pronouns in relative clauses always occur in long form.

These patterns show that form does depend, at least in part, on syntactic position. There is clearly a strong preference to use long forms as pronouns in agent or patient position or in relative clauses. Meanwhile, though the tendencies are not as strong, the opposite is evident with demonstratives and locatives. Speakers clearly prefer to use the short forms in such positions.

5.7.3Semantic features of demonstratives

The Hawu demonstrative system has four main semantic contrasts: distance from deictic center, number, knowledge of the referent, and individuation. As I will make clear in the following sections, the labels given in Table 5.10 are just labels assigned out of necessity; they describe patterns and prototypes within the dataset, but they are not meant to imply that all demonstratives fit uncontroversially under each label. Rather, the Hawu demonstrative system should be viewed as a system of competing contrasts which speakers choose between based on which information they want to convey. In the following sections I introduce the nuances to each of these semantic contrasts.

5.7.3.1Number

As Table 5.10 shows, Hawu distinguishes between singular and plural referents within its demonstrative system. However, this distinction is not as straightforward as might be assumed. While the terms ‘singular’ and ‘plural’ are largely descriptive of the patterns in the dataset, ‘point’ and ‘field’ (Lehman & Herdrich 2002) or ‘specific’ and ‘general’ might be equally descriptive terms.

With the exception of (na(pa))ne (which is divergent in many ways that are described in §5.7.3.5), singular demonstratives always refer to a single object (5.180) or place (5.181).

(5.180)  
ha’e  kapa d’e,  
climb ship prox.sg
‘Take this boat’.
(LP1-073; Speaker: Naomi 00:07:32.595–00:07:33.747)

(5.181)  
ki gedung hekola do uru, na ru-kèli  hewe ti nii  
if building school rel past prt leaf-lontar.palm just source dist.sg
‘In the past, the school building over there was roofed with lontar palm fronds’.
(LP1-158; Speaker: Marten 00:22:38.888–00:22:40.078)

Plural demonstratives generally refer to plural referents (5.182), but speakers emphasize that plural demonstratives differ from singular ones because they can refer to plural referents.

(5.182)  
ad’o j’e  do  wie pa  naiki hedd’e.  
NEG then stat give loc child prox.pl.kn
‘(The slave) doesn’t give (the rice) to these children’.
When plural demonstratives are used to refer to singular referents these referents are often spread over a large area. Referents such as islands (5.183), villages (5.184), and roads are often referred to using the plural demonstratives. However, a 'spread' area does not have to be on the scale of an island or a village. For instance, in (5.185) a woman is pacing around, and the speaker is directing the addressee to her location. Since she is not standing still, the speaker uses the plural nahére, even though on the scale of an island, the ground she covers is quite small.

(5.183)  b'ale ngati wa ngati hid’e noo j’ara kapa
  return source Sumba source dist.sg.indv 3pl path ship

‘He returned from Sumba, from there, by ship

(5.184)  ta pe-titu, ému ke roo, pa hid’e.
  prt caus-stand house prt 3pl loc dist.sg.indv

‘They built a house over there (in Senia village)’.

(5.185)  keweru-wetu bu pa, ngidi pa nahére heve.
  pace.cont woman loc around loc med.pl.ukn just

‘The woman is pacing just around there’.

While plural demonstratives do not always refer to plural referents, I choose the descriptors 'singular' versus 'plural' because they are representative of the majority of the dataset. Of 189 total instances of plural demonstratives, they are used to reference plural referents 119 times and they are used to reference singular referents (which are often spread across an area) 70 times.

5.7.3.2 Known versus unknown: The epistemic modality

The terms 'known' and 'unknown' are descriptors for a variety of situations which generally fall under the umbrella of the epistemic modality and which relate to a speaker’s knowledge of and belief in the existence of a referent. A variety of factors may influence a speaker’s choice between known and unknown demonstratives, and speakers appear to choose between them depending on which factor is most appropriate for the situation.

A speaker may choose known demonstratives when they can see the referent (5.186). Because they can see it, they are certain of its position. For instance, in the following example, the speaker is referring to his own legs, so he uses hed’e ‘prox.pl.kn’.

(5.186)  ru-b’eb’o hed’e ad’o ke.
  leaf-calf prox.pl.kn neg prt

‘these legs’
However, visibility is not a prerequisite for certainty. Speakers also may choose known demonstratives if they are very familiar with the referent. Perhaps they use it every day, or they might know more about it than the addressee. In such cases, the speaker does not need to know the referent’s exact position. In (5.187), the speaker is talking about building the road that connects his village to the main road on the island. He spent a long time working on the road, and he frequently uses it. As such, he is very familiar with its existence and location, but it is not visible to him as he speaks. Still, he uses *hed’e* ‘PROX.PL.KN’ to indicate his certainty.

\[(5.187)\]
\[\text{do la pe-j’ega nga ruj’ara} \text{ hed’e we} \]
\[\text{STAT CIS CAUS-work with leaf-path PROX.PL.KN just} \]
\[’(We) only worked on this road’.\]

Speakers tend to use an unknown demonstrative when they cannot see the referent. Because of this, they might be unsure of the referent’s exact position or whether it actually exists at all. In the following example (5.188), the speaker is talking about a place called Kantor Klasis which is located in a different village. The campus contains several buildings, and the speaker’s church has raised money to rebuild two of them. He knows the general direction of Kantor Klasis, but he may not know it’s exact position since he does not frequently interact with the location. As a result, he uses *nahid’e* ‘DIST.PL.INDV’.

\[(5.188)\]
\[\text{hèku nahid’e ta rehap we do d’ue b’ue nahid’e} \]
\[\text{so DIST.PL.INDV PRT rehabilitate just REL TWO CLF DIST.PL.INDV} \]
\[’So over there it’s just the two buildings being rehabilitated’.\]

Speakers may also choose unknown demonstratives if they are unfamiliar with the referent or less familiar than the addressee. This can be a politeness strategy when talking to an elder or a master. For example, in the following conversation (5.189), the speaker, Leonardo, is asking Margarita, who is a weaver by trade, about the types of Hawu weavings. They are categorized as ‘three’, ‘five’, or ‘seven’ based on the pattern. The addressee, is holding several blankets with different designs, and Leonardo wants to know which blanket would be the one categorized as ‘five’ (5.189a). Margarita shows him what a ‘five’ blanket looks like (5.189b), and then Leo wonders if the one he is holding would be considered a ‘five’ blanket (5.189c). Although he is certain of the blanket’s existence and position (in his arms), he uses *he* ‘PROX.SG.NVIS’ to express that he is uncertain about the nature of the referent. This tactic is very common in questions addressed to older or more knowledgeable people.

\[(5.189)\]
\[\text{a. L: Do minami ne mode hig’i wo,} \]
\[\text{L: STAT how ART type blanket CLF} \]
\[’Which blanket is type five’?\]
\[\text{b. M: wo-lèmi ne,} \]
\[\text{M: CLF-five ART} \]
\[’Blanket five’.\]
c. L: wo-lèmi he Mama.
L: clf-five prox.pl.ukn Mama
'Is this blanket five, Mama?'

Contrast Leonardo’s use of *he* in (5.189) with his use of *hed'e* in (5.190). He is referring to the same motifs in the same weaving in his hands, but because he is just drawing the addressee’s attention to the weaving, he does not concede to the addressee’s superior knowledge of the motifs by using *he*. Instead, he uses *nahed'e* 'prox.pl.kn'.

(5.190) gaba-gaba ne nahed'e,
picture.pl. art prox.pl.kn
'these pictures'

((Yanti 2018) 2018hvn_CON-006; Speaker: Leonardo
00:05:23.822–00:05:25.204)

Although the referent is never entirely unknown to the speaker, I choose the general terms ‘known’ and ‘unknown’ to describe this contrast. These terms are proxies for the meanings ‘high speaker knowledge’ versus ‘low speaker knowledge’, and this scale is dependent on competing spatial, social, discourse, and visual factors.

5.7.3.3 Individuation

Distal demonstratives can be separated into general distals and distals that serve to individuate referents. Individuation is the process by which speakers distinguish a referent from other possible candidates in order to draw the addressee’s attention to the correct referent. Speakers translate *(na)hii* as ‘those’ and *(na)hid'e* as ‘those there’. Therefore *ki'i nahii* would be translated as ‘those goats’ and *ki'i nahid'e* as ‘those goats there’. Individuating distal demonstratives are also more likely to be accompanied by a pointing gesture than their general counterparts. The co-occurring points serve to narrow the search domain to allow the speaker to more effectively index the referent. Throughout the entire HDP corpus, *(Na)ni* ‘dist.sg’ is accompanied by a point 67% of the time while the individuating singular distal demonstrative, *(na)nid'e* 'dist.sg.indv', is accompanied by a point 92% of the time. Similarly, while *(na)hii* 'dist.pl' is only accompanied by a gesture in 25% (3/12) of occurrences, *(na)hid'e* 'dist.pl.indv' is accompanied by a gesture in 66% (12/18) of occurrences (see Chapter 6 for information about the relationship between demonstratives and pointing in interactional genres).

The use of an individuating demonstrative is shown in Figure 5.2 and Example (5.2). Here, the speaker in (5.191) is describing traditional funerals, and he is talking about the tradition of eating and drinking to celebrate the life of the deceased. It is prohibited to celebrate in the deceased’s home, so mourners choose a nearby house. In this conversation, the speaker is assuming that the house that he is sitting in is that of the deceased, so he points out a neighbor’s house that could serve the the house for celebration (Figure 5.2). Because of these cultural restrictions on which houses can host celebrations, he is careful to accurately specify a specific house through the simultaneous use of *(na)nid'e* and a point.

(5.191) bisa ma ta la èmu, la èmu la nanid'e mi-nahère.
can trans prt trans house trans house trans dist.vis like-med.pl.ukn
'If they can, they go to a nearby house, like that one there'.

(LP1-073; Speaker: Jonathan
00.09.13.320–00.09.15.780)
Like the other semantic parameters discussed thus far, individuation is a fluid category. *(Na)nid’e* and *(na)hid’e* are not the only two demonstratives that can serve an individuating function, and sometimes they can simply be used as generic distals. However, I classify them as individuating demonstratives because usually, the need to specify a referent elicits the use of one of these individuating demonstratives.

### 5.7.3.4 Proximal

Proximal demonstratives include *(na)d’e*, *(na)hed’e*, and *(na)he*. What is considered proximal canonically includes referents that are held, objects directly in front of or behind the speaker, objects that are directly between speaker and addressee, and objects that are near both speaker and addressee. The following examples demonstrate some of the canonical uses of proximal demonstratives.

In (5.192), the speaker refers to his own location using *d’e* as he gives directions to Australia.

(5.192)  
\[
\text{kirid'}i ina yaa, ta la, Australia, ngati} \text{ d'e.}
\]

<table>
<thead>
<tr>
<th>trans</th>
<th>1sg</th>
<th>prt</th>
<th>PRV</th>
<th>source</th>
</tr>
</thead>
</table>
\[
\text{'If you want to go to Australia from here.'}
\]

(LP1-073; Speaker: Leonardo  
00:09:33.191–00:09:39.292)

In (5.193) and Figure 5.3, the referent is closer to the speaker than to the addressee. As she speaks, she points to the referent.

(5.193)  
\[
\text{nad'e ne fungsi langa} \text{ nad'e natuu ta tali ke}
\]

<table>
<thead>
<tr>
<th>PRV</th>
<th>PROX.SG</th>
<th>ART</th>
<th>function</th>
<th>loom</th>
<th>PROX.SG</th>
<th>BEN</th>
<th>PRV</th>
<th>PRV</th>
</tr>
</thead>
</table>
\[
\text{‘The function of this loom is to tie the yarn’}
\]

(LP1-0239; Speaker: Paulina  
00:06:10.288–00:06:13.215)
Figure 5.3: Speaker uses *nad’e* to refer to a loom that is closer to her than to the addressee.

Figure 5.4: Speaker uses *nad’e* to refer to a weaving tool that is between herself and the addressee.

In (5.194), (5.195) and Figures 5.4 and 5.5, the referent is near both the speaker and the addressee. As the speaker talks, both speaker and addressee touch the referent.

(5.194)  

\[ 
\text{nad’e aj’u ura nad’e.} \\
\text{PROX.SG k.o.tool PROX.SG} \\
\text{‘This is an \textit{aj’u ura}’}. 
\]

(LP1-040; Speaker: Paulina 00:00:45.660–00:00:47.152)

(5.195)  

\[ 
\text{gaba-gaba ne nahed’e.} \\
\text{picture.pl ART PROX.SG} \\
\text{‘These pictures’}. 
\]

((Yanti 2018) 2018hvn_CON-006; Speaker: Leonardo 00:05:23.822–00:05:25.204)

However, what may be considered proximal can be subjective and dependent on the situation and the
The demonstrative system

Figure 5.5: Speaker uses *nahed’e* to refer to designs on a weaving that is between himself and the addressee.

point of view of the speaker. Speakers may also use a proximal demonstrative to indicate referents that are across a room (5.196), relatively nearby but out of sight (5.197), and even distal (5.199).

(5.196)  
*ki mubëni pa nad’e.*

like,that if woman LOC PROX.SG

‘If it’s a woman (she goes) here’.

*ki mumone pa d’e.*

if man LOC PROX.SG

‘If it’s a man (he goes) here’.

(LP1-061; Speaker: Markus  
00:11:26.451–00:11:29.701)

(5.197)  
*j’e, rai hawu d’e, ne pa d’ara èi, pa d’ara èi.*

then land H. PROX.SG ART LOC in water LOC in water

‘Hawu island is in the water, in the water’.

*ne èi nad’e, rihi-rihi pa rai Hawu*

ART water PROX.SG around.RED LOC land H.

‘This water is around Hawu island’.

(LP1-051; Speaker: Migu  
00:00:59.073–00:01:08.965)

Some of this variability in the use of the proximal demonstratives may be because proximity to the speaker does not necessarily have to be physical. Often, speakers use proximal demonstratives to refer to referents that they are emotionally near or quite familiar with. For instance, when people talk about their daily activities, they tend to use the proximal demonstratives to refer to objects that they frequently interact with. In (5.198), the speaker uses *he PROX.PL.UKN* to refer to palm fruit as he describes his daily activity of squeezing the juice from the fruit.

(5.198)  
*aa ta ngape he we noo adi.*

ah PRT squeeze PROX.PL.UKN just 3SG little.brother

‘Ah, just squeeze these, little brother’.

(LP1-060; Speaker: Markus  
00:03:14.936–00:03:18.205)
In (5.199), the speaker uses *hed'e* ‘PROX.PL.KN’ to refer to a different island. He is asked about the places he has lived, and he says that he spent some time in Ende, a city on the island of Flores. While most speakers use distal demonstratives to refer to Flores because it is quite far and most are not familiar with the island, this speaker chooses to use *hed'e*, possibly because of his close connection with the city.

(5.199)  
\[ \text{aa la kewavo hed'e} \]  
\[ \text{oh TRANS E. PROX.PL.KN} \]  
‘Oh, to Ende’.  
(LP1-157; Speaker: Ridolof  
00:02:22.309–00:02:23.724)

5.7.3.5 Medial

The medial demonstratives include *(na(pa))ne*, *(na)père*, and *(na)hère*. They are more of a neutral category than the proximal and distal demonstratives, and this is especially the case with the singular demonstrative, *(na(pa))ne*. Medial demonstratives can be used to refer to referents that are near the addressee, neither far nor close to the speaker and addressee, and quite distant. Canonically, however, they tend to refer to referents that are held by the addressee, near the addressee, or neither close nor far from the speech event.

In elicited environments, a speaker transitions from using *nad'e* to *nane* when the referent is in a position near the addressee. For instance, a stone held by a speaker is referred to as *wadu nad'e* ‘this stone’. A stone that is directly between the speaker and addressee is also *wadu nad'e* ‘this stone’. However, a stone held by the addressee is *wadu nane* ‘that stone (near you)’. Further, a stone held by someone who is in the same room but not participating in the speech event is referred to using the distal demonstrative *wadu nani* ‘that stone’.

The following examples, (5.200), (5.201), and (5.202), demonstrate the canonical use of medial demonstratives in a near addressee context. In example (5.200), the speaker is asking the addressee to show the tools that he is wearing on his belt. While the speaker is relatively unfamiliar with these tools, the addressee uses them daily to collect palm wine as a source of income and thus has superior knowledge about them. Further, the speaker knows that the addressee is wearing the tools in a belt wrapped around his waist, but they are concealed by the addressee’s right arm. The speaker may choose *nahère* either because he cannot see the tools or in order to concede to the addressee’s superior knowledge of them. Figure 5.6 shows the speaker leaning towards the addressee, and he is making eye contact with the location where the tools are concealed. The addressee naturally has them covered with his right arm, but his left arm is reaching up to touch them as the speaker talks.

(5.200)  
\[ pe-d'elo ko ne b'ara nahère. \]  
\[ \text{show TAG ART thing MED.PL.UKN} \]  
‘Show (me) those tools of yours’.  
(LP1-157; Speaker: Leonardo  
00:08:27.676–00:08:29.906)

Similarly, in (5.201), the speaker is asking about some eggs brought by the addressee. These eggs are visible and in the addressee’s arms, so the speaker uses *napère* ‘MED.PL.KN’. Finally, in Example (5.202), the speaker uses *nane* ‘MED.SG’ to refer to the addressee’s location within the cage.

(5.201)  
\[ “dèka ngati ngaa dèlu la’a muu napère’. mihane’. \]  
\[ \text{come from where egg possess 2PL MED.PL.KN say} \]  
‘Those eggs of yours came from where?’ (she) asks’.  
160
Figure 5.6: Speaker uses nahère to refer to tools on the addressee’s belt that are concealed by his arm.

(5.202)  
\textit{paj’a ke ou ngalai e mihane.}  
pity PRT 2SG friend TAG say  
‘I pity you, my friend,’ said (the dog).

\textit{nane ke ou do b’ado pa nane.}  
MED.SG PRT 2SG REL enclosed LOC MED.SG  
‘You there enclosed in there.’

Medial demonstratives are also often used in commands, perhaps to imply the proximity of the referent to the addressee. Examples are given in (5.203) and (5.204). In the story in (5.203), wild animals are destroying the town, so the speaker asks which of several men can go to calm the beasts. When he refers to the dens of these beasts, he uses \textit{nahère}. Although the dens are outside of the village, this choice may be because he is commanding others to go there and as a result, he is implying their proximity to the referent location.

(5.203)  
\textit{j’e nadu uke do d’ai la ne’e \textit{nahère}? la ègu b’ara \textit{nahère} do b’ani}  
then who PRT REL then TRANS hmmm MED.PL.UKN TRANS bring clothes MED.PL.UKN STAT evil  
do \textit{gèga \textit{nahère}}  
STAT wild MED.PL.UKN  
‘Then who can go there? (and) Take those clothes. (They) are evil and wild’.

(5.204)  
\textit{“jee la ègu \textit{napère},” mihane, bèni tèlu.}  
immediately TRANS bring MED.PL.KN say woman three  
‘Immediately take her’ said the third woman’
Sometimes, medial demonstratives, particularly (na)hère, are used to refer to intangible referents that are nearer to the addressee in a metaphorical sense. This is demonstrated in (5.205). The addressee has just talked about how he receives rice from the government, and the speaker wants to know how big the sacks of rice are. These rice sacks belong to the addressee, not the speaker, so although they are not present, they are metaphorically nearer to the addressee. As such, the speaker uses nahère.

(5.205) hèku pèri kilo ke nahère. 
so how.many kilo PRT MED.PL.ukn
So how many kilos are those (sacks of rice) of yours’?

The following examples, (5.206) and (5.207), show canonical examples of nahère used to refer to referents that are neither near nor far from the speech event. In (5.206), the speaker uses nahère to refer to nails that are holding together the beams of the house. They are surrounding the speech event since they are in all of the walls of the house, but the nails are not visible since they are behind the plastering of the wall. In (5.207), the speaker uses napane to refer to something that is located on the left side of the house that he is sitting in.

(5.206) Geri ae pa nad’e. 
pole big LOC PROX.SG
‘The big pole here,
harí he-nguru laa ma, do raja nahère hari-hari.
one-ten one-ten pole CIS STAT nail MED.PL.ukn all.RED
‘All ten pillars are nailed by the boro stick.

(5.207) Nane pa tenab’a wui. 
MED.SG LOC part.of.house left.house
‘Those are on the left side of the house’.

Finally, medial demonstratives may be used for referents that are quite far from the speech event. Example (5.208) refers to a village that is about halfway across the island (5.208), while in (5.209) nane refers to a whirlpool that is near a different island entirely (5.209).

(5.208) hèku do, kako la nane ke dii b’èrirai. 
so STAT go TRANS MED PRT 1PL.INCL tomorrow
‘So we will go there (to Eiwou) tomorrow’.

162
(5.209)  *pa  hanga Raijua do, mod’a èni ne ei ne.*  
LOC beside R. REL spin self ART water ART  
‘at the strait of Raijua the water is a whirlpool’.  
*hèku do  b’ole lake d’ai nanc.*  
so STAT NEG go then MED.SG  
‘So don’t go past there’.  
(LP1-103; Speaker: Leonardo  
00:08:00.989–00:08:07.089)

Medial demonstratives can also be used as generic demonstratives, and this is particularly true for the singular medial demonstrative, *(na(pa))ne.* The shortest form, *ne*, is divergent from the others because it can be used as a generic article. It simply indicates a definite noun with no reference to its location. In such cases, *ne* usually precedes the head noun (5.210). Demonstratives never occur before the head noun.

(5.210)  *ne  ngara noo Luha nga, Mone?*  
ART name 3SG L. and M.  
‘Their names are Luha and Mone’.  
(LP1-109; Speaker: Naomi  
00:00:17.810–00:00:19.918)

Often, *ne* occurs in conjunction with a demonstrative that follows the noun. In (5.211), the article *ne* co-occurs with the demonstrative *nad’e ‘PROX.SG’.*

(5.211)  *ne, aj’u nad’e ri ta.*  
ART wood PROX.SG AGT PRT  
‘What about this wood’?  
((Yanti 2018) HVN2018-CON-006; Speaker: Leonardo  
00:01:53.799–00:01:55.439)

The article *ne* can also precede a demonstrative pronoun.

(5.212)  *hèku ne  nad’e, èla ke pe-peke ri a’a,*  
so ART PROX.SG PRF PRT PRF-tell AGT older.sibling  
‘So you have already talked about this’.  
(LP1-161; Speaker: Leonardo  
00:09:16.994–00:09:20.930)

However, *ne* can also follow the head noun like other demonstratives, but even in this context, *ne* very rarely retains any spatial meaning as the following example (5.213) suggests. This example is uttered by a character in a story, and he is talking about a soup he makes when there is no food. Neither the stone nor the water actually exist in physical space at the moment of the utterance and thus have no spatial relationship to the speaker nor the addressee. Instead, *ne* simply seems to be marking the definiteness of these referents. This is a very representative example of how *ne* is used throughout the corpus.

(5.213)  *ad’o ma  j’e do jad’i ta nga’e wowadu ne.*  
NEG TOWARDS.PROX then STAT so PRT eat CLF-stone MED.SG  
‘Even then the rock can’t be eaten’.

163
The longer forms, *nane* and *napane*, can be similarly bleached of spatial information. As with *ne*, sometimes they are used to refer to intangible objects or to referents that do not exist in the given context (5.214 and 5.215), and they often simply seem to mark definiteness as opposed to some spatial relationship.

(5.214)  
\[
\begin{align*}
\text{ta} & \quad \text{emo} & \quad \text{kerègu} & \quad \text{nane}. \\
\text{PRT} & \quad \text{PRF} & \quad \text{fever} & \quad \text{med.sg} \\
\end{align*}
\]

‘That fever’.  
\[
\begin{align*}
\text{kiri} & \quad \text{pa} & \quad \text{lii} & \quad \text{j’awa} & \quad \text{d’e} & \quad \text{ta} & \quad \text{malaria} & \quad \text{he} & \quad \text{ke}. \\
\text{if} & \quad \text{LOC} & \quad \text{say} & \quad \text{Java} & \quad \text{PROX.sg} & \quad \text{PRT} & \quad \text{malaria} & \quad \text{PROX.pl.ukn} & \quad \text{PRT} \\
\end{align*}
\]

‘(It’s) called malaria in Indonesian’.

(LP1-101; Speaker: Pelipus  
00:00:46.784–00:00:49.858)

Finally, medial demonstratives seem to be a default category for reference to the past (5.216), people who lived in the past (5.217), and characters or referents in stories (5.218).

(5.216)  
\[
\begin{align*}
\text{pa} & \quad \text{d’ara} & \quad \text{awe} & \quad \text{do} & \quad \text{napane}, \\
\text{LOC} & \quad \text{in} & \quad \text{time} & \quad \text{rel} & \quad \text{med.sg} \\
\end{align*}
\]

‘at that time’  

(LP1-093; Speaker: Naomi  
00:01:00.959–00:01:02.824)

(5.217)  
\[
\begin{align*}
\text{era} & \quad \text{ke} & \quad \text{mulege} & \quad \text{do} & \quad \text{nahe} & \quad \text{he} & \quad \text{ki} & \quad \text{d’o} & \quad \text{lèka} & \quad \text{ri} & \quad \text{dèu} & \quad \text{napane}. \\
\text{EXIST} & \quad \text{PRT} & \quad \text{mantis} & \quad \text{REL} & \quad \text{PROX.pl.ukn} & \quad \text{PROX.pl.ukn} & \quad \text{if} & \quad \text{NEG} & \quad \text{KNOW} & \quad \text{AGT} & \quad \text{PERSON} & \quad \text{MED.sg} \\
\end{align*}
\]

‘there is a mantis like that that isn’t known by those people (our ancestors)’  

(LP1-041; Speaker: Tukahae Thomas  
00:13:04.578–00:13:06.929)

(5.218)  
\[
\begin{align*}
\text{la} & \quad \text{mate} & \quad \text{kapa} & \quad \text{ha’e}, & \quad \text{duae} & \quad \text{do} & \quad \text{napène}. \\
\text{TRANS} & \quad \text{wait} & \quad \text{ship} & \quad \text{climb king} & \quad \text{rel} & \quad \text{med.sg} \\
\end{align*}
\]

‘That king waits for the ship’.

(LP1-138  
00:29:26.310–00:29:28.090)
5.7.3.6 Distal

Distal demonstratives include (na)ni, (na)hii (na)nid’e, and (na)hid’e. They differ from proximal and medial demonstratives in that there are four distal demonstratives, and they do not exhibit the same known vs. unknown contrast among plural forms. Rather, number and speaker knowledge seem to be collapsed into a single category that distinguishes singular/known vs. plural/unknown. There is also an additional distinction based on whether the speaker is individuating the referent.

Canonically, distal demonstratives are used to refer to referents that are not within the vicinity of either the speaker or the addressee. Referents may be as near as in the same room or as far as across the island or across the world. As with other demonstratives, the choice to use a distal demonstrative can be subjective and depend on whether the speaker wants to emphasize the distance between themself and the referent. In the following example (5.219), the speaker uses ni ‘DIST.SG’ three times, giving an idea of the various uses of the term. The first usage of ni refers to a gate that is about a block away and in sight. The second usage refers to a road that is about a five minute walk away. It’s possible to see where the road is because of a break in the trees. The third usage of ni refers to the location of a store in town called Mega Makmur. The speaker is not in the town and cannot see it. The store itself would be about a ten minute walk away.

(5.219) ti nad’e, dab’o maho la ub’a toka la ni?
from PROX.SG continue enter TRANS mouth store TRANS DIST.SG
‘From here enter the gate over there’.
dab’o ri la ni, ta dab’o mola heke teru la, ni.
continue AGT TRANS DIST.SG PRT continue straight continue straight TRANS DIST.SG
‘Then go there. Then just keep going straight to there’.

(LP1-092; Speaker: Leonardo
00:04:32.737–00:04:40.939)

Because singular distal demonstratives may also express certainty, they tend to be used to index referents that are nearer than those indexed by plural distal demonstratives, which may also express uncertainty. While the above example (5.219) shows (na)ni ‘DIST.SG’ indicating referents on Sabu island, the following examples show the canonical use of plural demonstratives (na)hii and (na)hid’e to refer to referents that are beyond the shores of Sabu. In (5.220), hid’e refers to Flores, a large island that is spread over a vast region. Flores is quite far from Sabu, so it cannot be seen, and the speaker has never visited.

(5.220) hei juu la hid’e ma ke ne, rai Kewowo.
BE.DIST increase CIS DIST.NVIS TRANS PRT ART island Flores
‘That’s located way over there, Flores island.

(LP1-073; Speaker: Leonardo
00.09.02.696–00.09.05.505)

Similarly, in (5.221), the speaker uses hii to refer to Kupang as she describes where her son lives and works.

(5.221) tuka wowadu ma ane pa hii.
hit CLF-stone CIS say LOC DIST.PL
‘(My son) works as a mason there (in Kupang)’.

(LP1-155; Speaker: Albertina
00:08:39.287–00:08:41.215)
Because most occurrences of distal demonstratives in the corpus are as locatives, it is extremely common that even plural demonstratives simply refer to singular referents. However, plural demonstratives are distinct from singular demonstratives in that they can refer to plural referents. When they are used to index singular referents, their use tends to be motivated by a level of unfamiliarity with the referent.

5.7.4 Summary of the demonstrative system

As the discussion in this section has shown, the demonstrative paradigm is quite complex. Lexical contrasts distinguish three degrees of distance from speaker and addressee. Demonstratives are also distinguished by number, and knowledge of the referent, and specificity. These are not strict categories, however, but are rather employed opportunistically based on the information that the speaker would like to focus on. Rather, speakers may fluidly choose between them based on their intentions. Similarly, number does not simply refer to the number of the referent. Speakers also might consider whether they are referring to a specific or general location. Speaker knowledge relates to the speaker’s familiarity with and ability to see the referent. These two factors may be influenced by social relationships and power dynamics as well as discourse structure. Finally, individuation refers to distinguishing a referent from other possible options.

Although I avoided discussion of the discourse, social, and temporal meanings of demonstratives, I was hard-pressed to completely ignore these factors since they play an inextricable role in demonstrative choice. Future study may seek to fully understand how the demonstrative paradigm works in such contexts and as a result, shed light on the interplay between these contexts and demonstrative choice.

5.8 Deictic existential verbs

Hawu has a set of deictic existential verbs that operate within a different deictic paradigm, which I will refer to as the verbal deictic paradigm. Unlike the demonstrative system, deictic existential verbs only distinguish two degrees of distance: proximal and distal. There are five deictic existential verbs which may be distinguished by number and distance from the deictic center. A sixth deictic verb, uhi, is also included in the table, but I have not observed it in this corpus. However, because it has been attested by other researchers in the past, I include it in this discussion. While there are not different lexical items that mark epistemic modality within this system, the speaker’s knowledge of the referent is one of the factors that distinguishes proximal from distal. The deictic verbs are shown in Table 5.12.

<table>
<thead>
<tr>
<th>Singular (proximal)</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>oni</td>
<td>(uhi)</td>
</tr>
<tr>
<td>nee</td>
<td>hee</td>
</tr>
<tr>
<td>lei</td>
<td>hei</td>
</tr>
</tbody>
</table>

Table 5.12: Hawu deictic existential verbs

5.8.1 Morphosyntactic properties of Deictic Verbs

Syntactically, deictic verbs behave similarly to other existential verbs (see §5.6.3 for more information). They may occur with verbal particles such as ta (5.222) and ke (5.223), and they tend to occur before the agent and patient.
Deictic existential verbs

(5.222)  
\[j'e \ \text{ta nee} \quad \text{hudi-hudi ri?}\]  
then PRT EXIST.PROX little.SUP AGT  
‘Why is there so little food left’?  
(LP1-125; Speaker: Malvinus  
00:02:22.674–00:02:25.670)

(5.223)  
\[j'e \ \text{do, hee ke deu he ta wègi are.}\]  
then STAT EXIST.PROX.PL PRT person PROX.PL.UKN PRT cut rice.stalks  
‘And they are here cutting the rice’.  
(LP1-109; Speaker: Hendrik  
00:19:30.689–00:19:32.340)

Deictic existential verbs may occur in stative clauses (5.224).

(5.224)  
\[rènge \ \text{ne lii roo ta do nee ke pa d'ara d'e.}\]  
hear ART say 3PL.PROX ART STAT EXIST.PROX.SG PRT LOC in PROX.SG  
‘He heard their words. (He) was inside here’.  
(LP1-124; Speaker: Data  
00:16:32.690–00:16:34.000)

They may also occur with directional information indicated through the directional verbal particles \(\text{ma} \ '\text{cis}'\) and \(\text{la} \ '\text{trans}'\).

(5.225)  
\[j'e \ \text{do hei la mii ina nga ama muu,}\]  
then STAT EXIST.DIST.PL TRANS where mother and father 2SG  
‘Where did your mother and father go?’  
(LP1-138; Speaker: Data  
00:02:27.790–00:02:30.380)

While there are a variety of negative existentials—\(\text{pe'e d'o, pi'a do, and b'ule d'o}\)—there are no negative deictic existentials.

5.8.2 Semantic properties of deictic verbs

\(\text{Oni}\) is used to draw the addressee’s attention to a referent that is being presented. \(\text{Oni}\) is exclusively used to refer to singular referents. Referents may be held by the speaker (5.226 & 5.227), or referents may be in the speaker’s general vicinity (5.228).

(5.226)  
\[\text{oni} \quad \text{nad'e, ne wue ne,}\]  
EXIST.PROX.SG PROX.SG ART fruit ART  
‘This is the fruit’. (lit. ‘Here is this the fruit’.) (held by the speaker and presented to another.)  
(LP1-111; Speaker: Malvinus  
00:07:52.781–00:007:54.290)

(5.227)  
\[\text{oni} \quad \text{ne wue kenana ne j'e oo.}\]  
EXIST.PROX.SG ART fruit mustard.stick ART then TAG  
‘This plant is the mustard stick’. (held by the speaker and presented to another. The storyteller makes a holding gesture)
Deictic existential verbs

Walker also notes the existence of a plural equivalent, *uhi*. He does not observe it in his own data, but he does observe it in the text of a conversation that was shared with him by Radja Haba. In his example, shown in (5.229), *uhi* refers to two letters which are held by the speaker and are being presented to an addressee. Here, the use of *uhi* parallels that of *oni* in the HDP corpus. Further, the structure of the beginning of the clause resembles (5.228) in that the deictic existential verb occurs clause-initially, and it is followed by *ke* and then the referent. However, similar to Walker, I also do not observe any occurrences of *uhi* in the HDP corpus.

(5.228)  
*oni ke Bu, nani muri ee.*  
EXIST.PROX.SG PRT woman DIST.SG live TAG  
'Here is that woman'. (woman is arriving)

(Walker 1982: 12)

*Nee* is used to locate singular referents that are near the deictic center. The nature of these referents and/or exact position are usually known by the speaker. For instance, in (5.230), the speaker is referring to the place where his brother is sitting. His brother is present in the room listening to him speak, so the speaker can point directly to his location and make eye contact with his brother. *Nee* can also co-occur with *nad’e ‘prox.sg’* to add emphasis to the referent’s proximal position, as in (5.231) which refers to the location of a ring that is in the speaker’s hand.

(5.230)  
*née ma ari yaa,*  
EXIST.PROX.SG ma younger.sibling 1SG  
'Here is my younger brother'.

(5.231)  
*ee, née pa nad’e we oo?*  
hey EXIST.PROX.SG LOCL PROX.SG just oh  
'Hey, here it is'.

As these examples suggest, there is some semantic overlap between *oni* and *nee*. Both can refer to objects held by the speaker and to referents that are near the speaker. It is unclear exactly how the terms differ since *oni* occurs quite rarely in the corpus. However, I suggest that *oni* may be disappearing from the lexicon. The term is only used by a few speakers in the dataset, all of which are elderly men. As such, *nee* may be absorbing the meaning of *oni*, which may also explain the lack of *uhi* in both the HDP corpus and Walker’s data.
Deictic existential verbs

Hee refers to the location of plural referents that are near the deictic center. As with nee, locations referred to by hee are usually visible. Examples (5.231) and (5.232) clearly show the difference between nee and hee. In both, the speaker holds the referent in their arms, and they are presenting it to the addressee. The only difference is how many referents there are. In (5.231), the referent is a single ring while in (5.232), the referents are several articles of clothing and some soap.

(5.232)  
\[
\text{hee exist.prox.pl ma, b’ara pe-gati hee exist.prox.pl ma hab’u ne.} \\
\text{’Here is soap and a change of clothes’.}
\]

kako we ou la j’iu ei.

’Just take a shower’.

(LP1-124; Speaker: Data 00:09:41.211–00:09:45.260)

Nei is used to refer to singular referents that are distant from the speaker. These are usually not visible to the speaker and are associated with a more general location. In both (5.233) and (5.234), the location of the referent is distant and not visible to any members of the conversation. The speaker in (5.233) uses nei to talk about a house that is across town. He has seen it but is not very familiar with what it is used for. Similarly, in (5.234), the speaker refers to a ring’s location, which is under a pillow on a bed in an attic of a distant house. This is the same ring referred to in (5.231), but it is simply in a more distal location.

(5.233)  
\[
\text{nei exist.prox.pl ne èmu, ane naa, èmu dewan ane’.} \\
\text{’There is a house. They say it’s a boardmember’s house’.}
\]

(LP1-073; Speaker: Leonardo 00:11:17.575–00:11:23.545)

(5.234)  
\[
\text{oo, nei pa d’ai nèlu, Nyo.} \\
\text{’Oh, it’s under the pillow, Nyo’.}
\]

(LP1-113; Speaker: Hendrik 00:21:12.690–00:21:14.730)

Finally, hei is used to locate distant plural referents. In (5.235) two dogs are being located near a gate that is outside of the house in which the speakers are located. As with nei ‘dist.sg’, hei generally refers to referents that are not visible to the speaker and that tend to be associated with a more general location.

(5.235)  
\[
\text{la trans toka ne, hei ta b’adu-b’adu we Marua nga Raja [weto ngita], dèu arrivé} \\
\text{trans gate med.sg exist.dist.pl prt bark.cont just M. and R. lest person } \\
\text{[wiu héra],} \\
\text{’At the gate Marua and Raja Weto kept barking lest anyone new arrived.”}
\]

(LP1-123; Speaker: Data 00:16:35.160–00:16:38.680)
Deictic existential verbs

As this discussion has shown, the distinction between proximal and distal deictic verbs resembles the distinction between known and unknown referents in the demonstrative paradigm. Proximal deictic verbs tend to be used to locate referents with certainty while distal deictic verbs tend to be used to locate referents more generally. Further evidence of this resemblance surfaces in questions. Deictic verbs may be used in conjunction with mii ‘where’ to ask the location of referents (5.236). Only distal deictic verbs, nei (5.236) and hei (5.237), are used in this manner. There are no examples of questions asking ‘where’ with proximal nee or hee. One possibility for this may be because if the referent is nearby and visible, its location must be known, which contradicts the need to ask ‘where’ at all.

(5.236) j'e nei pa mii ne têke ri ou.
then exist.dist.sg loc where art keep agt 2sg

‘And where do you keep it’?

(LP1-125; Speaker: Malvinus
00:06:27.500–00:06:28.580)

(5.237) j'e do hei la mii, ina nga ama muu.
then stat exist.dist.pl trans where mother and father 2pl

‘Where did your father and mother go’?

(LP1-124; Speaker: Data
00:02:27.790–00:02:30.380)

There is no evidence of medial deictic verbs. Walker (1982) reports the use of nène ‘med.sg’ and hère ‘med.pl’ which are both used in the utterance in (5.238).

(5.238) "Nène ma ne kuhi pa d'ida keraja b'èhi nad'e. Ègo we ri ou. Boke mariai ne exist.med.sg emph art key loc top cage iron prox.sg fetch just agt 2sg open quickly art kelae d'e,” mi-he a ne. Do hère la nginu ei-loko ko ne dèu do door prox.sg like-prox.pl say stat exist.med.pl trans drink water-river ko art person rel hape j'aa carry 1sg
carry 1sg

“'There is a key on top of this iron cage. You fetch it, (and) quickly open this door,” (he) said. “'The men who carry me are close by getting a drink of water.'”

(Walker 1982: 26)

Walker justifies his interpretation of nène and hère as medial deictic verbs with the following explanation:

In [the first clause] it could be argued that nène represents ‘near the addressee’. The speaker is inside the locked cage without a key, while the addressee is outside with access to the key at the top. [The later use of] hère refers to the men who had gone to get a drink at a nearby house. The context indicates that the men were not in sight at the time of the utterance which suggests that hei ‘be distant from the speaker (and addressee?)’ would be more appropriate. However, it is also arguable that the speaker uses hère here to suggest that the men are close to the addressee in order to encourage his haste in opening the cage.

These medial deictic verbs have not occurred in the HDP corpus. Their absence may be due to the nature of the data, which are largely narrative. There is thus rarely an addressee. However, if indeed, there are no medial deictic verbs, based on my typology of Malayo-Polynesian demonstratives in Chapter 2, Hawu may be considered to have an asymmetric deictic system, as its deictic verb paradigm differs from its demonstrative paradigm.
5.9 Demonstrative adverbs

Both full and short forms of demonstratives can be preceded by the morpheme *mi- ‘like, such as’* which results in what I call here a demonstrative adverb that means ‘like this’ or ‘like that’. These terms may be used to manage discourse, or they may describe the process of an action taking place, the shape of an object, the layout of a space, and a vast number of other applications. Although the forms resemble those within the demonstrative paradigm, demonstrative adverbs seem to have lost much of their association with their demonstrative forms.

Demonstratives preceded by *mi-* are given in Table 5.13. The columns labeled ‘Short’ and ‘Long’ provide how many times the short and long forms of each demonstrative adverb occur in the corpus. Some features of the forms are of note. First, certain forms never occur. In particular, *(na(pa))ne ‘MED.SG’*, *(na)ni ‘DIST.SG’*, *(na)hii ‘DIST.SG’* and *(na)hid’e ‘DIS.PL.KN’* are not preceded by *mi-* in this corpus. Other forms, including *mi-(na)d’e ‘PROX.SG’*, *mi-(na)père*, and *mi-(na)hid’e ‘DIST.PL.INDV’* occur very rarely.

This means that the most frequently occurring forms are *mi-(na)hed’e, mi-(na)he,* and *mi-(na)hère*. Interestingly, all of these terms are plural demonstratives, and two of them are plural, unknown demonstratives. Both short and long forms are acceptable among these commonly occurring forms.

<table>
<thead>
<tr>
<th>demonstrative adverb</th>
<th>Gloss</th>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>mi-(na)d’e</em></td>
<td>singular</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><em>mi-(na)hed’e</em></td>
<td>able to be seen or already known</td>
<td>87</td>
<td>94</td>
</tr>
<tr>
<td><em>mi-(na)he</em></td>
<td>not seen or not already known</td>
<td>126</td>
<td>8</td>
</tr>
<tr>
<td>MED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>mi-(na(pa))ne</em></td>
<td>singular</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>mi-(na)père</em></td>
<td>able to be seen or already known</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><em>mi-(na)hère</em></td>
<td>not seen or not already known</td>
<td>31</td>
<td>177</td>
</tr>
<tr>
<td>DIST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>mi-(na)ni</em></td>
<td>singular</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>mi-(na)hii</em></td>
<td>singular</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>mi-(na)nid’e</em></td>
<td>able to be seen or already known</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td><em>mi-(na)hid’e</em></td>
<td>not seen or not already known</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5.13: Hawu demonstrative adverbs. Numbers in the column labeled “short” indicate the number of times in the HDP corpus in which *mi-* occurs before the short form of the demonstrative. Numbers in the column labeled “long” indicate the number of times in which *mi-* occurs before the long form of the demonstrative.

5.9.1 Morphosyntactic properties of demonstrative adverbs

Demonstrative adverbs are not normally part of the clausal structure. They are usually attached to the end of the clause (5.239).

(5.239) *ta era ke ta déka he-ngi’u dob’oho.*

PRT EXIST PRT PRT come one-CLF snake

‘There is a snake’.

*aad’o* *la* *pe-merè* *ne, domad’a.*

ah PRT TRANS CAUS-wake.up ART squirrel

‘(It) comes to wake up the squirrel’.

La *pe-kèb’ade domad’a *mi-nahère.*

TRANS CAUS-startle squirrel like-MED.PL.UKN

‘to startle the squirrel, like that’.

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Demonstrative adverbs may also be used to refer to previously referenced events in discourse. In such instances, the demonstrative adverb is inserted after a transition word such as d’ai or j’e ‘then’ (5.240), éla ‘PRF’ (5.241), or ki do ‘if’ (5.242). All constructions are used as a transition from one event to the next in a story and may be roughly translated to ‘then like this/that’ or ‘after this/that’.

(5.240) ta d’ai mi-nahed’e ta lèka ke ri pèd’a ne ina d’e.
PRT then like-PROX.PL.KN PRT sick PRT AGT illness ART woman PROX.SG
‘Then like this, the mother gets sick’.

(5.241) éla mi-nahère kiri do wae ne ana mubèni d’e b’ale ri ma d’ue têlu lod’o
PRF like-MED.PL.UKN if STAT accept ART child woman PROX.SG return AGT CIS two three day
‘After that, if it (the gift) is accepted by the woman, they will return two or three days later’.

(5.242) hekola we ri ou ari ou d’e.
school IMP AGT 2SG younger.sibling 2SG PROX.SG
‘You just teach your sister this’.
owe ki do mi-nahère mai la ro’a hangalui la nii wèba aru b’ènyia e
yes if STAT like-MED.PL.UKN come TRANS hole creek TRANS DIST.SG hit eight morning
nèb’o.
IRR
‘Then if it’s like that, tomorrow morning at 8 just come into the small river over there’.

On rare occasions, demonstrative adverbs may act as verbs as indicated by surrounding verbal particles such as ta or ke (5.243).

(5.243) ta tale ne b’unga d’e.
PRT tie ART flower PROX.SG
‘Tie the flower design’.
hèku jad’i noo ta mi-hed’e
so become 3SG PRT like-PROX.PL.KN
‘So it becomes like this’.

((Yanti 2018) 2018hvn-CON-006; Speaker: Margarita
00:02:39.220–00:02:41.300)
5.9.2 Semantic properties of demonstrative adverbs

Demonstrative adverbs tend to refer to action or states, which are not usually referents that can be located in space. For instance, in the above examples, the demonstrative adverbs are used to refer to the acts of startling a squirrel, getting sick, and offering a gift. In addition to referencing actions, the demonstrative adverbs in these examples also serve an anaphoric function by linking events in discourse. However, demonstrative adverbs may also refer to the shape, size, or other properties of a referent, which can be located in space. This is the case in (5.243) in which the woman is referring to a weaving design that she is holding in her hands.

Considering these various and largely non-spatial uses of demonstrative adverbs, much of their study is beyond the scope of this work. However, I briefly discuss demonstrative adverbs, because they do seem to retain some slight relationship with the semantic parameters in the demonstrative system. In particular, distance from speech event participants seems to motivate choice of demonstrative adverb. In the following sections, I describe the rarer demonstrative adverbs first. Then I describe features of the more common demonstrative adverbs.

5.9.2.1 Singular demonstrative adverbs

Number is not a feature that is commonly coded by demonstrative adverbs. Singular demonstratives (na)d'e, (na(pa))ne, and (na)nii are nearly never used with mi-. There are just two instances total in the data of a singular demonstrative adverb, mi-d'e, and there does not appear to be any motivation for the choice to use it instead of one of the plural counterparts, mi-(na)he or mi-(na)hed'e. It is even possible that the speaker simply shortened mi-hed'e 'like-prox.pl.kn' to mi-d'e 'like-prox.sg'.

However, in both examples of the use of mi-d'e (5.244 & 5.245), speakers are referring to the physical properties of a referent that they are demonstrating through a representational gesture that they produce as they say mi-d'e. For instance, as the speaker talks about tying the edges of a basket together to contain the palm wine in the following example (5.244), he gestures in a way that represents the shape of the basket when it is secured, shown in Figure 5.7.

![Figure 5.7: Rihi gestures as he produces the utterance in (5.244) to show the shape of the basket when its edges are tied together.](image)

(5.244)  
\text{ta} \text{ u'je} \text{ ke.} \\
\text{PRT} \text{ tie} \text{ PRT} \\
‘Then it’s tied’. \\
\text{u'je, mi-d'e} \text{ jad'i} \text{ ta, ... ta} \text{ kewore ne.} \\
tie \text{ like-prox.sg become PRT ... PRT circle ART} \\
‘(It’s) tied like this so that it becomes like a circle’. 

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Similarly, when the speaker in (5.245) uses *mi-d’e* to refer to the size of the threads, she brings her index finger and thumb together to make a circle, representing the circumference of a thread, shown in Figure 5.8.

![Figure 5.8: Paulina brings index finger and thumb together in a circle to indicate the circumference and size of a thread (Example (5.245))](Image)

(5.245) maha ama ee do, logo wëngu hudi-hudi mi-d’e ri.
expensive brother TAG STAT because thread small.SUP like-PROX.SG AGT
‘Yeah, it’s expensive, brother, because the threads are small like this’.

In both examples, the speakers are referring to the gesture, which is produced directly in front of them, with the use of *mi-d’e*. However, the accompaniment of a gesture is not unique to the use of *mi-d’e*. Gestures can occur with all demonstrative adverbs which will be briefly addressed in the remainder of this section.

### 5.9.2.2 Distal demonstrative adverbs

Distal demonstrative adverbs are also rarely used. There are just two examples of the use of *mi-hid’e*, and both are uttered by the same speaker in reference to the same referent. In both (5.246) and (5.247), the speaker, a character in a story, is referencing a beautiful woman that he has met. She is presumed to be quite distant; neither speaker knows her location or if they’ll ever see her again, so they use *mi-hid’e* ‘DIST.PL.INDV’ to emphasize this physical and personal distance. Why *mi-hid’e* is used in no other contexts where the speaker refers to a distant referent is unclear. But its rare usage may suggest that *mi-hid’e* may only be used in contexts where a great distance is emphasized, where for instance, the referent is so far it is unattainable. In this instance, the speaker seems to reference this unattainable distance by referring to the woman as an angel, a spiritual being. Unfortunately, this recording was not recorded with video, so it is not possible to observe the corresponding gestures.

(5.246) pengéd’i nga nona do bëni, ie mi-hid’e ke j’e oo.
meet with young.woman REL woman good like-DIST.PL.INDV PRT then oh
‘Because I have already met with a beautiful angel like that’.
Demonstrative adverbs

(5.247)  
[wata ta do kura ngaja, ma ama ou nga a’a ou oo.  
when PR  ST  AT  very rude  CIS  father 2SG and older.brother 2SG  oh  
‘Your father and older brother are really rude’.  

pengèdi nga mubèni do bèni, ie do mi-hid’e ke.  
meet and woman  ST  woman  good  REL  like-DIST.PL.INDV  PR  
‘When you meet a girl that is beautiful like that’.

5.9.2.3 Medial demonstrative adverb: Mi-(na)père

Mi-(na)père 'MED.sg.kn' is also used quite rarely with only four total instances of the demonstrative adverb. However, it retains a clear connection to its medial meaning, in particular its connection to the addressee. Mi-(na)père is only used in situations where the speaker is talking directly to the addressee; they may be giving an order (5.248) or referring to something that the addressee is doing (5.249).

(5.248)  
[eba-èba bara do, nga d’èlu do bèla mi-père we.  
bring.red  ANIM  WITH  STOMACH  REL  like-MED.PL.KN  IMP  
‘Bring me an animal with a stomach that is big like that’.

LP1-113; Speaker: Hendrik  
00:08:38.660–00:08:43.040)

(5.249)  
["ki mi-napère we ae muu" mihane. "parahuma muu," mihane.  
if like-MED.PL.KN  IMP  LARGE  2PL  SAY  fail  2PL  SAY  
‘If you are that many,’ he says, "you will fail," he said’. (lit: ‘If just like that your numbers” (he) says, “you fail” (he) says’)  

(LP1-107; Speaker: Jonathan  
00:07:18.837–00:07:23.020)

The utterance in (5.248) is a command, and as I discussed in §5.7.3.5, the medial demonstratives are commonly used in commands. This may be to imply proximity between the referent and the addressee. In this example, mi-père refers to the size of the stomach that the speaker hopes to obtain from the addressee, so there is a non-physical relationship between the addressee and the stomach. Conversely, the utterance in (5.249) demonstrates physical closeness to the addressee. Here, mi-napère refers to a group of crocodiles. A monkey is speaking to these crocodiles and saying that their numbers will not allow them to win the fight. Both of these examples thus show that whether the proximity to the addressee is physical or non-physical, there is a clear association between the action and the addressee, which leads to the usage of mi-(na)père.

5.9.2.4 Common demonstrative adverbs

By far, the most commonly occurring demonstrative adverbs are the proximal and medial plural forms: mi-(na)hed’e, mi-(na)he, and mi-(na)hère. There are a few things of interest to note with these terms. First, there is asymmetry in the frequency of the full and short forms. Both the long form (mi-nahed’e) and
the short form (mi-hed’e) of the prox.pl.kn demonstrative adverb are used with rather equal frequency. Between mi-nahe and mi-he ‘prox.pl.ukn’, the short form is used vastly more frequently while between mi-nahère and mi-hère ‘med.pl.ukn’, the long form is used vastly more frequently. There seems to be no motivation for whether speakers employ long or short forms.

Second, although the base demonstratives are plural forms, the terms do not necessarily refer to plural referents. They can refer to both singular (5.250) and plural (5.251) referents.

(5.250) he-dèu do pasti pa [haba tenae] do worena mi-hed’e.

‘Each person must (drink) from a haba tenae that is big like this’.

(LP1-158; Speaker: Marten 00:01:30.578–00:01:33.378)

(5.251) Era dèu d’ai nga do warna-warna mode-mode do mi-nahed’e.

‘There are people who like colors and styles like these’.

((Yanti 2018) 2018hvn_CON-006; Speaker: Margarita 00:04:32.704–00:04:36.173)

Demonstrative adverbs are often used to refer to actions or events (5.252), so usually number is rarely a factor in which demonstrative adverb is used.

(5.252) ègu ngapi, j’e ngapi mi-nahed’e.

‘Take the ngapi then clamp it like-prox.pl.kn’.

(LP1-037; Speaker: Rihi 00:01:51.887–00:01:53.786)

Third, although demonstrative adverbs do not seem to encode number, perceived closeness—either through physical proximity, metaphorical proximity, or familiarity—may influence why a speaker might choose proximal demonstrative adverbs (mi-nahed’e and mi-nahe) over the medial demonstrative adverb (mi-nahère). Based on the demonstrative base of each form, one would expect the former two to refer to proximal referents and events while the latter should refer to distal referents.

This seems to be somewhat supported. Mi-(na)hed’e and mi-(na)he occur more commonly in genres in which the speaker is showing a process or describing their daily activities (5.253). In particular, if a speaker holds or touches the referent, they were more likely to also produce a proximal demonstrative adverb. However, it also seems that if the speaker represents the referent or reenacts the action through gesture, they are also more likely to use a proximal demonstrative. Within the corpus, if the speaker produces a representational or deictic gesture in conjunction with a demonstrative adverb, it is produced with a proximal demonstrative adverb. Representational and deictic gestures are those that are semantically related to the content of the speech. For instance, in Figure 5.9 and Example (5.253), Daniel produces a gesture that demonstrates how he slices palm fruit. As he produces this gesture, he also says mi-nahed’e ‘like-prox.pl.kn’. These gestures serve to situate the object or action in the vicinity of the referent, which may encourage the use of a proximal demonstrative adverb.

(5.253) mi-nahed’e ne cara èta ne like-prox.pl.kn art way slice art

‘Slice it (the palm fruit) like this’.
Demonstrative adverbs

Figure 5.9: As he says *mi-nahed’e*, Daniel produces a gesture that demonstrates how he slices palm fruit (Example (5.253)).

Figure 5.10: Ridolof produces a gesture that shows the height of a kekapi basket as he uses the demonstrative adverb *mi-he* (Example (5.254)).

Similarly, in Figure 5.10 and Example (5.254), Ridolof is talking about filling a kekapi basket with palm wine. As he speaks, he demonstrates the height of the kekapi and thus how high it is filled. In conjunction with the gesture, he uses the demonstrative adverb *mi-he*.

\[
\begin{align*}
(5.254) & \quad \text{pa kekapi do beka do d'ida mi-he j'e ihe ri,} \\
& \quad \text{loc k.o.basket rel fill rel on like-prox.pl.ukn then fill agt} \\
& \quad \text{‘In a kekapi that is filled to the top like this’}.
\end{align*}
\]

In contrast, the medial demonstrative *mi-(na)hère* was only produced with interactional or beat gestures. These gestures do not relate to the semantic information in speech but rather serve to manage discourse or reflect prosodic cues.

The role of perceived closeness in demonstrative choice may be linked to a more general tendency for discourse context and time to play a large role in distinguishing between these commonly-used demonstrative adverbs. Proximal demonstrative adverbs, *mi-(na)he* and *mi-(na)hed’e*, tend to refer to referents that are close in time or discourse, such as present time or the current topic within the discourse.
Demonstrative adverbs

(5.253) Meanwhile, the medial demonstrative adverb tends to refer to referents that are more distant in time or discourse, such as past time (5.257) or previous topics within the discourse (5.256). This is worth further investigation, but unfortunately, it is beyond the scope of this study.

(5.255) **ta d’ai mi-nahed’e, ta d’ute ke pa era b’ei ama noo.**
\[\text{PR}t\ \text{then}\ \text{like-PROX.SG.KN}\ \text{PRT}\ \text{pour}\ \text{PRT LOc}\ \text{place sleep father 3SG}\]
‘Then like this, (the slave) pours it on the father’s bed’.

(20190713_STORY-01_hvn; Speaker: Noh 00:14:40.901–00:14:44.642)

(5.256) **mi-nahère we ne lua keb’ali yaa**
\[\text{like-MED.PL.UKN just ART matter question 1SG}\]
‘Just like that, all of my questions’.

(LP1-158; Speaker: Marten 00:04:27.167–00:04:29.654)

(5.257) **mi-hère ne [muri namada] j’ii**
\[\text{like-MED.PL.UKN DET life 1PL.EXCL}\]
‘Our life was like that (in the past)’.

(LP1-158; Speaker: Marten 00:04:27.167–00:04:29.654)

These differences between proximal and medial demonstrative adverbs suggest that they have retained some spatial meaning. Proximal demonstrative adverbs are more likely to be produced when the referent (whether a physical referent or an action) is close in physical space, gesture space, time, or discourse. Meanwhile the medial demonstrative adverb tends to be used when the referent (whether a physical referent or an action) is farther away in physical space, gesture space, time, or discourse. Still, these commonly-used demonstrative adverbs do not convey information about plurality.

Interestingly, there are two recorded instances of what consultants call the fullest form of **mi-nahère MED.PL.UKN’** which is **mi-napuhère**. It arises by two different speakers who are taking part in the same conversation. Its context is shown in (5.258) and (5.259). It does not seem to vary in meaning from its shorter forms.

(5.258) **Mi-napuhère do petèke rowi Muri.**
\[\text{like-MED.PL.UKN REL defy because God}\]
‘That’s what happens if we defy God’s orders’.

(LP1-041; Speaker: Paulina 00:10:47.680–00:10:49.825)

(5.259) **menyaha we dìi do era.**
\[\text{regret IMP 1PL.INCL STAT exist}\]
‘We must regret it’.
\[\text{tao mi-napuhère}\]
\[\text{do like-MED.PL.UKN}\]
‘(If) we do like that’.

(LP1-041; Tukahae Thomas 00:12:38.110–00:12:41.005)
5.9.3 Summary of demonstrative adverbs

Demonstrative adverbs are formed when mi- ‘like, such as’ precedes a demonstrative. They are used frequently in natural speech, and they rarely form part of the syntactic structure of the clause. Rather, they tend to be appended onto the beginning or end of the clause. Demonstrative adverbs may be used to refer to properties of a referent or to demonstrate an action. However, the vast majority of demonstrative adverbs are simply used to affirm statements and organize discourse.

As a result, they seem to have little relationship to the meanings of the demonstratives themselves. In particular, number and speaker knowledge seem to have little connection to the demonstrative bases. Instead, proximity, familiarity, certainty, or speaker knowledge seem to be associated with proximal demonstrative adverbs (mi-(na)hed’e and mi-(na)he) while distance and lack of familiarity, certainty, or speaker knowledge seem to be associated with the medial demonstrative adverb (mi-(na)hère). Thus, while demonstrative adverbs seem to have little association with their base adverbs, proximity has been maintained.

This discussion has been quite general, simply describing a few of the patterns and traits of demonstrative adverbs. Future study with a focus on discourse structure may be able to better untangle some of the complexities of demonstrative adverbs.

5.10 Spatial orientation

Hawu has four terms that seem to reference cardinal directions: dimu, wa, lou and d’ae. Each term refers to a general area which roughly translates to the 90 degree quadrants depicted in Figure 5.11. An example containing each of these directionals is given in (5.260).
Figure 5.12: Two villages in Hawu Dimu. B’od’ae village is in the northern (or b’od’ae) part of the region while B’olou is in the southern (or b’olou) part.

(5.260) Tèlu ngi’u, mengad’a la bara-dimu, he-ngi’u la b’o-lou, he-ngi’u la b’o-d’ae, he-ngi’u la bara-wa,
three clf face TRANS toward-east one-clf TRANS toward-south one-clf TRANS toward-north one-clf TRANS toward-west
‘There are three pigs facing east, one of them facing north, one facing south, and one facing west’.

(LP1-046; Basianto Lede Lay
00:00:54.150–00:01:03.520)

The terms, dimu and wa, are reflexes of PMP monsoon terms. Wa derives from PMP ‘habaRat ‘west monsoon’ while dimu derives from PMP ‘timuR ‘east monsoon’ (Blust & Trussel 2010). They are also synonymous with the names for the islands that lie to the east and west of Sabu—dimu for Timor island and wa for Sumba island.

The terms lou and d’ae stem from a historical land-sea axis. Lou likely derives from PAN ‘lahud ‘seaward’ and d’ae from PAN ‘daya ‘landward’. It appears that despite its toponymic origins, the lou-d’ae axis is a cardinal axis with little association with the landscape itself. Although lou still means ‘deep sea’, speakers more commonly use the more general term, dahi ‘sea’ to refer to the sea. D’ae is never used in the data outside of the context of absolute directionals. Rather, speakers more commonly use lede ‘mountain’ to refer to the interior regions.8

Directionals can be distinguished from their corresponding toponyms by the presence of either bara- or b’o- preceding the directional term. The directionals dimu and wa are preceded by bara- while lou and d’ae are preceded by b’o-. The origin of these prefixes remains unclear. The prefix b’o is never used elsewhere in the language. The only other usage of the term is in two place names called B’olou and B’od’ae that are located in Sabu Dimu. They seem to be related to the directional terms in some way since B’olou is in the b’olou (southern) part of Sabu Dimu, and B’od’ae is in the b’od’ae (northern) part. The locations of these villages are shown in Figure 5.12.

The prefix bara is used elsewhere to mean ‘direction’ or ‘side’. Both interpretations may explain why it precedes dimu and wa. It may be a simple directional term indicating ‘in the direction of the east/west’, but because bara only precedes dimu and wa it may very likely mean ‘side’. Hawu speakers living in the Seba-speaking region sometimes refer to their island using assigned intrinsic properties, (see §5.12 for more information), and Sabu Dimu and Sabu Mehara are the east (dimu) and west (wa) sides respectively.

8To my knowledge, neither lede nor dahi are used in a systematic directional system. They are only employed as toponyms.
As a result of this categorization and conceptualization of the island, *bara* may literally mean ‘side’ in the context of *bara-dimu* ‘the east side’ and *bara-wa* ‘the west side’.

Regardless of their precise meaning, the particles *bara* and *b’o* indicate that the following morpheme is part of the absolute directional system. Without these preceding particles, the words act as regular toponyms and not as part of the directional system. The contrast is shown in the following examples. In the former (5.261), *lou* refers to the southern region of the island which forms part of the king’s territory. In the latter (5.262), *lou* is not preceded by *b’o*. Rather it follows the locative *pa* which marks *lou* as a location, the location of the deep sea.

(5.261) duae ma ke nèb’o do nga rai pereda. bara-wa bara-dimu, b’o-d’ae, b’o-lou.
	
toward-south
	
‘He is also the king, of many territories of the west, east, south and north’

(LP1-138 00:06:38.540–00:06:41.660)

(5.262) do mara ko pa lou ne.
	
‘The deep sea was receding’.

(LP1-107; Speaker: Jonathan 00:05:21.331–00:05:22.331)

Speakers living on the northern coast of Sabu use *b’olou*, etymologically ‘toward the sea’, to refer to the south or towards the interior of the island and *b’od’ae*, etymologically ‘towards the land’, to refer to the north or towards the sea. This apparent paradox may suggest that the axis was developed by a historical population located on the southern coast of Sabu. For this population, the sea was located toward the south and the island interior to the north, which coincides with the toponymic meaning of the *lou-d’ae* axis. It appears that eventually, this geocentric axis was adopted by people on the northern coast at a point when the terms were already semantically bleached. This is supported by data provided by Duggan who confirmed that on the southern shore of Sabu, *lou* consistently points south towards the sea and *dae* is oriented north towards the hills. Here the terms correspond with their etymological origins and have the same absolute direction as their use on the north shore of Sabu. *B’aradimu* and *b’arawa*, similarly, no longer retain their monsoon wind-based meaning. Rather, to speakers, they are rooted in the islands of Sumba and Timor. *Dimu* is additionally the eastern region of Sabu and a distinct dialect of Hawu.

These data were derived using several methods. Ideally, I would have conducted spatial elicitation tasks that controlled for speaker orientation in various locations on Sabu island. However, this was impossible due to restricted travel as a result of the COVID-19 pandemic. Instead, I base this analysis on conversations that I had with people when I was in Sabu and on natural speech data. When I was in Sabu, I asked several speakers about directions. These speakers tended to assign directions as depicted in Figure 5.11, though there was some variation. Younger people tended to be less sure than older people, and in these conversations, some people seemed aware of the relationship between *b’olou* ‘south’ and *lou* ‘deep sea’ which led to the disagreements on the orientation of the two. I marked these directions on maps as we spoke. I then compared these data to how people used these terms in natural speech and the direction toward each referenced location based on the speaker’s position. This was determined either through a vector implied in speech that grounded the directional in the physical world (e.g. an utterance such as ‘towards Mehara in the west’) or through a pointing gesture that corresponded with the
absolute directional (data suggest that speakers point to the absolute locations of referents, which will be
discussed in Chapter 6). To do this, I searched the corpus for each reference to an absolute directional
term and recorded which direction the speaker was referring to. Reference to cardinal directions was
included in stories about one’s life, a life event, a description of daily activities, descriptions of cultural
practices, and direction giving. Reference to cardinal directions in folkstories was excluded because the
exact setting of the stories is often unclear. References to cardinal directions in elicitation tasks such as
Man and Tree (Levinson et al. 1992) and Route Description Elicitation (Wilkins 1993) were considered only
to supplement absolute reference in natural speech since speakers were rarely comfortable with the use
of absolute directionals in such tasks.

What became clear through these methods is that orientation on an absolute scale is employed rarely
in natural speech. In spatial elicitation contexts in which speakers are forced to use the terms, speakers can
be unsure. For instance, in the above example (5.260), taken from the Man and Tree task, the speakers use
absolute directionals, but because they wanted to make sure they did not make any mistakes, before
completing the task, they consulted other Hawu speakers as to the direction of each directional. There
was a lengthy and heated discussion before the speakers finally agreed to go with one speaker’s intuition.

Because of the varied locations in which these data were collected, I assume these results to be
representative of absolute spatial orientation of speakers living in the Seba-speaking region on the northern
part of the island. I then compared my own data to that in Duggan & Hägerdal (2018), and I also personally
communicated with the researcher. Duggan confirmed that on the southern shore of Sabu, *lou* consistently
points south towards the sea and *dae* is oriented north towards the hills. Here the terms correspond with
their etymological origins and have the same absolute direction as their use on the north shore of Sabu.
While this is not the ideal method for determining spatial orientation, it was the most reliable method
given my inability to personally conduct research.

### 5.11 Left vs. right

It has been reported that many Austronesian languages make limited use of ‘left’ and ‘right’, often reserving
them for the description of the asymmetries of the body or for referents that are touching or in very close
proximity to a human body (Bril 2004, Johnson 2014:201). This is also how ‘left’ and ‘right’ seem to behave
in Hawu. The terms for left and right, *keriu* and *ked’anga*, are employed relatively sparingly. Based on
data in the HDP corpus, Hawu speakers do not extend ‘left’ and ‘right’ beyond their bodies, and they do
not assign objects their own intrinsic left and right.

*Keriu* and *ked’anga* may differentiate body parts on either side of the body as shown in Examples
(5.263) and (5.264).

(5.263)  
*ta hi’i ke ri naiki do d’ue dèu nahed’e,*  
  PRT search PRT AGT child REL two person PROX.PL.KN

‘These two children searched (for the lice),’

*he-dèu ti wodilu ked’anga.*  
  one-CLF SOURCE ear right

‘one from the right ear,’

*he-dèu ti wodilu keriu.*  
  one-CLF SOURCE ear left

‘one from the left ear’.

(LP1-105; Speaker: Paulina  
00:02:51.260-00:02:53.040)
(5.264) ta ale we dèu,
  PRN rare just person
  ‘rarely people,’
  dèu mone ked’anga j’e i’a èpi.
  person man right then can wind
  ‘(who are) right-handed men can wind (it)’

(LP1-146; Speaker: Jonathan 00:02:54.630–00:02:55.530)

The terms may also refer to the body’s movement. However, all movement to the left or right is angular, meaning that the center axis is a point on the body, and the body or body part shifts orientation in the leftward or rightward direction around this axis. People never “go left” or “go right.” Rather they “go straight” after turning left or right. A person may turn their entire body to the left or right, or, as shown in (5.265), just the head may turn to the right and to the left.

(5.265) kako nga, jaga-jaga j’e ou mihane. keb’ib’a ked’anga keriu.
  go with careful-EMPH then 2SG say glance right left
  “Then go and be careful,” he says. ”Look right and left.”

(LP1-113; Speaker: Hendrik 00:04:47.421–00:04:51.490)

In (5.266), just the arm is moving in a leftward direction.

(5.266) ad’o do èpi mi pa tima.
  NEG STAT spin like LOC usual
  ‘(It’s) not spun as usual’.
  do èpi b’ale keriu.
  STAT spin return left
  ‘(It’s) spun to the left’.

(LP1-146; Speaker: Jonathan 00:02:42.521–00:02:45.320)

There is just one example where the use of ked’anga extends beyond the speaker’s body, which is shown in (5.267). This example is interesting for several reasons. First, this is the only instance where ked’anga or keriu is preceded by ai ‘hand’. Second, the use of ked’anga does not refer to the asymmetries of the speaker’s own body. This may be because the speaker is telling a story. He seems to be taking the perspective of the main character. In the context of this story, the main character is choosing one of three princesses to be his wife. They are lined up before him, and he is choosing based on looks only. As the narrator speaks, he visualizes the three women before him, and using his right hand, he points to the left side of his own body (Figure 5.13). This suggests that although he is taking on the perspective of the main character, he is also adopting the left and right of the women. Through this example it seems that although ked’anga and keriu are usually reserved to refer to the asymmetries of the speaker’s own body, speakers may also use them to refer to the left and right of other people’s bodies.

(5.267) do mèjad’i pa ai ked’anga, d’enge ne bèni a’a d’e.
  STAT sit LOC hand right directly ART woman older.sibling PROX.SG
  ‘the oldest sister sitting on the right hand’.
5.12 Topological relations

Hawu has a number of relational terms that may be used to locate a figure in reference to a ground. ‘Figure’ refers to the object whose location is of interest while ‘ground’ refers to the object being used to locate the figure (Zlatev 2007). These include terms such as ‘front’ and ‘back’ or ‘on’ and ‘under’. I call these terms relational terms or topological relations, and in this section I describe the details of their semantics and use. Here I used the same broad corpus approach that I used to study absolute directionals and demonstratives. I identified each occurrence of each term discussed in this section, and my discussion is based on the patterns of their use.

Speakers may use relational terms within an intrinsic or (rarely) a relative FoR. However, note that while I reference FoR throughout these discussions, this chapter is not meant to analyze Hawu spatial cognition and how this relates to FoR—study of this would require elicitation tasks that carefully control for the speaker’s position in space and their relationship to the referents. Rather, FoR is part of my analysis to help describe the use and meanings of relational terms.

Although the information in this section is based on the analysis of all occurrences of these words within the Hawu corpus, I consulted elicited utterances in response to the Topological Relations Picture Series task (Bowerman & Pederson 1992) to elucidate confusing patterns. Because of the clear nature of these examples, I also give them as examples since these are representations of the clearest canonical usages of these terms.

Hawu speakers employ at least twelve terms to express topological relations. Alongside demonstratives, these are the most common way to express spatial relations within the HDP corpus. Terms are given in Table 5.14, and each will be discussed in more detail.

The terms *d’ida* ‘on’, *kolo* ‘top’, and *d’a’i* ‘under’ are defined by the figure’s vertical relationship with
Topological relations

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>d'ida</td>
<td>‘on’ (figure must have contact with ground)</td>
</tr>
<tr>
<td>kolo</td>
<td>‘top, tip’ (intrinsic property of an object: hill, tree, ocean, rock, mountain, spear, etc.)</td>
</tr>
<tr>
<td>pemira</td>
<td>‘in line with’ (either vertically or horizontally)</td>
</tr>
<tr>
<td>d'a'i</td>
<td>under, below (contact between figure and ground not necessary)</td>
</tr>
<tr>
<td>d'ara</td>
<td>‘in, inside’</td>
</tr>
<tr>
<td>telora</td>
<td>‘middle, center’</td>
</tr>
<tr>
<td>pekewero</td>
<td>‘around, surround’</td>
</tr>
<tr>
<td>keraha</td>
<td>‘side’</td>
</tr>
<tr>
<td>peumu</td>
<td>‘near’</td>
</tr>
<tr>
<td>j'èu</td>
<td>‘far’</td>
</tr>
<tr>
<td>hed'apa</td>
<td>‘in front of’ (relationship between figure and ground) or ‘front’ (intrinsic property of ground)</td>
</tr>
<tr>
<td>kej'unga</td>
<td>‘behind’ (relationship between figure and ground) or ‘back’ (intrinsic property of ground)</td>
</tr>
</tbody>
</table>

Table 5.14: Relational terms used to refer to the spatial relationship between a figure and a ground

The term d'ida ‘on’ can only be used if there is contact between the figure and the ground (5.268).

![Figure 5.14: The term d'ida is used to describe the relationship of the plate in reference to the table. The plate is in contact with the table and higher than the tabletop (Example (5.268))](image)

(5.268) pa d'e, era he-wue gaba, nga he-wue gaj'o, pa d'ara piri, pa d'ida he-wue meja.

Loc prox.sg exis one-clf picture with one-clf glass loc in plate loc on one-clf table

‘Here, there is a picture and a glass on a plate on a table’.

(LP1-049; Speaker: Naomi 00:00:14.200–00:00:30.840)

If there is no contact between the figure and the ground, pemira ‘in line with’ is used instead. However, pemira may be used to describe a vertical relationship between a figure and a ground (5.269), or it can also refer to a horizontal relationship between them (5.270). What is important to the definition of pemira is not the axis of the vector between figure and ground but rather the fact that a straight line can be drawn between them.
Figure 5.15: The term *permira* 'in line with' is used to describe the position of the light in relation to the table. *Permira* is appropriate because the light is above the table, and there is no contact between them (Example (5.269)).

(5.269)  
\[
\text{era he-wue meja ub’araka èpa?} \\
\text{exist one-clf table rectangle four} \\
\text{‘There is a rectangular table’}.
\]
\[
\text{nga lapu do ketoe, permira nga meja ne.} \\
\text{with lamp rel hang in.line with table art} \\
\text{‘And a lamp that is hanging in line with the table’}.
\]

(LP1-049; Speaker: Naomi  
0000:02:23.560–00:02:29.900)

Figure 5.16: The term *permira* ‘in line with’ is used to describe the relationship between the two men. They are not touching, but a straight line can be drawn between them.

(5.270)  
\[
\text{era do d’ue dèu momone do titu nga èmi kaji. do titu permira.} \\
\text{exist rel two person man stat stand with hold staff stat stand in.line} \\
\text{‘There are two men that are standing side by side with staffs’}.
\]
The term *kolo* ‘top’ is used to refer to an intrinsic upper part of the ground, (5.271); common grounds include mountaintops, treetops, speartips, rock tops, tops of heads, and fingertips. As some examples—such as fingertips and speartips—suggest, *kolo* does not necessarily refer to the vertical top of a referent. Rather, it might also be translated as ‘tip’ which could be perceived as the most important or most mobile end of the ground.

(5.271) \[ j'e \ b'al e \ m a \ r a i \ k'et u \ kolo \ lede. \]
then return cis land head top mountain
‘Then he arrived on the mountaintop’.

(5.272) \[ ta \ mej'edi\ ke \ noo \ pa \ kolo \ wowadu \ ne, \]
PRT sit PRT 3SG LOC top CLF-rock ART
‘She sits on the top of a rock’.

*D’a’i* ‘bottom, below’ describes a figure that is vertically lower than the ground. It may be used whether there is contact between the figure and the ground or not and can refer to both a relationship between objects (5.273) or an intrinsic part of an object itself.

Figure 5.17: 'The term *d’a’i* may be used to describe the position of the ball in relation to the chair (Example (5.273)).

(5.273) \[ pa \ d’a’i\ k ed era \ ne,\ era \ he-wue \ bola. \]
LOC under chair ART exist one-CLF ball
‘Under the chair there is a ball’.
D’ara ‘interior, inside’ may refer to the location of a figure that is confined by a ground on all or several sides. Some common grounds that the term d’ara may describe include: sea, village, basket, house, island, day, garden, plate etc. Common among these objects is that they may be perceived to enclose a two or three-dimensional space within their boundaries, whether these boundaries are tangible or intangible. An example of a figure enclosed by physical boundaries within a three-dimensional space is given in Figure 5.18 and (5.274).

![Figure 5.18: The term d’ara ‘in, inside’ may describe the lamp’s position in relation to the room. The room is enclosing the lamp within a three dimensional space (Example (5.274)).](image)

(5.274)  
\[
\text{pa } \text{d'ara } \text{he-wue } \text{kama era} \text{ he-wue } \text{lapu} \\
\text{LOC in one-CLF room EXIST one-CLF lamp}
\]

‘In a room there is a lamp’.

(LP1-049; Speaker: Naomi 00:01:24.420–00:01:28.200)

Telora ‘middle, center’ differs from d’ara because it marks a figure’s location in the exact center of the boundaries the ground (5.275). It is possible for this center to be a metaphorical one; the word for ‘midnight’ literally translates to ‘middle of the night’ (5.276) which is defined by the nonphysical boundaries of the sun rising and setting. The boundary of the ground may also be fluid. It may be something that moves or only exists temporarily. For instance, in (5.277) a circle of pigs surrounds the figure and serves as the ground.

(5.275)  
\[
\text{ki mubëni noo, peja’e pa } \text{telora kopo}.
\]

‘If she is a woman, put her in the middle of the room’.

(LP1-061; Speaker: Matobo 00:11:17.485–00:11:18.598)

(5.276)  
\[
\text{telora } \text{mèd’a}
\]

‘midnight’
The opposite of d’ara and telora is pekewero ‘around, surround’. This is used for figures that partially or entirely enclose a ground (5.278) either in a two-dimensional or three-dimensional space.

(5.278) **tanga ri ta la èba j’e,**

take AGT PRT TRANS ash then

‘She took the ashes. Then’

**pekewero mi-hed’e ne kepue, wèga do hèle pa hed’apa èmu ne.**

around like-PROX.PL.KN ART tree k.o.tree REL stand LOC front house ART

‘put them around the tree in front of the the house’.

(LP1-125; Speaker: Malvinus

00:15:20.730–00:15:25.710)

As mentioned in §5.11, ked’anga ‘right’ and keriu ‘left’ are not used to refer to the relationship between a figure and a ground beyond the body, nor are they assigned to non-human referents. If a figure is to the left or right of a ground, the more generic keraha ‘side’ (5.279) is used.

(5.279) **d’ai ata d’ai keraha SMA èhi dab’o teru hape la lede**

then turn then near high.school one go.past straight until TRANS mountain

‘Then turn beside High School One, (and) keep going straight until the hill’.

(LP1-073; Speaker: Naomi

00:02:56.202–00:03:00:393)

To focus on distance between the figure and ground as opposed to the angularity of their relationship, speakers may employ peumu ‘near’ (5.280) or j’èu ‘far’ (5.281).

(5.280) **parii ja ko we?**

when hour TAG just

‘Just a few hours later,’

**ta era d’ènge ke he-we kapa?**

PRT EXIST immediately PRT one-CLF ship

‘there is a ship’

**do ihilaka peumu nga, rai do napane?**

REL sink near with island REL MED.SG

‘that sinks near the island’.

(LP1-093; Speaker: Naomi

00:02:27.728–00:02:30.715)
The terms *hed’apa* ‘front’ and *kej’unga* ‘back’ seem to be able to be used in both an intrinsic and a relative sense depending on the nature of the ground. Certain referents—such as people, houses (5.282), chairs, and cars (5.283)—have intrinsic fronts and backs. When these serve as grounds, speakers always employ their intrinsic properties.

(5.282) *nga èbe ne napane la pe-dane la *hed’apa* èmu duae*

with take ART MED.SG TRANS CAUS-bury TRANS front house king

‘And (she) takes the bones and buries them in front of the king’s house’.

(20201114_FOKLORE-02_hvn; Speaker: Data
00:07:34.280–00:07:36:890)

(5.283) *hèku era had’e do ha’e pa *kej’unga* d’e*

so EXIST some REL climb LOC back PROX.SG

‘So there were some of us that climbed into the back of the car’.

(LP1-095; Speaker: Leonardo
00:01:13:378–00:01:13.363)

Even Sabu island has been assigned intrinsic properties. For speakers living on the northern coast, the front of the island is the Seba-speaking region where the speakers themselves live. This is also where the ships from other islands arrive and where the largest town, Seba, is. The back of Sabu is Sabu Liae which lies to the south on the other side of the mountains. In (5.284), the speaker is giving directions from Seba to Liae. She describes the process of driving over the mountains to the southern shore as ‘going to the back’.

(5.284) *bisa lema lake d’ai Mehara, ègo bahagia Teriwu, dab’o teru la kej’unga, abo can also go.past then M. take happy T. go.straight continue TRANS back find Liae. L.*

‘(You) can also go back Mehara then. Happily take (it) to Teriwu. Keep going to the back and find Liae.’

(LP1-073; Speaker: Naomi
00:07:06.888–00:07:12.070)

Relative orientation is only used once in the HDP corpus and shown in (5.285) which corresponds to Figure 5.19. The clothesline, which is the ground, does not have any intrinsic properties to make use of, so the speaker uses her own perspective to assign a front and back to the clothesline and determine that the tree is behind it. This strategy is never employed elsewhere in the corpus. The more common strategy is also used in (5.285) when the speaker describes the relationship between the mountain and the clothesline. The mountain (the ground) also does not have an intrinsic front or back, but rather than use relative FoR, the speaker simply states that the figure (the clothesline) is near the mountain. Because this is the only
clear example of relative FoR use, I tentatively assume that while the relative FoR is available to speakers, speakers tend to prefer intrinsic and absolute FoR. Of course, more targeted data collection is necessary to confirm or deny this claim.

(5.285) \( \text{era he-we, kolo lede?} \)
\[ \text{exist one-clf top mountain} \]
‘There is a mountain’.
\( \text{nga pa keraha lede ne, era he-êhi laidari? [...]} \)
\[ \text{with loc side mountain art exist one-one clothesline [...]} \]
‘And near this mountain there is a clothesline’. […]
\( \text{lema pa kej’unga laidari era hekepue aj’u moneae} \)
\[ \text{also loc behind clothesline exist one-clf wood big} \]
‘Also behind the clothesline there is a big tree’.

(LP1-049; Speaker: Naomi
00:03:13.920–00:03:28.690)

Evidently, Hawu speakers have many relational terms to employ when discussing the relationship between a figure and a ground. After deictic reference, this is the most common way to talk about a referent’s position in space. When these terms are used within a FoR, it tends to be the intrinsic FoR. The intrinsic properties of the ground itself are what determines how the relationship is described. There is rarely consideration of the speaker’s position. Only \textit{hed’apa} ‘front’ and \textit{kej’unga} ‘back’ may be used in a relative FoR, and even then, this seems to be avoided.

5.13 Summary

In this chapter, I have described some of the basic phonological, grammatical, and spatial properties of Hawu. This sketch grammar is in no way meant to be a complete description of the language but has instead been intended to provide the reader with important information to understand the description of spatial language in Hawu.

I have shown that speakers heavily rely on spatial deixis to orient referents in space. Terms with a deictic meaning (which include demonstratives, deictic existential verbs, and demonstrative adverbs) occur very frequently within the HDP corpus, and as a result, the analysis of deictic systems was based
on patterns observed among 2,194 words. Other forms of spatial reference, including the cardinal system and relational terms, are used more sparingly, which is reflected in the relatively brief discussion of these topics.

In Chapter 6, I use this sketch grammar, and particularly my description of demonstratives, to explore how pointing gestures relate to the linguistic expression of space.
Chapter 6: Gesture and Space in Hawu

6.1 Introduction

In Chapter 5, I showed that Hawu speakers rely quite heavily on deictic reference to talk about space. They employ a demonstrative system of ten terms that distinguishes the referent’s distance from speech participants, its plurality, the speaker’s knowledge of the referent, and whether the speaker is distinguishing it from others. However, deictic reference is not restricted to the spoken modality. Speakers also use pointing to index referents.

As two methods for achieving the same goal, pointing and demonstratives are inextricably linked in their alignment and function. They are often temporally coordinated (Levett et al. 1985, Diessel 2006, Chu & Hagoort 2014, Krivokapic et al. 2016); when we point, we tend to use a demonstrative, and when we use a demonstrative we tend to point. Both are specialized tools for indicating (Kendon & Versante 2003, Kita 2003a) or creating a connection to a referent in space, time, or discourse in order to direct an addressee’s attention to that referent (Clark 2003). Because of their shared function, I refer to pointing and demonstratives together as indexicals—communicative tools on different modalities that are used for indexing (Perry 1979). In order for pointing and demonstratives to have any meaning, they must be anchored. This means that there is an object for attention (which I call a referent (Talmy 2018)), an agreed-upon origo, usually the speaker, who indexes referents, and an addressee who identifies those referents (Clark 2020). All take place within a deictic field that extends from the origo. Together, indexicals facilitate the narrowing of the search domain (Levinson 2003, Wilkins 2003, Diessel 2012), but because they are expressed through different modalities, they provide slightly different information; demonstratives provide semantic information and orient the addressee’s attention to the gesturing body, while pointing narrows the search domain (Haviland 2003, 2009, Kendon 2004a). Because of this, there is some evidence that demonstratives and pointing can only be meaningfully studied in relation to each other (e.g Kendon 2004b, Eriksson 2009, Hindmarsh & Heath 2000).

However, pointing is not necessarily a straightforward phenomenon. Pointing is a composite act that combines form features such as hand shape, palm orientation, movement, position, and other body cues such as gaze towards the referent or a head toss in the direction of the referent (Enfield 2001, Kita 2003a), which can relate to the meaning of the point. The nature of targeting a referent can also be complex (Silverstein 1976, Haviland 2003). Pointing may be concrete, meaning that the point is directed towards the physical position of a referent. Concrete pointing takes place in what I call ‘absolute space’ or an ‘absolute frame’, meaning that the speaker maintains an awareness of the locations of their surroundings and can accurately index referents within it. Pointing may also be abstract, what McNeill (2003) calls ‘abstract deixis’, meaning that the point is directed towards seemingly empty space, what I call ‘narrational space’ or a ‘narrational frame’ after Haviland (1993). Pointing in narrational space tends to adopt a relative point of view in that the speaker constructs positions for referents in relation to their own body. Even concrete pointing is not straightforward. When speakers point to a referent, they may not necessarily mean to point to that referent itself (Kita 2003b). For example, if a speaker points to a house, they might be pointing to the house, but they also might also be drawing attention to its size, color, or the materials that it was
built with. They could also be pointing to the house to indicate the person that lives inside the house or to indicate an activity that takes place in the house. To identify the intended referent, addressees rely on cultural cues (Haviland 1993, Wilkins 2003), pointing form (Kendon & Versante 2003, Kendon 2004b), co-produced speech (McNeill 1992, 2005), and likely many other factors within the physical, cultural, and linguistic context of the speech event.

Given this, my goal in this chapter is to understand the pointing system in Hawu. I look at deictic reference in both gesture and speech in order to understand how Hawu speakers use both modalities to target referents. In Chapter 5, I broke down the demonstrative system into its component parts, and I identified the various semantic facets of each demonstrative. In this chapter, I now break down pointing into its component parts, observing how semiotic features of pointing—such as the gesture frame, height, hand shape, and palm orientation—can provide nuanced information about the referent. I frame this investigation with two broad questions:

1. How do speakers manage deictic reference across the modalities? What is the relationship between demonstrative choice and the frequency or form of a point?

2. How do semiotic features of pointing—such as the space in which the gesture is produced (absolute or narrational), height, hand shape, and orientation—provide information about the referent?

After introducing the methodologies for data collection and annotation (§6.2), I observe how demonstratives and pointing are aligned in time and meaning (§6.3). I then observe how the component parts of points serve to index the referent even when language does not provide the information (§6.4). I first note whether speakers orient their gestures within absolute or narrative space (§6.4.1). Then I observe how pointing height can indicate the distance of the referent (§6.4.2). Finally, I discuss how features such as hand shape and palm orientation can encode meaning (§6.4.3). I close with a discussion of the features of Hawu pointing (§6.5).

### 6.2 Methodology

This study takes a descriptive approach to gesture. I rely on a corpus of 244 pointing gestures that were coded for their form, function, and relation to speech. The analysis is based on three conversations elicited using the Millingen task (Kita 2001). In total, the conversations resulted in one hour and twenty minutes of audiovisual data. In the remainder of this section, I will describe the Millingen task, the participants and location, data collection methodology, and data coding methodology.

#### 6.2.1 The Millingen Task

The Millingen task (Kita 2001) was developed by Sotaro Kita and colleagues at the Max Planck Institute. It is a conversational task that is intended to elicit rich gestural data pertaining to space, discourse, and time within the setting of a conversation. The task is conducted by a native speaker who serves as the interviewer, and they ask interviewees about changes to the village and notable events in their lives. Sample questions can be accessed in Appendix 7.2. Through these questions, the interviewer encourages interviewees to engage in conversation in which they describe the layout of a place, locate people or events, or explain how to navigate to a destination. These are all spatial topics that have been documented to almost necessitate gesture use (Seyfeddinipur & Kita 2001, Allen 2003, Kita 2003b). Further, describing a sequence of events tends to encourage the use of gestures that reveal models of temporal conceptualization (e.g. Núñez & Sweetser 2006).
6.2.2 Participants and location

Leonardo, who is from Depe village, conducted all interviews. Interviewees were three male speakers of Hawu above the age of 50. All were right-handed, born in Depe, and spoke the Seba dialect of Hawu. They had also spent most of their lives in Depe. Relevant personal metadata can be found in Table 6.1.

Leonardo identified older villagers who were not close family members. This was an opportunistic sample given the restrictions due to the ongoing pandemic, but our goal was to establish a conversation dynamic in which Leonardo was familiar with and comfortable talking with the interviewee, but their relationship was distant enough that Leonardo could ask the interviewees about their lives without already knowing the answers. Ultimately, the relationship varied between the interviewees; Ridolof is Leonardo’s neighbor, so the two have a more personal relationship than Leonardo has with Marten and Stefanus. To account for these differences, Leonardo simply adjusted his questions to suit the situation.

In total, Leonardo filmed four people. However, one speaker did not produce gestures as they spoke, so their data are not included in this analysis. They may not have produced gestures for several reasons. It may be that the relationship between Leonardo and the interviewee was too close. If the addressee already has knowledge of the speaker’s answer, the speaker may be less explicit and as such, less likely to gesture. This speaker also seemed to take on the role of telling a story as opposed to having a conversation, so there was little interaction throughout the interview. We have observed while documenting Hawu that speakers tend to gesture less when telling a story as opposed to having a conversation.

6.2.3 Data collection

Before beginning the interviews, Leonardo and I crafted a list of questions that he would be comfortable asking speakers. These questions pertained to the interviewees’ families, their childhood homes, major events such as weddings or moving, and jobs that they held in the past. These questions were intended to encourage the use of spatial and temporal language and can be found in Appendix 7.2. Note, however, that this is not a script that Leonardo followed, nor were these exact questions asked during the interviews. Rather, Leonardo was instructed to be familiar enough with these questions that he could naturally incorporate them into the interview. Prior to recording with speakers, Leonardo was asked to practice with family members until he could hold a comfortable conversation without looking at the list of questions.

Leonardo was aware that the task was meant to elicit spatial and gestural information. This knowledge allowed him to tailor his questions to encourage interviewees to use spatial language. The interviewees were aware only that Leonardo wanted to talk about their childhood and changes to the village since then. Because passing on knowledge is important to Hawu speakers, the interview was framed as a younger community member looking to learn about and document his village in the past. Leonardo is experienced in conducting such interviews, so he was easily able to establish a comfortable rapport between himself and the interviewee.

All conversations were held outside on the interviewees’ properties in Depe. Speakers sat on the ground and directly faced the camera. Leonardo set up the video camera so that the speakers’ full bodies could be seen without obstruction, and they could extend their arms in all directions without gesturing.
offscreen (Seyfeddinipur 2012). Leonardo sat to the left of the interviewees, at about a 90° angle in relation to both the interviewee and the camera. The approximate location of the interview and the interviewees’ orientation in relation to the rest of Sabu island can be viewed in Appendix 7.2.

Before the interview, Leonardo collected metadata and explained the point of the conversation. He then began the interview with general questions, asking what has changed in Depe since the speakers were children. The remainder of the conversation then flowed naturally based on the interviewees’ responses; Leonardo used our list of questions simply as anchoring points to bring the conversation back to space if it strayed away.

After the recording took place, Leonardo shared the exact coordinates of the conversation with me via the “Share” feature on Google Maps. He also filmed the surroundings of the interview. This was meant to orient the conversation in space and document what buildings and landscape features were nearby. With this information and through subsequent discussions with Leonardo, I was able to determine the coordinates of the referents mentioned in the conversation. I kept track of exact coordinates using Google maps, but maps with speaker’s approximate locations and orientation in relation to individual referents were created in Adobe Photoshop and Adobe Illustrator. This information was sufficient to allow me to track the orientation of the interview participants, the directionality of their pointing gestures, and the locations of their referents.

6.2.4 Data annotation

The Millingen conversations were transcribed and translated using the same methods that were employed for the rest of the HDP corpus that were described in Chapter 4. Leonardo segmented, transcribed, and translated data into Indonesian. I then translated data into English and coded for gesture with frequent correspondence with Leonardo throughout the process.

6.2.4.1 Coding demonstratives

All instances of demonstratives in the Millingen conversations were added to the demonstrative database that was described in §5.7 and thus coded using the same parameters. Every demonstrative was coded for its grammatical properties, discourse properties, temporal properties, parameters within the demonstrative system (distance, number, speaker knowledge, individuation), and accompanying gestures (see §4.5 for more details about these parameters). Although, all demonstratives were part of the same database, I largely only work with the demonstratives that arose in the Millingen data throughout this chapter. I only consult the entire HDP corpus when there are otherwise not enough data in just the Millingen tasks, and this is always explicitly stated.

My analyses of demonstratives in this chapter are based on the demonstrative system described in §5.7. This gestural analysis excludes deictic verbs, because they occur quite rarely and because they form part of a different deictic system than the demonstrative system. It also excludes demonstrative pronouns since, as I described in §5.9, these have lost much of their spatial meaning and do not function within a clear deictic paradigm.

6.2.4.2 Gesture annotation

Gestures were annotated in the same ELAN file as speech. Each hand for each speaker received two gesture tiers in ELAN: a gesture phase tier and a gesture meaning tier. I began gesture annotation using a wide net approach in which I identified all possible pointing gestures based on their form and then reduced the corpus until only pointing gestures that clearly served an indexing function remained. In this initial coding stage, I identified potential pointing gestures that could possibly project a vector toward the referent (Kita 2003b: 1). Because I had already coded all gestures that accompanied demonstratives within the entire
HDP corpus (§4.5), I used the common forms that arose in this coding to inform my identification of points within the Millingen conversations. Further, because gesture should usually be coded by at least two coders in order to reduce bias (Kita et al. 1997), I sought to minimize my own bias by making all initial annotations without knowledge of the accompanying speech. I segmented gesture phases by watching the video without sound before I translated the file.

I divided the gesture unit—the limb’s entire excursion from a resting position until it returns to a resting position (Kendon 2004c: 111)—of each potential point into its individual phases on the gesture phase tier in ELAN. The most common method for segmenting gestures includes four phases: preparation, stroke, hold, and retraction (Kendon 2004c). The preparation is the part of the gesture in which the limb is lifted from resting position and is prepared to make the gesture. The stroke is usually the most meaningful part of the gesture. The hand has assumed the gesture’s hand shape, and is intentionally moved through the air. A hold is the stationary position of the body part when it is not in resting position. This may be meaningful in itself—in which case I refer to it as a static stroke—or it may be a post-stroke hold in which the hand is held in the position that it arrived at through the stroke (Kita 1993). Finally the retraction occurs when the hand loses its intentional shape, and the limb is pulled back to resting position.

Usually the stroke is the most meaningful part of the gesture, called the nucleus (Kendon 2004c), but in pointing, when there is a hold, it is the most meaningful part of the gesture. It is during this phase that the body part is oriented so that the vector it creates extends towards the referent, thus accomplishing the goal of the pointing gesture. As such, I refer to the gesture phase of a point in which the body part is unmoving and oriented towards the referent as a static stroke (personal communication Mandana Seyfedinnipur, 2021). I coded pointing gestures differently based on whether they contained a static or dynamic stroke. A point was considered to have a static stroke if there was an identifiable hold that was longer than 200ms (cf. van Wassenhove et al. 2007). In such cases, the point was broken down into the following phases:

Preparation –> Static Stroke –> Retraction

In points in which the nucleus is a static stroke, the preparation was considered to begin the moment that the hand left resting position. The preparation ended and the static stroke began the moment that the hand stopped moving and was directed towards a referent. The retraction began when the limb began moving again after a static stroke and was pulled toward a resting position. If the limb was pulled towards the body but never reached resting position before preparing for a second gesture, this was considered to be a partial retraction (Kita et al. 1997) and was still coded as a retraction. Generally, the shoulder, elbow, or wrist led the movement of a retraction rather than the extended finger(s).

In pointing gestures that did not have an identifiable static stroke, the dynamic stroke was considered to be the meaningful part of the gesture. Such pointing gestures were broken down into the following phases:

Preparation –> Dynamic Stroke –> Retraction

In points containing a dynamic stroke, the preparation was considered to begin the moment that the hand left resting position. The dynamic stroke began when the hand assumed its pointing form and movement was intentionally directed towards a referent. The retraction began when the hand began to lose form and was pulled towards the body. The retraction ended when the hand was once again at rest.

I delineated the boundaries of gesture phases by identifying a change in motion or direction (Kita et al. 1997, Özyürek et al. 2008). For instance, if the gesture went from a stroke with downwards motion to a hold, the end of the stroke was marked at the exact moment the movement ended. If a gesture contained a stroke with downwards motion followed by one with upwards motion, the end of the initial stroke occurred at the midpoint of the transition from downwards to upwards movement. When change of direction could not be used, I instead used change of speed or hand shape to determine boundaries between gesture phases.
I coded the meaning of points on the gesture meaning tier within the ELAN file. This tier was coded in free form and included information about the target of the point and the reason for the point. The meaning and functions of gestures can usually only be interpreted based on the co-occurring linguistic context (McNeill 1992, 2005), so before coding gesture meaning, I translated the conversation. During the process of identifying gesture meaning, I excluded gestures and other body movements that had been incorrectly marked as points during the initial coding phase. I only considered a gesture to be a point if it clearly and unambiguously indexed a referent. I included Leonardo in this stage, often asking him “What is he pointing to?” If Leonardo could not identify a clear referent, we did not include the point. I also determined points with a clear referent by identifying notably different patterns in features of the gesture form and other body cues such as head movement and eye gaze. I categorized gestures using these parameters with inspiration from (Bressem 2013). How each of these features were considered is discussed separately below.

Movement: Only those strokes in which “the movement by which the gesture is accomplished is thus a movement that appears to be aimed in a clearly defined direction as if toward some specific target” (Kendon & Versante 2003) were included. This means that I only included points where the nucleus of the gesture clearly delineated a deictic vector towards a referent. I determined that the gesture was intentionally directed towards a referent if I was able to identify a consistent location for that referent (either in absolute or narrational space) or if the speaker made clear movements to contrast one entity with another.

Position: Gestures were more likely to be discarded if they occurred in the resting position. Some speakers commonly formed pointing hand shapes without removing their hands from the resting position. While these were initially coded as pointing gestures when I was not taking speech into account, most of these were later discarded because a clear referent could rarely be identified. By not leaving resting position, the gestures tended to lack the movement necessary for them to be considered intentionally directed towards a referent. These gestures also tended to lack accompanying and head movement and gaze towards the referent which, as I will describe, were also good indicators of pointing gestures. Ultimately, I expect many of the gestures that were discarded because of their position are likely some form of interactional or beat gestures as opposed to points.

Head tosses and eye gaze: Not only is it important to consider gestures in their linguistic context, but other bodily clues are also good indicators of a pointing gesture (Wagner et al. 2014). In particular, I consider a head toss that is directed towards the referent and gaze in the direction of the referent to be signs that the accompanying gesture is indeed a point. While these are not required features of manual pointing, their co-occurrence increased the likelihood that I would clearly be able to establish a referent.

Although gaze can serve to index (Kita 2003b, Wilkins 2003), I did not consider gaze towards a referent to be a pointing gesture itself, but I did consider head tosses to be points. Sometimes Hawu speakers do not use their hand to point but rather nod their head in the direction of the referent. In such instances, the speaker turns their head and directs it towards the referent. They then raise their chin and nose in a quick nod towards the referent in a manner that is reminiscent of nose pointing among the New Guinea peoples (Cooperrider & Núñez 2012). I call these head tosses, and this is not unusual in Pacific communities. Users of Sāmoan (Mosel 2004), Yélî Dnye (Levinson & Majid 2013), Kata Kolok (De Vos 2014), and Yupno (Cooperrider et al. 2018b) have all been documented to point with their head. As such, I felt it was necessary to track head tosses that were clearly directed towards a referent even if they did not co-occur with a manual point, and they are considered throughout this analysis as another possible form of indexing a referent.
By using these parameters to narrow down my coding of gestures, the most common forms of manual pointing within the Millingen Task conversations include:

- Open hand palm vertical (Figure 6.1a)
- Open hand palm down (Figure 6.1b)
- Open hand palm up (Figure 6.1c)
- Index point palm vertical (Figure 6.1d)
- Index point palm down (Figure 6.1e)
- Index point, palm up (Figure 6.1f)

An index point has the index finger extended. The remaining fingers may be clenched into a fist (Figure 6.1d), or they may be quite loose (Figure 6.1f). An open hand point has all fingers extended, and their tips are oriented towards a referent. The fingers might be tightly adducted, extended straight yet spread apart, or loosely extended with a slight bend and slight separation. In both open hand and index finger points, the thumb may be pulled in towards the rest of the hand (Figure 6.1a & 6.1e), or it can be extended itself, relatively perpendicularly to the other fingers (Figure 6.1b & 6.1f). Each pointing form could be oriented with the palm vertical (Figures 6.1a & 6.1d), down (Figures 6.1b & 6.1e), or up (Figures 6.1c & 6.1f). The palm up versions of both the index point and the open hand gestures occur much less frequently than their palm-down and palm-vertical counterparts.

There were also some pointing gestures that occurred just once or twice in the dataset. These include:

- Pointing with the middle, ring, and pinky fingers with the index finger curled in and touching the thumb (Figure 6.2a)
- Thumb point (Figure 6.2b)
- Pointing with both the index and middle fingers (Figure 6.2c)

Finally, it is crucial to note that pointing gestures rarely occur in isolation (Kendon & Versante 2003). Often, the deictic meaning is just part of the entire meaning of the gesture. For instance, in the example in Figure 6.3, the speaker is describing the process of building a traditional house. As he talks about buying floorboards, he consistently points towards the ground in front of him with both his index and middle fingers slightly extended. It seems that in addition to pointing to the floor in narrative space, his fingers serve as a representation of the floorboards that he is discussing. As the utterance in (6.1) shows, this gesture is produced when he talks about the number of boards, and in this example, it aligns with the classifier for long, thin objects, laa. Here, the deictic information is co-occurring with information about the shape and number of the referent, and this is influencing the form of the speaker’s hand. I still consider it a point, though, because the speaker consistently and unambiguously uses this gesture to reference the floorboards in the same location within the gesture space.

(6.1)  nara pèri [(lai ke) nane]  
       only how.many CLS PRT MED.SG  
       ‘(You) only get how many sheets?’

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1Throughout this chapter, I mark duration of gesture units in relation to speech with square brackets [] on the transcription tier of glossing. I indicate the nucleus of the gesture (the static stroke, dynamic stroke, or hold depending on the gesture) with parentheses () around the corresponding speech. The words uttered during the entire gesture unit are in bold so that they can be easily separated from the rest of the utterance. When several gestures occur within the utterance, I include the letter of the corresponding figure as a superscript before the first square bracket.
Demonstratives and pointing are intimately connected. Although some research has suggested that they are so closely connected that pointing is obligatory with a demonstrative (Levelt et al. 1985), their nuanced relationship has long been recognized in the pointing literature. Pointing and demonstratives are co-organized, meaning that they are produced in relation to each other (Piwek et al. 2008, Cooperrider 2016).
Pointing and demonstratives in Hawu

Figure 6.2: a) A point with three fingers extended: the middle, ring, and pinky fingers. The index finger is bent down and is touching the thumb. The speaker is indexing several people in narrative space. b) A point with the thumb. The speaker is indexing his house. c) A point with both the index and middle finger. The speaker is indexing a nearby village.

Pointing can supplement or replace demonstratives (Marslen-Wilson et al. 1982), and often the choice to do one or the other is systematically-driven. For instance, pointing may be more likely to accompany certain demonstrative forms. Both Dutch and English speakers tend to favor proximal demonstratives over distal ones when they point. When they do not point, they overwhelmingly favor distal demonstratives (Bangerter 2004, Piwek et al. 2008). This suggests that speakers could be aware that the ambiguity of their pointing increases with distance, and thus recognize that the utility of the point decreases. Cooperrider (2016) observes that pointing ambiguity indeed drives English speakers to co-produce a point and a proximal demonstrative. When speakers are given a laser pointer, which can index referents more precisely than a finger, they use a higher proportion of proximal demonstratives when pointing with the laser as opposed to their hand.

Descriptions of demonstratives and pointing in Pacific languages suggests that the preference to point with proximal demonstratives may not be restricted to English and Dutch. Although pointing has yet to be empirically studied in these works, researchers observe a connection between pointing and proximal demonstratives as opposed to distal demonstratives in languages such as Caac in New Caledonia (Cauchard 2015) and Ske in Vanuatu (Johnson 2014) as suggested by the fact that some proximal demonstratives in their systems require an accompanying point. It is even possible that the choice between demonstrative

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2Throughout this chapter, I define linguistic information and gestures to co-occur or be co-produced if the gesture is temporally aligned with an IU that is semantically-aligned with the gesture.
forms—whether proximal or distal—may be entwined with whether it is accompanied by pointing. As discussed in Chapter 3, Margetts (2004) observes that pointing in Saliba can bring a referent that is near the addressee or far from both conversation participants into the sphere of the speaker, thus allowing the use of the proximal demonstrative (Margetts 2004).

However, this has yet to be empirically studied in the region. Certainly, more targeted research is necessary to better-understand why speakers pointed more often with these demonstratives. While these are just some of the correspondences that researchers have observed between demonstratives and pointing, they serve to demonstrate why the demonstrative system cannot necessarily be meaningfully studied without consideration of pointing.

In the Millingen tasks, 448 demonstratives and 244 points were produced. This disparity immediately reveals that pointing gestures do not need to align with demonstratives, and in fact, usually they do not. Only 69 pointing gestures co-occurred with demonstratives. While it is not unusual for pointing and demonstratives to occur in isolation (Diessel 2006), as I have discussed, because studies suggest that they are tightly coordinated, this lack of temporal alignment was surprising. However, this does not necessarily mean that pointing and demonstratives are not tightly linked in Hawu. Rather, speakers coordinate indexing across modalities to achieve efficient and effective communication. As such, after I describe how points align with Hawu’s many demonstratives (§6.3.1), I also discuss some features of demonstratives that do not occur with pointing (§6.3.2) and points that do not occur with a demonstrative (§6.3.3).

### 6.3.1 Demonstratives that co-occur with a point

Out of 448 instances where a demonstrative is produced, only 69 (15%) in total are accompanied by a semantically-related point. With so few co-productions of indexicals and the many semantic parameters—distance, plurality, spread of the referent, speaker knowledge, and the speaker’s certainty about the existence and position of the referent—encoded within Hawu’s demonstrative system of nine terms, there are simply not enough data within the Millingen dataset to properly explore the relationship between pointing and demonstratives. As a result, I opportunistically look to all of the recordings of interactive speech events within the broader HDP corpus. With 295 total co-productions, there are more data to observe, but even from this data it is only possible to observe correlations in the data. Ideally, after
a qualitative analysis a more systematic data collection targeting specific parameters would have been conducted. However, given the ongoing pandemic, I was not able to expand the study systematically in the available timeframe.

The majority of demonstratives in the corpus are (na)d’e, and as a result, the majority of points that co-occur with a demonstrative, co-occur with (na)d’e. Of the 295 total co-productions, 204 included (na)d’e. As a result, the other nine demonstratives make up less than 23% of the corpus of demonstratives produced with a point. Table 6.2 shows the total number of occurrences of each demonstrative within the corpus and then how many pointing gestures occur with the demonstrative. The final column demonstrates the total percentage of co-productions within each degree of distance.

<table>
<thead>
<tr>
<th>Demonstrative</th>
<th>Total productions</th>
<th>Accompanying points</th>
<th>Total co-productions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROX</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(na)d’e</td>
<td>568</td>
<td>204 (36%)</td>
<td>211/640</td>
</tr>
<tr>
<td>(na)he</td>
<td>44</td>
<td>3 (7%)</td>
<td>(33%)</td>
</tr>
<tr>
<td>(na)hed’e</td>
<td>28</td>
<td>4 (14%)</td>
<td>(33%)</td>
</tr>
<tr>
<td><strong>ADDR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(na)ni</td>
<td>46</td>
<td>31 (67%)</td>
<td>39/156</td>
</tr>
<tr>
<td>(na)hii</td>
<td>1</td>
<td>0 (0%)</td>
<td>(25%)</td>
</tr>
<tr>
<td>(na)hid’e</td>
<td>10</td>
<td>3 (30%)</td>
<td>(65%)</td>
</tr>
<tr>
<td>(na)nid’e</td>
<td>12</td>
<td>11 (92%)</td>
<td></td>
</tr>
<tr>
<td><strong>DIST</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(na)he</td>
<td>203</td>
<td>7% of the time</td>
<td></td>
</tr>
<tr>
<td>(na)hère</td>
<td>2% of the time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(na)père</td>
<td>0% of the time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(na)hid’e</td>
<td>30% of the time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(na)nid’e</td>
<td>25% of the time</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>865</td>
<td>295 (34%)</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2: The rate of co-productions between pointing and demonstratives. ‘Total productions’ refers to the total number of each demonstrative that occurs within the dataset. The column labeled ‘Accompanying points’ refers to the number of points that were produced alongside each demonstrative. ‘Total co-productions’ refers to the total number of times that a point co-occurred with a demonstrative at each distance level.

Points most often co-occur with distal demonstratives. Approximately 2/3 of distal demonstratives occur with a point as opposed to 1/3 of proximal demonstratives and 1/4 of medial demonstratives. In particular, the plural, distal, known demonstrative, (na)nid’e, stands apart from the others. Out of a total of 12 occurrences of (na)nid’e, 11 (or 92%) co-occur with a pointing gesture of some kind. This stark difference between (na)nid’e and the rest of the demonstrative paradigm may be due to the differentiating function of (na)nid’e. As I mentioned in §5.7.3.6, in Chapter 5, (na)nid’e tends to be used to allow the speaker to distinguish a distant but visible referent from others. This pattern aligns with other findings in the literature suggesting that pointing is more likely to occur when it is serving to disambiguate referents. Presumably, although (na)hid’e also serves an individuating function, points accompany it less because it refers to plural or unfamiliar referents. Both features are less likely to elicit a point. Regardless of distance, plural, unknown demonstratives are accompanied less frequently than their plural known counterparts. (Na)he co-occurs with a point 7% of the time, (na)hère 2% of the time, (na)hii 0% of the time, and (na)hid’e 30% of the time. Contrast these numbers with the plural known demonstratives which co-occur with points 14% ((na)hed’e and (na)père), and 92% ((na)nid’e) of the time. Each plural, unknown demonstrative co-occurs with a point at least half as frequently as its plural, known counterpart. Still, the individuating function of (na)hid’e is reflected in that it co-occurs with a point 30% of the time, which is much more than any of the other plural, unknown demonstratives.

Notably, speakers are also more likely to point with singular demonstratives as opposed to their plural
counterparts. At all distance levels, the singular demonstrative is more likely to be accompanied by a point than the plural demonstratives. Again, this may be related to the notion that a pointing gesture is more likely to occur if it serves to disambiguate referents. A singular referent can more-easily be set apart from other possible referents. This idea is further supported by the fact that at all distance levels, the plural demonstratives ((na)he, (na)hère, (na)hii, and (na)hid’e) are the least likely to be accompanied by a point. If the referent is spread over a broad area, and its position is not well-known, then the likelihood that the speaker is comfortable pointing to the referent probably decreases.

6.3.2 Demonstratives without pointing

In the Millingen corpus, 379 (84.5%) demonstratives are produced without a corresponding point. Because of this, it is necessary to briefly contextualize why two forms of indexing that rely on each other for meaning might occur separately so frequently. Although the co-reliance between demonstratives and pointing has been emphasized in the literature (Hindmarsh & Heath 2000, Eriksson 2009) and although pointing is the most obvious way to establish a relationship between an utterance and a referent in space or time (Kendon 2004a: 222), pointing is just one way for addressees to obtain the contextual clues they need to identify the referent of the demonstrative. It is possible to identify the referent of a demonstrative through information that is perceptually available within the speaker’s vicinity (Cooperrider 2016), expectations about what the speaker may intend to refer to through situational or discourse clues (Clark 1996, Gerwing & Bavelas 2004), and information provided through the demonstrative form (Rocca & Wallentin 2020). In Hawu, it seems that besides pointing, speakers can indicate referents through body movements or gestures that are not points or through anaphoric linkages in discourse.

Body movements that are not points may include facial expressions, embodied actions, and non-deictic gestures such as representational, interactional, or beat gestures (See Chapter 1 for more information about types of gestures). As an example, in (6.2), the speaker uses the demonstrative d’e and later he to refer to a basket. In this example, the speaker is describing the type of baskets that were used to carry materials to and from the location where he was building the road in his town. However, rather than point to an object or location, the speaker produces a representational gesture to construct the referent in narrative space. The speakers’ hands are curved and placed in a way that gives the addressee an idea of the shape of the basket, an action which also serves to locate the basket in narrative space. Without a point, he is now able to unambiguously refer to this basket using proximal demonstratives.

(6.2) *'[uda nga hodi.
crowbar with basket
a crowbar and a basket
hodi—]
basket
’a basket’
hodi d’e do ényo.
k.o.basket PROX.SG REL weave
‘This basket is woven
ke mi kehedi.
prt like kehedi
‘like a kehedi.’
*'[mi mode kehedi he]
like style kehedi PROX.PL.UKN
‘In the styles of these kehedi.’
Pointing and demonstratives in Hawu

Figure 6.4: Marten talks about using baskets to transport materials while doing roadwork, and he uses representational gestures to establish the referent in narrational space (Image corresponds to speech fragment in example (6.2)). Figure a) aligns with his utterance *udi nga hodi. hodi*– ‘with a crowbar and a basket, the basket...’. In this utterance, the speaker produces a gesture that represents this basket and that establishes it within narrational space. There is no demonstrative in this sentence, but in the following IU, *d’e* refers back to this basket. Figure b) illustrates the gesture that is produced while the speaker says *mi mode kehedi he*. As he speaks, he produces the same representational gesture to once again establish the basket as the referent, and this aligns with the demonstrative *he*.

Far more commonly, however, rather than produce representational gestures to anchor referents within the speaker’s gesture space, speakers tend to rely on information that has already been introduced in speech. This is the case for 299 of the 397 (75%) demonstratives that occur without a point. This information could be produced within the same IU as the demonstrative or in previous IUs. A common way that this is done in Hawu is shown in the following example (6.3). The speaker uses the locative *pa d’e* to refer to his location, but immediately before he uses the locative, he names the place *rai hawu* ‘Sabu island’. Not only are both speakers very familiar with this place, but the conversation is taking place on *rai hawu*. By anchoring the demonstrative to its referent through speech, the speaker does not need to point to establish the referent of the demonstrative *d’e*.3

(6.3)  
\[
\text{pa rai hawu pa d’e} \\
\text{LOC land H. LOC PROX} \\
\text{‘on Sabu island here’}
\]

Similarly, many demonstratives in this corpus occur in common phrases, most of which are temporal (a total of 149 utterances or 33% of the corpus). Hawu speakers use demonstratives to refer to the past,

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3Pointing is also less likely when speakers are located in the referent location. When speakers refer to Sabu island or Depe village, sometimes they will point to the ground or to the space in front of them to indicate that they are located in these places, but more often, they do not point at all. Five out of 19 (26%) references to Depe have a point, and three out of 22 (14%) to Sabu have a point.
present, and future, and while there are many points in this corpus that target time periods, pointing is not at all necessary with temporal phrases such as *awe do napane* 'that time', *awe nad’le/to nad’e* ‘nowadays’, and *awe do uru he* ‘the time in the past’.

While the explanations given in this section do not cover all of the situations in which a pointing gesture might not accompany a demonstrative, they do seem to explain 93% of cases in which demonstratives are produced without a co-occurring point. Based on these patterns, the striking number of demonstratives that were produced without a point becomes less surprising. Pointing is not the only type of gesture that can establish a referent; representational gestures can also do this. Further, it seems that when a demonstrative is not introducing new information to the discussion or if the demonstrative is part of a common phrase, a point is not necessary because an anaphoric linkage is instead established (Gerwing & Bavelas 2004). It is important to note, however, that this section is simply intended to introduce the reader to certain patterns within the dataset. While I mention referents that were previously established in discourse, I have not analyzed the Hawu demonstrative system for its anaphoric or cataphoric uses. A more discourse-focused analysis of pointing and demonstratives might be useful to better-understand how referents are introduced to the discourse and managed via gestures, demonstratives, and other cues.

### 6.3.3 Pointing without a demonstrative

Not only do most demonstratives occur without a point, but most points occur without a demonstrative. Only 69 of 244 pointing gestures produced during the Millingen task co-occur with a demonstrative, meaning that most pointing gestures (79%) are the only indexicals produced during the utterance. Because of this, it is necessary to understand how points align with the information that is produced in speech so that they can still serve their function of narrowing the search domain in order to orient the addressee’s attention to the correct referent.

Most points tend to co-occur with verbs or references to places. In the following example (6.4), the point is produced as the speaker utters the names of two locations. As Leonardo says *hèku la Dimu* 'so in Dimu’, he prepares the point when he says *la Di-*, and the static stroke occurs as he finishes the place name *Dimu*. It is held throughout the following pause. In the following IU, the gesture phase again begins with the preposition, and the static stroke is held once the speaker begins to utter the place name, *Mehara*. The point is held until the end of the IU. There are no demonstratives in these utterances. The point is instead aligned with the place name which provides the necessary context to direct the addressee’s attention towards the place’s location.

![Figure 6.5: Leonardo points towards Dimu, a region of eastern Sabu. He then points toward Mehara, a region to the southwest. The nucleus of each point occurs as he says the name of the place. Image corresponds to speech fragment in example (6.4).](image-url)
Figure 6.6: Marten is talking about walking to Seba. He points in the direction of Seba, and the point generally aligns with the verb *kako* ‘go’. Image corresponds to speech fragment in example (6.6).

(6.4) \( \text{hēku} \) \^[la \text{Di}(\text{mu})] \, \^[la \ (\text{Mehara lema to?})] \)
\[ \text{so TRANS D. TRANS M. also TAG} \]
'To Dimu and also to Mehara, right?'

Similarly pointing can also serve to locate generic nouns. In the following utterance (6.5), the speaker is talking about the addressee’s work as a *majelis* at the local church, and he anchors the gesture in their shared knowledge of the village. The nucleus of the point co-occurs with *majelis*. The speaker chooses to point, not to the addressee, but rather to the location of Depe church, which is the location where the addressee works as a *majelis*.

(6.5) \^[do \text{toi} \text{ri} \text{yaa do (majelis) pa}] \quad \text{gereja pa depe} \]
\[ \text{STAT know AGT 1 SG person magistrate LOC church LOC D.} \]
'I know you’re a magistrate at Depe church.'

Pointing gestures may also co-occur with verbs to provide information about the directionality, location, or destination of the action. In Example (6.6) and Figure 6.6, the speaker points to the location of Seba. This point is providing information about the direction of the verb and the destination. The preparation for this point occurs as the speaker utters the verb, and the static stroke occurs with TAM information.

(6.6) \^[pereke \text{ri} \text{ama nē[\text{b’o} ne \text{kako (nēb’o)}]}] \]
\[ \text{think AGT man IRR DET go IRR} \]
'Think about the (the distance) to walk (to Seba).’

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In all contexts, the point aligns with linguistic information that helps the addressee identify the referent of the point. A place name tells the addressee that the speaker is locating the place. A verb may tell the addressee that the point indicates a movement vector or the location of the action. A generic noun may invoke some shared knowledge about the context of the speech and the layout of the village to help the addressee identify the referent. These three contexts suggest that even when the point is not aligned with the demonstrative, it is aligned with linguistic information that serves to provide the addressee with the information necessary to understand the referent of the gesture.

### 6.3.4 Discussion of pointing and demonstratives

Based on the information provided in sections 6.3.1, 6.3.2, and 6.3.3, it seems that Hawu speakers opportunistically employ indexicals across the modalities. Demonstratives and pointing provide slightly different information, and speakers may employ them separately based on what they are seeking to communicate. As discussed in Chapter 5, demonstratives can provide information about the proximity, plurality, spread, or familiarity of the referent. Hawu demonstratives, however, cannot specify an angular search domain in order to identify a referent in actual space, nor can they manage relations between entities in space without an accompanying point. As such, speakers may choose between indexing on the spoken or manual modality depending on which kind of information is most important to the interaction.

A point appears to be less necessary when a referent has already been introduced to the conversation or when a speaker uses a common phrase containing a demonstrative (such as temporal phrases). Points that are produced without a demonstrative tend to provide directional or locational information to a verb or noun produced in speech. Approximately 35% of demonstratives co-occur with demonstratives, and there do seem to be some patterns in how the indexicals are co-produced across the modalities. Pointing occurs most frequently with distal demonstratives. Distal demonstratives co-occur with points about 65% of the time. Proximal demonstratives co-occur with points about 33% of the time, and medial demonstratives only occur with points about 25% of the time. In particular, pointing almost always occurs with (na)nid’e ‘DIST.SG.INDV’ which functions to individuate a distal referent from other possible options, and as such, an accompanying point is almost required.

These findings are strikingly contrary to findings by other researchers. As I discussed at the beginning of this section, previous research has shown that Dutch and English speakers more frequently produce a proximal demonstrative when they point (Bangerter 2004, Piwek et al. 2008, Cooperrider 2016). Further, the documentation of several demonstrative systems of Malayo-Polynesian languages seems to suggest a stronger connection between pointing and proximal demonstratives as opposed to distal ones (e.g. Johnson 2014, Cauchard 2015). There may be several reasons as to why these patterns exist. Researchers have suggested that English proximal demonstratives are linked to a notion of specificity and an ability to clearly disambiguate the referent, so regardless of distance, a speaker is more likely to use ‘this’ if the referent can be unambiguously identified (Cooperrider 2016). Further, a pointing gesture can bring the referent into the sphere of the speaker thus allowing the use of a speaker-oriented demonstrative even when the referent is not near the speaker (Margetts 2004).

Yet, in Hawu, speakers clearly seem to favor pointing when uttering a distal demonstrative. This supposedly opposite result may be motivated by the same underlying factor as the research on Dutch and English suggests. Hawu speakers may have the same instinct and English and Dutch speakers and recognize that a referent that is farther away is more difficult to unambiguously differentiate without a point. However, because the Hawu demonstrative system encodes different information from the English and Dutch ones, demonstratives at the distal level may be more closely associated with specificity than
proximal ones. This may be linked to the nature of Hawu’s demonstrative system. Individuation is only coded in the demonstrative system at a distal level, and because of its individuating function, (na)nid’e ‘DIST.SG.INDV’ effectively requires an accompanying point. Because of this, speakers may associate disambiguating a referent through pointing with all distal demonstratives.

While this is somewhat surprising considering the published literature, a return to the typological overview of Malayo-Polynesian demonstrative systems in Chapter 2 may hint that cross-linguistic variation in how pointing aligns with demonstratives is likely. For instance, in Kilivila, it is the use of the medial demonstrative beyo that tends to necessitate a demonstrative. The pointing gesture is meant to narrow the search domain for a referent that is distant but still within sight. Other languages, such as Samoan, code gesture within their demonstrative system at all distances. In Samoan, the demonstratives lele ‘near speaker (+gesture)’, nale ‘near addressee (+gesture)’, and lale ‘not too far (+gesture)’ are usually accompanied by a point (Mosel 2004), and Lavukaleve demonstratives simply have a presentative suffix -ri if accompanied by a point (Terrill 2018). While these patterns have largely not been empirically tested, targeted gesture study may reveal that Hawu speakers’ preference to associated pointing and distal demonstratives is not aberrant in comparison to the other studies conducted on this topic, but rather, it is one of many possible interpretations.

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When pointing and demonstratives occur together, the demonstrative provides information about the referent that is targeted by the point. The choice of demonstrative can inform the addressee as to how many referents there are or how certain the speaker is of its location. However, even when no demonstrative is uttered, the speech that co-occurs with a point provides important information. A verb that denotes movement in a specific direction may tell the addressee that the point is providing directional information. A place name may draw the addressee’s attention to the location of that place, but it may not just be speech that provides that information. For instance, a point that co-occurs alongside kako ‘go’ may indicate the vector of movement, the location of the destination, or even the location of the origin of the movement. With so many possibilities, an addressee could easily misinterpret the reason for the point. But, as I will explain in this section, it appears that speech is just one tool for anchoring a point.

As an example, in the utterance in (6.7) and Figure 6.7, the speaker produces a point as he says ‘Carried from here’. The right arm is lifted to above shoulder height and is extended towards the speakers’ right. The hand is in the shape of an index point that is aligned at approximately a 45° angle above horizontal. While the utterance contains a demonstrative, d’e ‘PROX.SG’, the point does not semantically align with this information. Rather, the point serves to locate the destination of the carrying act, which is nowhere in the utterance. Still, the the addresssee knows that the point does not align with the demonstrative d’e but is rather indexing the village of Seba. This begs the question as to how the addressee implicitly knows this.

(6.7)  
\[ \text{ta (hape (rai) ti) d’e}. \]
\[ \text{PRT carry from PROX.SG} \]

‘(I was) carried (to Seba) from here’. (lit: ‘Carried from here’.)

(6.7) \[ \text{ta (hape (rai) ti) d’e}. \]
\[ \text{PRT carry from PROX.SG} \]

‘(I was) carried (to Seba) from here’. (lit: ‘Carried from here’.)

Previous research has shown that component features of the gesture, such as hand shape, palm orientation, and pointing height, matter. They can inform the addressee of the role that the point plays in the utterance and the kind of information that the speaker is conveying through the point (Wilkins
Figure 6.7: Stefanus points toward Seba, which is the destination of the verb *hape* ‘carry’. The point does not correspond with the demonstrative *d e ‘PROX.SG’* which is also produced in this utterance. Image corresponds to speech fragment in example (6.7).

For instance, Kendon & Versante (2003) observe that in Neapolitan (nap) index, palm-vertical points are used to provide conditions for the circumstances of the speech content. Meanwhile, open hand, palm vertical points indicate an example of the topic at hand. An association between form and meaning is especially salient among the Arrernte to the extent that pointing can serve alone as an utterance, and speakers are consciously aware of the differences between different pointing forms. A “horned sign,”—which involves the extension of just the index and pinky fingers—indicates the location of a destination (Wilkins 2003). More generally, speakers of languages around the world tend to produce index points in order designate a specific referent while they tend to produce open hand points when the target is imprecise (Cochet & Vauclair 2014) or in order to designate a vector without indicating a target inside it (Mesh 2021).

In the remainder of this chapter, I describe four features of pointing in Hawu that appear to have bearing on the meaning of the point. These include the direction of the pointing vector, the height of the point, its hand shape, and its orientation.

### 6.4.1 Indexing referents

As I mentioned in §6.1, I identify two gesture frames: narrative and absolute, following (Haviland 1993) and Levinson et al. (2003). When speakers point in narrative space, they indicate constructed positions of referents within a three-dimensional representation of physical space in front of them. When speakers point in absolute space, they direct points toward the physical location of objects, either visible or distant (Kendon 2004b). Hawu speakers do not always orient points in absolute space, but they do so quite frequently. Out of 244 points, 136 (56%) were anchored in absolute space. A total of 109 pointing gestures were positioned in narrative space.

When Hawu speakers point in absolute space, the features of the pointing tend to differ from those that are oriented in narrative space. Points that are oriented in absolute space tend to be more expansive than pointing in narrative space. They frequently have a full arm extension, and they sometimes break the back plane (Figure 6.8). Conversely, all points in narrative space were located in the front 180° of the body.
Some or all of these features have been observed in language communities around the world including Guugu Yimithirr (Haviland 1993, 1998), Arrernte (Wilkins 2003), Kata Kolok (De Vos 2014), Ban Khor Sign Language (Nonaka 2015), and Quiahije Chatino (Mesh 2021, Mesh et al. 2021).

The proportion to which Hawu speakers point in absolute space also seems to vary based on spatial scale, so in the following sections I will describe pointing to locations in Depe, on Sabu, and beyond the shores of the island.

6.4.1.1 Targets on Sabu island

It is clear from the data that speakers maintain an awareness of the layout of Sabu island and anchor their speech in their surroundings. When speakers reference locations in Depe village, pointing seems to be almost compulsory. Of 14 references to unique, named locations in Depe, speakers point to the referent’s location in absolute space 12 times even though both the speaker and the addressee are familiar with the locations of the referents.

A typical example of this kind of pointing is shown in Figure 6.9 and (6.8). Here, Stefanus is describing the location of the TPT, a company in Depe. He says ‘The TPT is by Mawila’s house over there’. As he speaks, he points over his shoulder in the direction of Mawila’s house. The speaker is aware that Leonardo knows both Mawila and the location of the company. Still, Stefanus accurately indexes their location with both a point and a demonstrative.

(6.8) [(tpt do pa èmu nga Mawila pa nid’e)]

\[
\text{TPT REL LOC house with M. LOC DIST.SG.INDV}
\]

‘The TPT is by Mawila’s house over there.’

---

4By unique, named locations, I mean that the referent cannot be said to be located anywhere else. These may include names of islands, regions, villages, or neighborhoods. It can also include unique buildings such as offices for certain organizations, churches, or people’s homes.
There are just two instances where a point does not accompany the name of a location, both of which are shown in Example (6.9) and Figure 6.10. During the first mention of the church called Kalvari Kēj’i, rather than point to its location, the speaker points towards the space in front of him, which is meant to indicate that both he and the church are in Depe. However, as he points, he does not say the full name of the church, so Leonardo provides this information. As Leonardo speaks, the addressee’s hand has come to rest on his legs, but his finger is still pointing in front of him. Leonardo himself does not point.
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Figure 6.11: The speaker is talking about trekking to a nearby well as a child to collect water. He points in the direction of a well, but it is unclear whether this is the well he used as a child or simply a nearby well. Regardless of his relationship with the well, it is clear that he is anchoring his story in the absolute environment. Image corresponds to speech fragment in example (6.10).

(6.9) a. S: [(Kalvari.
   S: K.
   'S: Kalvari (church).'

b. L: Kalvari Kē'j'i)]
   L: K. K.
   ':: Kalvari Kē'j'i (church).'

   (LP1-159; Speaker: Stefanus & Leonardo
   00:13:00.495–00:13:01.805)

While there are only 14 points that accompany the names of locations in Depe, speakers often point to unique locations without uttering their name. Further, when speakers talk about more general places in the village—such as roads, farming fields, wells, and forests—they also usually refer to them with a point that is anchored in the absolute environment. However, it is important to note a difference with pointing to such referents versus unique ones. Because of the nature of the Millingen task, in these conversations, speakers are often talking about events in their past, and they rarely share enough information about their life to indicate whether the speaker is pointing to the actual location of the event or is simply pointing to a familiar feature in the environment. For instance, as Marten talks about collecting water from the well when he was a child, he says 'We carried water from here to the spring'. As he says 'to the spring', he points towards his left where a well is located. It is not possible to tell whether the well he is pointing to is truly the well of his childhood or simply the well that he uses now. However, despite this uncertainty around how exactly the referent relates to the content of his speech, it is clear that the speaker is using his surroundings to anchor his stories in Depe.

(6.10) oke ie rai ti d'e [j'ii, ha(pe la ub'a huli d'e)].
   carry.water good from PROX.SG 1PL.EXCL until TRANS mouth PROX.SG
   'We carried water from here to this well.'

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On an island scale, people are similarly consistent in pointing to the locations of places and landmarks. Absolute pointing is produced quite frequently but not as consistently as on the village scale. Of a total of 49 references to named, unique locations on Sabu, 28 (57%) of them were accompanied by a point. However, while this seems to be a small number of pointing gestures, in nearly all of the instances in which someone does not point, the referent was already mentioned and its location established, in a manner similar to Example (6.9) and Figure 6.10. Just as pointing does not need to accompany a demonstrative once the referent of the demonstrative is established, speakers can choose whether or not to point to a place again once they have established its location. Quite notably, however, on a village scale, speakers tend to continue pointing to the referent even after it has been established.

On both a village and island scale, absolute pointing is extremely important to both the speaker and the addressee. Speakers can rely on pointing to reach an understanding. In the few examples in which the speaker does not point directly to the referent, the addressee points. For instance, in Figure 6.12, the interviewee, Stefanus, is describing the process of building the road in Depe, and he is using narrative space in front of him. He is imagining the road stretching in front of him until it arrives at Depe church. When he says *gereja hed’è* ‘this church’, his hand is flat with all fingers extended. His arm is bent slightly and lifted to extend in front of his chest. When he says ‘this church’, he could be referring to one of two churches in Depe: Gereja Ebenhaeser or Gereja Kalvari Kèj’i. The road that Stefanus is talking about leads to both, and because the speaker is not pointing to absolute space, Leonardo cannot be sure which one he is referring to. So Leonardo follows up Stefanus’s statement with a question that affirms that Stefanus is talking about Gereja Ebenhaeser and not Gereja Kalvari Kèj’i. He says *ma gereja ma Depe* ‘the church in Depe’, and as he speaks, he lifts his elbow to shoulder-height and points with his index finger towards the church. Because he is pointing towards Ebenhaeser church, he does not need to provide a name. As Leonardo retracts his hand, Stefanus confirms that he is indeed talking about Ebenhaeser church, by repeating his earlier gesture in narrative space. Throughout this interaction, neither of the churches are named, but at the end of it, the speakers reach an understanding thanks to Leonardo’s absolute point in the direction of Gereja Ebenhaeser.
Figure 6.12: A sequence of three points in which conversation participants reach an understanding through pointing. a) Stefanus locates a church in narrative space without saying the name of the church. b) Leonardo confirms which church he is referring to by pointing in the direction of Gereja Ebenhaeser. c) Stefanus confirms he is talking about Gereja Ebenhaeser by pointing again to the space in front of him and repeating Leonardo’s question. Interestingly, he does not mimic Leonardo’s gesture in absolute space. Instead he confirms Leonardo’s statement by again pointing to where he located the church within narrative space. Throughout this interaction, speakers never explicitly state the name of the church. Image corresponds to speech fragment in Example (6.11).

(6.11) a. \textit{S: lake ri j’ii hape ma gereja hed’e, [rai dìi depe j’e na(d’e.)]} \\
\textit{S: go AGT 1PL.EX until CIS church PROX.PL.UKN land 1PL.INCL D. then PROX.SG} \\
‘Our (road) goes all the way to this church. This is in Depe village.’

b. \textit{L: ma [gereja ma de(pe)]} \\
\textit{L: CIS church CIS D.} \\
‘The church in Depe.’

c. \textit{S: [(ma gereja ma Depe d’e)]} \\
\textit{S: CIS church CIS D. PROX.SG} \\
‘The church in Depe.’

(LP1-159; Speaker: Stefanus & Leonardo 
00:03:19.995–00:03:24.521)
The rate at which speakers produce points within absolute space as well as the ways in which speakers can rely on pointing to convey information and manage conversation highlight the importance of accurately pointing to locations on Sabu island. Pointing is a crucial part of the conversation, and this trend stands in stark contrast to pointing in reference to locations that are beyond Sabu island.

6.4.1.2 Targets beyond Sabu island

While absolute pointing to referents on an island and village scale is almost obligatory, it is almost nonexistent on a worldwide scale. When speakers refer to other islands or to locations on other islands, they rarely point. Of a total of 47 mentions of unique locations beyond Sabu, the reference is only accompanied by an absolute point twice, and these are the only two absolute points to any locations on other islands.

There are several possibilities as to why absolute pointing is absent on a worldwide or off-island scale. First, and perhaps most likely, speakers may be less familiar with locations on other islands, so they do not point. If we turn to the broader HDP corpus, there is just one other recorded instance of pointing beyond Sabu, and in this case, the speaker is giving me directions to Flores island. She knows I am not extremely familiar with the area, so she is being quite detailed. Once she has told me how to find a boat that I should take to the island, she waves her hand flippantly towards Flores island and says *hei jula pa hid’e* ‘just go straight there’. This utterance seems to encompass much of the uncertainty that people feel about locations beyond Sabu. She doesn’t give any further details because she can’t say exactly what I should do with my boat once I leave Sabu’s shores.

Second, even if the speaker is familiar with off-island locations, because the referents are so far away, absolute pointing may not serve a valuable purpose in the conversation because speakers may not be able to emphasize information such as relative distance between locations. Take, for instance, the utterance in Example (6.12). The speaker is talking about the route that he took when he was selling oil in Kupang, the capital city of NTT which is located on Timor island. Every day he would travel from Bakunase—a neighborhood to the west of Kupang—to Kupang. As he says, ‘(I) sold (oil) from Bakunase to Kupang,’ his finger follows a path from his left to right or from west to east. While the final part of the point is in the direction of Kupang, the beginning of the point is clearly not towards Bakunase which, like Kupang, is also located to the east or to the man’s right. It is possible that his finger is following the absolute direction of his route which runs from west to east, the same orientation as his point. However, with the knowledge we have, he could just as well be pointing to narrative space and constructing his daily route within the space in front of him. Regardless of the intention, the pointing act allows him to convey a sense of the relative locations of Kupang and Bakunase and emphasize the great distance that he traveled each day between them. This information would not have been conveyed if he had just pointed eastwards in the direction of both Kupang and Bakunase.

(6.12)  *pe-wie,  "[d’ue raiti Ba(kunase)] [teru hape la (ub’a dara ko)ta ke]lili hari-hari caus-give carry from B. straight until trans mouth gate city around all.REP*

‘(I) sold oil, carrying (it) from Bakunase all the way to Kupang around everywhere.’

(LP1-158; Speaker: Marten 00:31:07.174–00:31:10.759)

6.4.2 Pointing height

Another component of pointing that has been documented to encode meaning is the height of the point. When speakers point to referents, they tend to point higher when the referent is farther away (Wilkins 1999), which has been called the *far-is-up* strategy (Clark 1996, Mesh 2021). Height can be measured
through several features of the point including the height of the arm, straight movement, and the angle of the point (De Vos 2014). The *far-is-up* strategy has been observed in languages on several continents including Australia (Kendon 1980, 1988, Levinson 2003), Central America (Levinson 2003, Haviland 2009, Le Guen 2011), Africa (Orie 2009), Europe (van der Kooij 2002), and even closer to the Hawu context in Ilokano (Streeck 2009), Ban Khor Sign Language (Nonaka 2015), and Kata Kolok Sign Language (De Vos 2014). Mesh et al. (2021: 3) hypothesize that this feature is so common, because a distance marker within a pointing gesture is a useful communicative feature.

### 6.4.2.1 Coding and methodology

To observe whether Hawu speakers point higher to farther referents, I coded the referent distance and height of all points that were oriented within absolute space. I divided the Hawu world up into five possible scales:

- **Self**: the referent is the speaker themself or on the speaker’s body
- **Vicinity**: the referent is within the speaker’s immediate vicinity
- **Village**: the referent is in Depe village but not in the speaker’s immediate vicinity. The speaker relies on their knowledge of the layout of Depe to locate the referent.
- **Island**: the referent is on Sabu island but outside of Depe village. The speaker relies on their knowledge of the human and natural topography of the island
- **World**: the referent is beyond Sabu island. No referents were outside of NTT

I do not include the Self scale in this analysis because the height of a point to a body part tends to correlate with the height of the body part itself, so, for instance, if a speaker points to the top of their head, their gesture will be raised to the height of his head. This raised gesture does not correlate with horizontal distance but rather with the vertical position of the referent. As a result, this analysis is ultimately based on the 136 points that indexed referents on the other four scales. I include the speaker’s vicinity as its own scale because referents in the vicinity that are part of the immediate environment of the conversation and
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are thus highly salient. The village, island, and worldwide scales correspond to the scales that have been adopted by researchers conducting spatial research in the Pacific as I described in Chapter 2. The village scale represents the area that is very familiar to the speaker, and the speaker interacts with referents on this scale in their daily activities. The island scale is outside the realm of daily interaction but is still familiar to the speaker. The speaker only interacts with the worldwide scale when they take a boat or a plane to travel off-island. It is not part of frequent interaction.

I also divided gestures into three possible heights:

- Low: the elbow is not raised from its resting position, or the palm and finger are angled downwards (Figure 6.14)

- Mid: the elbow is raised but not above shoulder height, or the palm and finger are directed horizontally or less than a 45° angle above horizontal (Figure 6.15)

- High: the elbow is raised to at least shoulder-height or the palm and finger are directed at least at a 45° angle above horizontal (Figure 6.16)

Height was coded without consideration of the referent’s distance. I conducted this categorization when I first coded features of the gestures before I expected to observe correlations between distance and gesture height. Other researchers have defined “height” as how high the elbow is raised. For instance, Mesh (2021) considers a raised gesture to be one in which the elbow is lifted to at least shoulder height. I initially tried this coding technique, but it did not appear to reflect the variation in Hawu pointing. While there are indeed pointing gestures in which the elbow is raised to at least shoulder height, as shown in Figure 6.8a, these are not very common. Only 23 of 126 points to referents in absolute space had an elbow raised to at least shoulder height. Instead, the height of gestures seemed to vary in two parameters: height of the elbow and the angle of the point. Therefore, I coded “high” points to either have a raised arm or a vertically-oriented palm and finger (here meaning that the finger is oriented at least at a 45° angle above horizontal). Rarely both a raised arm and a vertically-oriented palm occur in the same gesture. When the point is vertically-oriented, the elbow usually remains resting on the leg, and only the forearm is lifted.

![Figure 6.14: Two gestures that were categorized as ‘low’ gestures.](image)

(a) (b)

Figure 6.14: Two gestures that were categorized as ‘low’ gestures. In a), the speaker’s (Leonardo) elbow and hands are lifted slightly, but they are kept around waist height. His hands are not raised above the elbow (Depe_LP1-159; 00:08:49.956–00:08:51.795). In b), the speaker’s (Stefanus) elbow is bent and resting on his leg. His hand is angled downwards towards the ground (Depe_LP1-159; 00:05:26.183–00:05:27.413)
Figure 6.15: Two gestures that were categorized as ‘mid’ gestures. In a), the speaker’s arm is fully extended. His elbow and arm are both below his shoulder (LP1-159; 00:06:20.848–00:06:21.361). In b) the speaker’s elbow is bent and nearer to its rest position. The hand, although raised higher than the elbow, is below shoulder height (LP1-157; 00:03:35.150–00:03:35.431).

Figure 6.16: Two gestures that were categorized as ‘high’ gestures. In a), the speaker’s point may be more akin to other analyses of gesture height. The arm is fully extended, and the elbow is raised to shoulder height (Depe_LP1-158; 00:30:29.837–00:30:30.462). The gesture in b) has a bent elbow that is resting on the speaker’s knee. The speaker has raised his hand to head height in order to point to the referent and the index finger is oriented near-vertically (LP1-157; 00:03:35.150–00:03:35.431).

6.4.2.2 Correlation of height of gesture with distance

The data suggest that Hawu speakers point higher to farther referents. These results are given in Table 6.3 and show progressively more raised points for more distal referents. There were just two points to referents on a worldwide scale, and both were extended arms with the elbow raised and the hand reaching above the head. About 2/3 of the points targeting referents on the island scale were high. Very few points to island-scale referents were low gestures (only two gestures, less than 6%). When the target was on the village scale, the number of high points becomes reduced to closer to 1/3. Most points on the village scale were at mid-height while just two (or 6%) were low pointing gestures. On the vicinity scale, there are even fewer, with only seven (or 13%) high points. As on the village scale, most vicinity-scale referents are mid-height, but there is an increased number of low pointing gestures. Fourteen (or 25%) in total are low
Interestingly, if I had chosen to code gesture height solely based on the elbow height, using the same parameters as Mesh (2021), I would see similar results. Most points with a lifted elbow are produced at the village and island scales, and the highest proportion of high gestures would occur at the island scale. 53% of island-scale oriented pointing gestures had elbows raised to at least shoulder height while only 23% of village-oriented pointing gestures had raised elbows.

The consistency in the results between both types of coding suggests that speakers are more likely to produce high points when indexing referents on larger scales, a tendency that aligns with much of the literature on pointing gestures. More revealing results may arise if distance is considered to be a continuous rather than a categorical variable. Instead of the scales vicinity, village, island, and world, referents could be coded based on how many kilometers they are from the speaker, following the methodology used in Mesh et al. (2021). This strategy would account for more nuance and would more accurately represent the actual distance between the speaker and the referent. For instance, in my analysis, the village next to Depe has the same values as a village across the island. Because they are collapsed into a single category, the many kilometers difference in distance between these locations and the fact that Hawu speakers are much more familiar with a neighboring village as opposed to one across the island are not accounted for. A continuous coding of referent distance would limit the bias that arises through my coding and allow for a true analysis of distance. However, such an analysis would require more data.

Although, Hawu speakers to seem to employ the far-is-up strategy, because I coded height based on elbow height or the vertical angle of the point, it suggests that high points in Hawu tend not to be as expansive as the high points documented in Kata Kolok (De Vos 2014), Arrernte (Wilkins 2003), and Quiahije Chatino (Mesh 2021). This may be a part of the grammar of absolute pointing in Hawu, but it also might be due to the context of the conversation. Speakers are sitting close together telling stories as opposed to being engaged in a targeted spatially-oriented task such as giving directions or pointing out locations of villages. It is possible that Hawu speakers may make their points smaller to account for the more conversational atmosphere. Speakers are also sitting cross-legged on the ground with their arms resting on their legs, and this sitting position (as opposed to a standing position) encourages speakers to use smaller gestures. There is unfortunately no data for comparison to determine which factor may be motivating these small points.

6.4.3 Hand shape and orientation

I have shown above that the gesture frame and the height of the points encode meaning. In this section, I address two additional pointing features: hand shape and orientation. I return to the six most common pointing forms in Hawu to observe whether their form is related to the function they serve within the utterance. These forms include:

- Open hand, palm vertical
- Open hand, palm down
• Open hand, palm up
• Index point, palm vertical
• Index point, palm down
• Index point, palm up

As I discussed in §6.2, I coded the function of each point produced in the Millingen Task. I based these on how they align with speech information and discussions with Leonardo. Common functions included: individuating, offering as an example, positioning/anchoring referent in a location, origin or destination of movement, and directionality/indicating a vector (not a location). Based on this coding, it seems that certain hand shapes and palm orientations align with certain functions. Open hand, palm vertical gestures indicate vectors or directionality without focus on the referent. In contrast, both palm down and palm vertical index points locate or individuate referents. Open hand, palm down gestures locate spread referents or place them on the ground. Palm up gestures (both index point and flat hand) indicate referents that are being offered for exchange. I will provide more information for each type in the following sections.

6.4.3.1 Open hand, palm vertical

Open hand, palm vertical gestures indicate directionality; rather than locate a referent, they denote a vector. The nucleus of an open hand gesture tends to occur as the speaker is saying the verb. Usually this verb is one that denotes a vector that extends away from a deictic center such as *kako* ‘go’, *hape* ‘carry’, *teru* ‘continue’, and *heleo* ‘see’. When the nucleus of an open hand, palm vertical gesture occurs with a noun, these tend to be nouns that move (such as cars) or nouns that stretch along a vector (such as roads).

A typical open hand, palm vertical gesture is shown in (6.13) and Figure 6.17.

Figure 6.17: Marten produces a flat hand vector to indicate the directionality of the road and as a result, the directionality of his work on the road. The gesture is produced as the speaker utters *j’ège ke teru ma* ‘We worked continuously’. Image corresponds to speech fragment in example (6.13).

(6.13) hēku d’ai ta, j’èga ne ruj’ara ae d’e ma Depe.
work DET road many PROX.SG CIS D.

‘So (we) worked on the highway coming to Depe.’
Here, the speaker is talking about working on the main road that runs through Depe. In the first IU of (6.13), he establishes what kind of work they were doing. In the second IU, he gestures with a palm vertical open hand point. The stroke of this gesture occurs as the speaker utters the verb *teru* ‘continue’. Throughout the stroke, the speaker lifts his arm to show movement away from the speaker along the road, which is also the direction of the work that was being completed. In this utterance, the vector created by this movement, as opposed to a specific location, is being highlighted through the gesture.

Of course, because speakers often orient gestures in absolute space, open hand, palm vertical gestures by nature may also indicate the location of the destination of the action. However, it appears that their intention is to draw attention to the vector rather than the destination. For instance, in Example (6.14) and Figure 6.18, the speaker is talking about the places where he worked as a *magelis*. As he does so, he points towards the southwest with an open hand, palm vertical gesture and lists the places. However, there are two features that indicate that the speaker may be indicating a vector rather than a location. First, the gesture unit begins as the speaker says *hape la* which literally means ‘carry towards’ and is a way to indicate a vector. Second, although he is pointing towards the locations, his gesture is not precise, he does not change the position of his hand to accommodate each location but rather seems to imply that ‘they’re all in this general direction’. 

![Figure 6.18: Stefanus indicates directionality toward several villages. The preparation for the gesture begins with the *hape la* ‘carry towards’, and the gesture is held as he says the name of each village. Image corresponds to speech fragment in example (6.14).](image)

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(6.14) *ad’o de nad’e do [hape la Teriwu (Raenalulu?)]*

neq prox.sg prox.sg rel carry trans t. r.

‘Not here, this was in Teriwu, Raenalulu,’

*Titinalede Luimediri* ko dīi.

T. l. tag 1pl.incl

‘Titinalede, (and) Luimediri, right?’
6.4.3.2 Index points

Index points are clearly meant to locate or individuate a referent. When speakers employ an index point, the focus is on the position of the referent itself—whether an object, a place, or an action. The nucleus of index points tends to co-occur with proper and generic nouns that the speaker is locating, as demonstrated in (6.15) and Figure 6.19. Stefanus first directs an index point towards the PNPM office as he says the name. Then he directs a second index point towards the road that he is talking about.

![Stefanus pointing to the PNPM office and the road](image)

Figure 6.19: Stefanus points to the location of the PNPM office. He then points to the location of the road that was built with the help of the PNPM. Image corresponds to speech fragment in example (6.15).

(6.15) 
\[\text{“[awe (PNPM)].}\] \[\text{[usu \ ri (j’ii \ ma nahed’e)].}\]
\[\text{time \ P. \ propose AGT Ipl.excl cis prox.pl.kn}\]
\[\text{‘At the time, we proposed to the PNPM (to build) this (road).’}\]

However, index points can also co-occur with a verb if the speaker seeks to locate the action in a specific location. Such verbs tend not to delineate a vector. Rather, they are actions that take place in one location or in no particular direction. Examples include *manga* ‘play’, *j’ega* ‘work’, *èki* ‘tie’, *nga’a* ‘eat’, and *perète* ‘hang’. Because there is little to no directionality associated with these actions, the index point is intended to locate the action rather than delineate a vector along which it takes place. As an example, in (6.16) and Figure 6.20, Ridolof is talking about how there was less food when he was a child, but even though he would only eat a little, he would still have enough energy to play all day. With each verb, the speaker locates the action in the space around him. Eating and being full are anchored in his house in front of him, and playing is anchored in a hill to his right.

(6.16) 
\[\text{“[ta (hèb’o \ he-u)b’a \ ri \ ou] donahu, } \text{[manga (he-lod’o) rai \ pa \ kolo] lede } \text{“[ta}\]
\[\text{PRT eat.sugar one-spoon AGT 2sg sugar play one-day land loc top mountain PRT}\]
\[\text{(b’èhu) we \ d’elu]}\]
\[\text{full just stomach}\]
\[\text{‘(We would) just eat one spoonful of sugar, (and we) could play on the mountain for a whole day.}\]
Figure 6.20: Ridolof talks about eating just a little as a child but still having energy to play in the fields. His points align with the verbs he utters, and they serve to locate the acts they denote within the space around him. In a) he points toward his home, anchoring the act of eating. In b) he points towards a hill nearby, anchoring the act of playing, and in c) he points again towards the house to anchor the act of being full. Image corresponds to speech fragment in example (6.16).

(Our) stomachs were full.’

(Our) stomachs were full.’

(LP1-157; Speaker: Ridolof
00:10:41.552–00:10:44.376)

There is no identifiable distinction between index, palm vertical points and index, palm down points. Index, palm down points may be used to emphasize something that is being said, or they might locate referents that are more central to the speech than index, palm vertical points. However, such patterns are impressionistic at best, so I do not pursue them further.

6.4.3.3 Pointing to the addressee

Pointing to the addressee provides further support of this contrast between open hand, palm vertical and index points. Speakers point to the addressee with an open hand point when the speaker is directing a question or a statement toward the addressee. For instance, when Leonardo asks Stefanus how many children he has, he directs an open hand towards the speaker (Figure 6.21 and (6.17)). The stroke of the point aligns with oha bapa ’do you have’.
There are two reasons that a speaker might point to the addressee using an index point. The first is to distinguish the addressee as an agent. For instance, when Ridolof tells Leonardo *j’ê lema ta nga’a lema* ‘you would also be hungry’, he is putting emphasis on the addressee as the one who is hungry, and he produces an index point that targets the addressee. The only other instance when the speaker directs an index point towards the addressee is when the speaker uses the addressee as an example for someone else. When Stefanus talks about Leonardo’s dad, he points to Leonardo using an index point as he says *bapa ou* ‘your father’. In this way, he’s not intentionally pointing at Leonardo. He’s pointing at Leonardo’s dad through Leonardo.
Given these examples, there are clear parallels between these different forms of pointing when they target the addressee. A flat hand, palm vertical point does not necessarily point to the addressee but rather in the direction of the addressee. It serves to direct a question or statement rather than locate the addressee. In contrast, index points serve to indicate the addressee as the agent of the utterance, or they are used metonymically to point to referents that are associated with the addressee.

### 6.4.3.4 Open hand, palm down

Open hand, palm down gestures are used to locate referents; these are often referents that may be spread over an area (e.g. an island, a building) or they are located on the ground (e.g. a floor). The former situation is shown in (6.20) and Figure 6.24. The speaker is locating a building that is part of a campus of offices called Kantor Klasis. He is telling Leonardo about how the people at his church have donated money to rehabilitate two buildings. His point seems to be intended to locate the buildings. The gesture’s preparation begins with the verb *rehap* ‘rehabilitate’, and the static stroke occurs during the description of the buildings *do d’ue b’ue* ‘that are two’.

(6.20) *hèku nahid’e  [ta reh(ap  we do d’ue b’ue) nahid’e]*

\[ \begin{array}{ll}
\text{so} & \text{DIST.PL.INDV} \\
\text{PRT} & \text{rehap} \\
\text{just} & \text{REL} \\
\text{two} & \text{CLS} \\
\text{DIST.PL.INDV} & \end{array} \]

‘So that’s just the second building that’s being rehabilitated.’
Figure 6.24: Stefanus uses an open hand, palm down point to locate two distant buildings. Image corresponds to speech fragment in example (6.20).

(DEPE_LP1-159; Speaker: Stefanus 00:15:16.778–00:15:18.648)

Open hand, palm down points are particularly common when speakers point to referents within narrative space, as if the speakers are placing the referent in front of them. In the following example, the speaker is talking about how he does his work at the church because he wants to improve people’s lives both in the present and the future. He contrasts present with future with two open hand, palm down points. He locates the present in the space directly in front of his crossed legs. His arm is bent, and his fingers are only loosely extended into a flat hand point. When he locates the future, he extends his arm farther in front of him, and his hand, although still quite loose, takes on a more defined flat hand shape.

Figure 6.25: Stefanus indicates the present and the future in narrative space using an open hand, palm down gesture. Image corresponds to speech fragment in example (6.21).

(6.21)  a[tuu (ngi’u do nad’e)], nga b[tuu muri mada (do, ta medae d’e mi-nahère)].
stand self REL PROX.SG with stand lifestyle REL PRT future PROX.SG like-MED.PL.UNK
‘For oneself now and for the lifestyle in the future, like that.’

(DEPE_LP1-159; Speaker: Stefanus)
Demonstratives are far more likely to occur with an open hand, palm down point than an open hand, palm vertical one. Sixteen out of 30 (53%) open hand, palm down gestures co-occur with a demonstrative while only seven out of 49 (14%) palm vertical gestures co-occur with a demonstrative. This may relate to the locative function of open hand, palm down points. Because they are used to locate a referent rather than to anchor a vector, their function may better-align with the function of demonstratives which refer to objects or locations as opposed to vectors. There are only two examples of open hand, palm down points indicating directionality. In the first, the hand of the speaker is embodying a car driving along a road as he points in the direction of the road itself. In the second, the speaker is describing movement along a road, and he talk about a place where one descends to a river. Directly following the point, he swipes his hand downwards to indicate downwards movement.

6.4.3.5 Palm up gestures

Some points have the palm oriented slightly upwards. Palm up pointing gestures—with both open hand and index finger hand shapes—seem to indicate a referent in an exchange or as a byproduct of an absolute point towards the back plane. Both open hand and index finger, palm up points are rarer than the other palm orientations.

Four out of five open hand, palm up gestures occur when the speaker is pointing to something that he is selling or exchanging, as shown in Figure 6.26 and Example (6.22). Here, the speaker is talking about wood that he would sell in Seba when he was a child. Previously, he anchored the wood in front of him with an index finger point, but when the point aligns with harga ‘price’, the hand is open and the palm is at a 45° angle upwards as if he is offering something as he indicates the referent.

Figure 6.26: Speaker uses an open hand, palm up point to indicate the position of wood that he is selling in narrative space. The point aligns with harga ‘price’. The hand is open and the palm is at a 45° angle upwards as if he is offering something as he indicates the referent. Image corresponds to speech fragment in example (6.22).

(6.22) la kale aj’u la ro’a j’ami mi-nahère.
TRANS seach wood TRANS forest like-MED.PL.UKN
(We) searched for wood in the forest.
la pe-wie aj’u la lahala Mèb’a mi-nahère.
TRANS CAUS-give wood TRANS beach M. like-MED.PL.UKN
‘to sell at Seba beach, like that,’
*nga har(ga)*, with price
‘with the price...’

(LP1-158; Speaker: Marten 00:03:20.123–00:03:30.717)

Index, palm up points can also be used in this way, albeit they are more rarely done so. In a continuation of his conversation about selling wood, Marten talks about the other things that he would sell as a child. All are oriented in narrative space before him. When he talks about selling vegetables, he points to the vegetables in narrative space. Like the gesture in Figure 6.26, the palm of this gesture is oriented upwards. However, this gesture is an index point.

![Image of Marten pointing to vegetables](image_url)

Figure 6.27: Marten points to vegetables in narrative space. He is talking about selling vegetables, and the index, palm up point aligns with *era haj’o la pewie haj’o* ‘If there were vegetables, (I) sold the vegetables.’ Image corresponds to speech fragment in example (6.23).

(6.23) *era ha(j’o lape)-wie haj’o* ma,
exist vegetable TRANS CAUS-give vegetable CIS
‘If there are vegetables, (I) sold the vegetables.’

(LP1-158; Speaker: Marten 00:03:53.926–00:03:55.896)

The palm up points that do not indicate the object of an exchange are used to indicate the location of a referent. The palm seems to be oriented upwards as a byproduct of indexing a referent that is not in front of the speaker. In Figure 6.26, as the speaker indicates the location of the well that he is referring to, he bends his wrist backwards and flips his palm upwards so that his fingers are pointing towards the well without the need to extend his arm.
6.4.4 Discussion: Pointing semiotics

In this section, I have observed four features of Hawu pointing that contain meaning: gesture frame, arm height, hand shape, and palm orientation. Each feature provides slightly different information. The gesture frame helps the addressee accurately locate the referent. I identify two gesture frames: an absolute frame and a narrational frame. When gestures are oriented within an absolute frame, they are directed towards the exact location of the referent, and they serve to ground the speech in locations on Hawu island. Accurate reference to referent locations is extremely important to managing referents in discourse, and ambiguous pointing or the lack of a point in absolute space can lead to moments of discordance between the speaker and addressee. Conversely, absolute pointing is so important that speakers can once again reach an understanding with just a point.

Gesture height correlates with the distance of the referent. Higher points—indicated by the height of the arms or the verticality of the hand—are used to indicate farther referents, as in the case in languages around the world. Height further represents a feature of absolute pointing. Points that are structured within narrative space are rarely high points, suggesting that the correlation between height and distance is largely relevant when speakers point in absolute space.

Hand shape and palm orientation provide information about the nature of the referent and why it is being indexed. Information about whether the speaker is indexing a location, a direction, or something that is being offered in an exchange is communicated in part through the hand shape and orientation of the point. In this section I have observed the meaning of the six most common pointing forms within this dataset: open hand, palm vertical; open hand, palm down; open hand, palm up; index point, palm up; index point, palm down; and index point, palm vertical.

Open hand, palm vertical points indicate a vector, or directionality, without emphasis on the referent’s location. Index points—both palm down and palm vertical—are used to locate and individuate referents.
Open hand, palm down points are also used to locate referents, but the gesture is used to emphasize the spread of the referent, or it acts to place the referent on the ground in front of the speaker. Palm up points locate a referent being offered in an exchange.

These form-function associations correlate with findings in other studies that have looked at the relationship between the form of a point and its meaning. For instance, open hand, palm vertical points have been documented to be used to indicate vectors without a precise target (Cochet & Vauclair 2014, Mesh 2021). Meanwhile, Kendon & Versante (2003) also observe that index points are used to locate or individuate a referent while open-hand, palm up points are used when offering a referent. However, unlike Kendon & Versante (2003), I do not observe a difference between palm vertical and palm down index points. Speakers of the Millingen task seem to employ these in the same manner.

With this information in mind, I return to the example discussed at the beginning of this section which is repeated below in Figure 6.29 and (6.25). Recall that the point that Stefanus produces is intended to index a town called Seba, which is the destination of the action he describes in his utterance ‘Carried from here’.

Earlier, I posed the question: How does the addressee identify that the point does not align with the demonstrative d’e and is instead aligned with unspoken information?

(6.25)  \[
\text{[\text{ta (hape rai) ti d’e}]}
\]

\[
\text{PRT carry from PROX.SG}
\]

‘(I was) carried (to Seba) from here’. (lit: ‘Carried from here.’)

Based on the information in this section, it is now possible to answer this question. First, the arm is lifted to at least shoulder height, which is more likely to occur when the speaker is pointing in absolute as opposed to narrative space. It is oriented towards the northeast. Because the point is a high point, the referent is likely far away. This suggests that the point is not meant to accompany d’e ‘PROX.SG’. Second, the point is an index point. This suggests that the speaker is locating a referent as opposed to indicating a vector. Thus, the point is not intended to indicate the vector created by the act of ‘carrying’ (though it inevitably does provide directional information simply based on its orientation). Considering these clues,
Figure 6.30: Stefanus repeats the point in (6.25), but this time he includes the referent, the hospital in Seba, in his speech (6.26), indicating that the speaker indeed intended his previous point to locate the hospital in Seba. Image corresponds to speech fragment in example (6.26).

The addressee can determine that the point is meant to locate a relatively distant location to the northeast, and from context clues, they can recognize that the point is directed towards Seba. This is confirmed in the next utterance when the speaker says *hape la emu pèd’ a la mèba la nii* ‘Carried to the hospital in Seba over there’ while producing an identical point (Figure 6.30).

(6.26)  
\[ hape \ la \ \dot{e}mu \ \dot{e}mu \ pè(d’a \ la) \ \ Mèba \ la \] nii  
  carry\ TRANS house\ hospital\ TRANS\ S.  \ TRANS\ DIST.SG  
  ‘(I was) carried to the hospital in Seba over there.’

6.5 Discussion

The literature on indexicals suggests that pointing and demonstratives are inextricably linked and cannot be meaningfully studied without each other (Levinson et al. 2018). This indeed seems to be true in Hawu. However, this does not necessarily mean that indexicals across the modalities always co-occur. In fact, most demonstratives are produced without a point, and most points are produced without a demonstrative. Rather, the different indexing functions that are offered by demonstratives and pointing are employed opportunistically based on the information that the speaker seeks to convey.

When speakers are indexing a referent that was previously-mentioned in discourse, usually only a demonstrative is necessary. Conversely, when speakers need to locate an object or action mentioned in speech, only a point is necessary. Regardless, sometimes demonstratives do co-occur with pointing. Within the HDP corpus, demonstratives and pointing co-occur about 34% of the time. Certain demonstrative forms are more likely to co-occur with a point. In particular, points tend to occur more often with distal demonstratives and singular demonstratives. The DIST.SG.INDV demonstrative *(na)nid’e* stands out in that it almost always co-occurs with a point (92% of the time). As I discussed, in §6.3.1, these
findings oppose those found by other studies (Cooperrider 2016: e.g.). There are several possibilities as to why these differing results arose. I hypothesize that patterns of co-occurring points and demonstratives differ based on language and culture, and Hawu simply represents another way in which demonstratives and pointing are linked. Hawu speakers may be motivated to co-produce points and distal demonstratives because their demonstrative system codes individuation at the distal level, thus resulting in an association between distal demonstratives and the need to point out the referent.

It is, however, important to note that the analysis presented in this chapter is based on naturalistic interactional data, while much of the research into this topic is largely restricted to lab studies. It may be that different genres result in different pointing habits. In the context of a lab study where people are conducting a predetermined spatial task, speakers may be more aware of their pointing habits and adjust them to best complete the task. In contrast, in this interactional data, pointing is largely unconsciously produced as the interlocutors speak, there is a mix of primary and secondary points. This is just one difference between the datasets that may have elicited these differing results, and it highlights a possible avenue for a follow up study on Hawu.

Because demonstratives and pointing do not always align, I hypothesize that semiotic features of pointing may contribute to the meaning of the point. To observe how gestures are able to convey meaning without a demonstrative, I analyze several component parts of all points that were produced during the Millingen task. I observe how the gesture frame, height, hand shape, and palm orientation, can all contribute different semantic information that, when considered together, provide the necessary information to allow the addressee to identify the referent, even without speech. There is an expectation that speakers will point to landmarks and places on Sabu island when they are mentioned. A missing or incorrect point can lead to a moment of discordance between the interlocutors. Pointing height provides information about the distance of the referent; a farther referent is more likely to be indexed with a higher point. Hand shape and palm orientation can provide information about the whether the speaker is indicating a vector, locating referent, or indicating something that is being offered. While these are likely not all indicators of the point’s meaning, they are four components of the “grammatical structure” of points in this corpus.

It is possible that these semiotic features of pointing are crucial for discourse structure management and referent tracking. Because arguments are dropped so frequently in Hawu, in some cases, gestures seemed to manage discourse by aligning addressees’ attention to dropped arguments. This is evident in (6.25) where the speaker’s point is filling the position of a dropped argument in speech. Through features such as gesture frame, height, hand shape, and palm orientation, the addressee can understand this role of the point. Argument dropping is not just a feature of Hawu, but rather a feature of many languages in Indonesia (Ewing 2001, 2014, Khairunnisa 2022). Studying co-speech gestures is one possible route to better understand how speakers track dropped arguments in languages throughout the region.

This study can be expanded in other ways as well. For instance, Leonardo, who is in his 20s, occasionally gestured differently from the older speakers he was interviewing. I would be interested to see how social factors such as age, education level, and proficiency in Hawu might affect the pointing system. One possible route for this study may be an observation of temporal gestures. This is one area where Leonardo’s pointing clearly differed from that of his interviewees. When Leonardo indicated time in space, he consistently located the past to his left and the future to his right, which is also the direction of writing in Indonesian and Hawu (for more information about writing direction and temporal pointing see e.g. Fuhrman & Boroditsky 2007). The gestures of the older speakers, however, followed a variety of different time alignments. Sometimes they gestured left to right like Leonardo. Other times the past was to the right and the future to the left. They also gestured along the sagittal axis, usually indicating the past in front of them. As such, study of temporal gestures may be an ideal medium to understand how social factors influence pointing habits, and in particular, how gestures differ across generations in a language undergoing shift.
It is important to note the limitations of this analysis. This is a pilot study of Hawu pointing, and thus it is not based on rigorous statistical testing. Ideally, several more speakers would have participated in this study. Kita (2001) suggests at least four speakers should participate with a minimum of 1 hour of data. This accounts for variability between speakers and should result in enough data to allow for quantitative analysis of gestures. Future study should include data from at least one more speaker, which should allow me to make some observations that were impossible with the current dataset. Data collection is ongoing, so I expect to be able to bolster the findings from this chapter in a future iteration of the study. Still, even with more data, it will be important to note that these data are not necessarily representative of the entire Hawu population. As I discussed in Chapter 3, spatial language, and presumably spatial gestures can differ based on factors such as gender, profession, and age. We can only confidently say these data are representative of the gesture tendencies of the three men in this study. But even if we generalize, the data can only be representative of older, Hawu men who have spent much of their lives living a subsistence lifestyle in Depe. The data are also only representative of this specific genre of speech.

There were also distinct challenges to collecting these data. Because of the global coronavirus pandemic, travel was restricted, so I was not able to go to Sabu and be present during data collection. While Leonardo carefully assured consistency across his interviews, I could not test theories that arose during the exploration of the data. All observations in this chapter would have improved if I could have conducted follow-up testing. Undoubtedly, these are areas for additional work.
Chapter 7: Conclusion

As I have shown throughout this dissertation, the study of space has been productive in Malayo-Polynesian languages. The published literature displays immense diversity in absolute or geocentric orientation systems and demonstratives (Chapter 2). Researchers approach the study of these facets through specific lenses such as culture, multiplicity, identity history, and geography. But while researchers of language and space in other areas of the world have embraced gesture as a lens that can be particularly revealing about the language of space, researchers working on Austronesian languages have yet to fully engage with this disciplinary shift (Chapter 3). The Hawu language offers a unique opportunity for the study of language, space, and gesture because it is an underdocumented language that remains vital, thus allowing the study of its phonological, grammatical, and spatial features in a corpus of natural speech data (Chapter 4). While Hawu has the potential to contribute to the study of Austronesian languages in a variety of ways, its spatial language stands in stark contrast to the typological observations of other Malayo-Polynesian languages. Hawu speakers rely on a demonstratives system that was not identified throughout the review of demonstrative systems in Chapter 2, and absolute orientation is used sparingly (Chapter 5). The study of gesture further develops our understanding of these spatial systems. Pointing is part of the demonstrative system, and pointing itself can convey meaning through the orientation of the point, the height of the point, hand shape, and orientation (Chapter 6).

In this chapter, I end this journey by considering the implications that the study of demonstratives and pointing in Hawu has on the literature review presented earlier in this dissertation (§7.1). I then offer some avenues for future research with hopes that other researchers may find inspiration to follow up on this work (§7.2).

7.1 Hawu’s place in the spatial literature on Malayo-Polynesian languages

Hawu is an ideal language in which to study spatial language and gesture. Because space is specialized knowledge that is below the threshold of speaker awareness, it can become endangered even before the language does (Evans 2010). Although Hawu is a minority Indonesian language, it remains quite vital. It is still the language of everyday communication for speakers of all ages on Hawu island. Thus, it is possible to document the natural use of the language in a variety of genres. Because of the vitality of Hawu, when I first began this study of Hawu space, I had anticipated the language to have a land-sea system. This is the native orientation system of many Austronesian languages, and land-sea systems are not unusual in NTT (e.g. Baird 2002, Nagaya 2012). Further, based on the sociotopography literature, Hawu geography and culture have several features that tend to align with geocentric orientation systems, and in particular, a land-sea system.

Among these are the fact that Sabu is a relatively small island. People living on Sabu are never far from the sea, which is very often visible to much of the population. Pappas & Holton (2022) find that speakers of Malayo-Polynesian languages tend to employ land-sea or coastal systems when they are spoken
in coastal regions. Further, several studies have found that urban populations almost always employ relative FoR, but rural populations tend to use absolute geocentric orientation (Majid et al. 2004, Dasen & Mishra 2010). Researchers suggest that urban populations are more likely to use a relative system for a variety of reasons, but the most accepted theories seem to be that cities tend to obscure visual access to the landscape, and urban-dwelling populations have less interaction with the natural environment. In contrast, rural populations—especially hunter-gatherers or pastoralists—interact with large swaths of land each day and thus have a more intimate relationship with the local topography (Levinson 2008, Dasen & Mishra 2010, Palmer 2015). Hawu speakers largely live in rural settings. There is one town on the island which is not large. Buildings are largely restricted to one story, and the population is likely only a few thousand people. Most of the rest of Sabu island is sparsely populated with plenty of space and sometimes wilderness between homes. This population density is related to the fact that Hawu speakers mostly practice subsistence agriculture, living off of farming, fishing, herding, gathering, and collecting palm juice. Most people, particularly men, spend large portions of their days outside conducting these activities. Further, even just a decade or two ago, walking was still the primary means of moving about the island. All of these features of Hawu daily life suggest that Hawu speakers have an intimate relationship with the landscape.

Based on these features—a rural, coastal population that practices subsistence agriculture and relies on both the land and the sea for their livelihoods—it seemed quite likely that an absolute system based on the land-sea distinction would be the main means of orientation among Hawu speakers. Instead, I found no use of a linguistically-encoded geocentric system and even minimal use of a cardinal system. In daily interactions, people use demonstratives and relational terms to categorize, navigate, and orient themselves within the landscape. Based on these features of spatial language in Hawu, it appears that Hawu does not align with the previous literature on sociotopography. Nearly all of the sociotopographic features that have thus far been observed to be associated with absolute orientation are present in Hawu; yet Hawu speakers rarely seem to employ absolute orientation in quotidian interactions.

At first, this may suggest that non-sociotopographic features (or sociotopographic features that have yet to be empirically studied for their relationship to spatial orientation) may be motivating Hawu speakers to use non-geocentric orientation. Perhaps historical factors, contact with other languages such as Indonesian, or other features mentioned in Chapter 3 or Pappas & Mawyer (2022) might be motivating Hawu speakers’ preference to use deictic spatial orientation. However, if gesture, in particular, is considered as a lens to study spatial language, Hawu does not deviate from the findings within the sociotopographic literature at all. The study of pointing in Chapter 6 suggests that Hawu speakers are very aware of the absolute positions of landmarks—both built and natural—on Sabu island, and they continually mediate their own orientation in relation to these locations. Speakers consistently indicate these locations by accurately pointing to their position which plays a crucial role in efficient and successful communication. This suggests that in fact, Hawu speakers do employ an absolute FoR that is embedded within spatial communication. It is simply rarely communicated through speech, and it has not been grammaticalized into a linguistically-expressed system of spatial orientation.

These findings in Hawu suggest that perhaps, sociotopographic factors shape spatial utterances as opposed to just spatial language, and as such, the study of sociotopography should necessarily include gesture. Studies in other parts of the world have drawn attention to the complementary relationship between language and gesture in spatial orientation, which may further support this idea. Study in Central America shows that geocentric orientation is retained in gesture longer than it is retained in language; even as Ngigua (coz) speakers shift to Spanish and more frequently employ a relative FoR in speech, they continue to orient their gestures within absolute space (Calderón et al. 2019). Similarly, speakers of Yucatec Maya do not often use a specific FoR in speech. Like Hawu speakers, instead, they employ demonstratives, but the gestures of Yucatec Maya (yua) speakers align with absolute space (Le Guen 2009, 2011). Both of these studies show that both speech and gesture are necessary components in the study of space because
Hawu’s place in the spatial literature on Malayo-Polynesian languages
together they may reveal a more complex picture than just one modality.
While I recognize that it is unrealistic to expect that all studies of sociotopography incorporate gesture
since gesture study is time-consuming and requires specialized theoretical and methodological training,
I do suggest that gesture may be another avenue for studying sociotopography. This dissertation is a
first step to bridging this gap. Through the study of both speech and gesture, I have identified that
both modalities are important in order to obtain a clear picture of how Hawu speakers mediate their
surroundings in order to anchor utterances in the environment.
Another surprise that arose in my study of Hawu was its unique demonstrative system and the fluid
nature of the terms. In my typological overview of Malayo-Polynesian demonstrative systems, I identified
three types of systems: distance-oriented, person-oriented, and elevational systems. Distance-oriented
systems use only the speaker as the deictic center. Person-oriented systems use both speaker and addressee
(and potentially someone who is not participating in the speech event) as deictic centers, and elevational
systems differentiate deictic reference on a horizontal and a vertical axis. There is a fourth type of system
that requires further exploration which incorporates other topological features—such as the sea, the island
interior, and the river—within the demonstrative system. There are also many different manifestations of
each type of system based on how many demonstratives they contain and the semantic parameters that
differentiate demonstratives within a system. Systems may employ spatial factors such as distance from
deictic center, spread, specificity, and visibility. They may also employ non-spatial factors such as plurality,
visibility, audibility, and whether there is an accompanying gesture.
The Hawu demonstrative system, looks like no other system described in this typology. It has ten
terms that are distinguished by distance, number, individuation, and speaker knowledge. In this context,
speaker knowledge refers to how familiar speakers are with the referent, which may include whether
they know exactly where it is located, whether the referent is visible, or how much the speaker knows
about the referent in relation to the addressee. While this type of knowledge about the referent is encoded
in other Malayo-Polynesian demonstrative systems, in no other system is it only encoded among plural
demonstratives.
Further, the typology of Malayo-Polynesian demonstrative systems suggests rigid demonstrative
frameworks, but the Hawu system is anything but rigid. Hawu speakers seem to employ demonstratives
opportunistically based on which features of the referent they would like to emphasize. Each label that I
assigned came with its own nuances and plenty of exceptions, meaning that though I gloss (na)hed’e as
‘prox.pl.kn’, it is not just used to refer to proximal, plural referents that the speaker has familiarity with.
 Speakers may use the term to express proximity, plurality, or certainty.
I don’t believe that this fluidity is unique to Hawu, however. Rather, I expect that all demonstrative
systems are just as nuanced. Levels of ambiguity and interaction of various semantic features are evident in many well-described Pacific demonstrative systems such as Caac (Cauchard 2015), Lavukaleve
(Terrill 2018), and Yélî Dnye (Levinson 2018b). As a result, this nuance instead highlights a limitation of
my typological analysis in Chapter 2. I did not broadly recognize fluidity but rather presented each
demonstrative system as an rigid system. This is partially because of the nature of typological analysis;
to make broad, crosslinguistic generalizations, it is necessary to generalize systems. However, it is also a
product of the secondary literature I used. Most of the demonstrative systems I studied were presented
as rigid systems with little nuance, largely because until recently, the importance of demonstratives for
the study of language was largely unrecognized (Levinson 2018a). This limitation simply calls attention
to the need to improve nuanced documentation of demonstrative systems in the future. Luckily, this is
something that those who study demonstratives recognize (e.g. Diessel 2006, 2012, Levinson et al. 2018),
and more and more language grammars are incorporating targeted analysis of demonstratives.
As the demonstrative literature begins to recognize the nuance and complexity of every demonstrative
system, consideration of gestures is also slowly being incorporated into demonstrative studies (e.g. Terrill
2018, Margetts 2018). The examination of both modalities is extremely important because pointing and
demonstratives are two methods for achieving the same function. They are both specialized tools for indicating or creating a connection between a referent in space, time, or discourse in order to direct an addressee’s attention to that referent. Because of this, they are inextricably linked in their alignment and function (Clark 2003, Kendon & Versante 2003, Kita 2003b), and it may not be possible to meaningfully study one modality without consideration of the other. Research on demonstratives and pointing has shown that speakers’ choice of demonstrative may interact with whether a pointing gesture is included. In particular, speakers of some languages more often produce a point and a demonstrative together when the demonstrative is proximal (e.g. Bangerter 2004, Cooperrider 2016).

However, Hawu speakers more often point when they produce a distal demonstrative. Distal demonstratives co-occur with points about 65% of the time. Proximal demonstratives co-occur with points about 33%, and medial demonstratives only co-occur with points about 25% of the time. This finding lies in stark contrast to previous research on this topic. Documentation of Saliba’s demonstrative system has suggested that pointing brings a referent into a more proximal sphere, thus allowing the use of a proximal demonstrative (Margetts 2004). Meanwhile, in English and Dutch proximal demonstratives may be associated with specificity; therefore, the increased specificity provided by a point allows the use of a proximal demonstrative even when the referent is not near (Cooperrider 2016). Hawu speakers may not associate proximal demonstratives with specificity to the same degree as English and Dutch speakers because Hawu’s demonstrative system encodes individuation at the distal level, thus resulting in an association between distal demonstratives and the need to point out the referent. These results may suggest that patterns of co-occurring points and demonstratives differ based on language and culture, and Hawu simply represents another way in which demonstratives and pointing are linked. Because there is so little research on this topic, there is a need for study on diverse languages to confirm or deny this hypothesis.

In addition to these patterns between demonstratives and pointing, it seems that Hawu speakers opportunistically employ indexicals across the modalities. Because demonstratives and pointing provide slightly different information, speakers may employ them separately based on the kind of information they provide. Hawu demonstratives can provide information about the proximity, plurality, spread, or familiarity of the referent, but they cannot specify an angular search domain or manage relations between entities in space. As such, speakers may choose between indexing on the spoken or manual modality depending on which kind of information is most important to the interaction.

In fact, pointing itself is not entirely devoid of meaning, certain pointing features can convey certain types of information. For instance, in Hawu, gesture frame, height, shape, and palm orientation all convey meaning. There is an expectation that speakers will point to landmarks and places on Sabu island when they are mentioned. A missing or incorrect point can hinder the conversation. Pointing height provides information about the distance of the referent; a farther referent is more likely to be indexed with a higher point. Hand shape and palm orientation can provide information about the whether the speaker is indicating a vector, locating referent, or indicating something that is being offered. All of these features allow speakers to use points without requiring accompanying speech, and they lead to a composite system of indicating across the modalities. A better understanding of this role of pointing may elucidate how speakers effectively manage referents in discourse.

Overall, this dissertation emphasizes the need to more broadly recognize the value of gesture in linguistic study. Gesture is crucial to communicating about space, and it has the potential to augment linguistic analysis. It can be a means to study FoR or how speakers manage referents in discourse, and it also has the potential to enlighten linguistic theories such as Sociotopography.
7.2 Future directions

In light of these findings, there are several avenues for future research. This dissertation is one of the first systematic studies of pointing and spatial language on an Austronesian language and has offered a description of multimodal indexing in Hawu. However, it is still a pilot study in many ways.

First, it is important to remember that the analysis of pointing is just based on three men with rather similar demographics. Therefore, I cannot confidently generalize the findings in Chapter 6 to the entire population of Hawu speakers. Similarly, because I was unable to travel to the field during this portion of the study, I was not able to conduct follow-up study on many of the gestural patterns observed in the data. Ideally, the descriptive corpus-based approach that I adopted in Chapter 6 would have been the exploratory stage of data analysis, which could then be followed by empirical studies of targeted features within the dataset. Unfortunately, this was not possible, so additional studies that observe the form-meaning relationship of Hawu points and the semantic and temporal relationship between pointing and demonstratives in more depth would be useful. At minimum, additional data would allow me to draw more confident conclusions. This is something I am in the process of doing. Data from three additional Millingen Task conversations are in the process of being transcribed which will add approximately another hour of data to my analysis.

Relatedly, though this dissertation was focused on Hawu space, I was simply unable to conduct many of the traditionally-used language-independent methodologies for the study of spatial language (see e.g. Levinson et al. 1992, Levinson 1999, Burenhult & Levinson 2008), and because of this, I could not provide an in-depth analysis of how people employ terms such as ‘left’ and ‘right’ or how they navigate different FoR. As my review of the literature suggests, much of the literature on Malayo-Polynesian languages focuses on absolute orientation systems, so an understanding of how Hawu speakers juggle different FoR would not only contribute to the literature on absolute orientation but also offer a clearer understanding of how sociotopographic factors influence spatial orientation in Hawu. I was also hard-pressed to describe the non-spatial (temporal and discourse) uses of spatial vocabulary, which is an area that is lacking in the broader literature. In-depth study of these concepts would be valuable for broadening our typological understanding of space-time and discourse management.

Further, the study of gesture in general is severely lacking among Austronesian languages. Not only has little work been conducted on gesture and space (as reflected in my relatively sparse review of gestural approaches to studying space in §3.6) but hardly any work has been conducted on gesture at all in Austronesian languages. Further work could be conducted on pragmatic or interactional gestures which would be a valuable contribution to understanding how gesture is used to manage conversations. Hawu has the potential to contribute to this. In particular, one interesting gesture that emerged during this study is one in which the index finger is pulled in towards the palm so that the pad of the finger is flush with the palm. The thumb us usually extended at a ninety degree angle from the palm, but it can also be bent to touch the nail of the index finger. All three interviewees produced this gesture, and it was simply beyond the scope of this study to identify its purpose. It does not appear to be a form of pointing since I was rarely able to identify a clear referent when this gesture was produced. Speakers also do not seem to recognize the gesture, which means it is likely unconsciously produced. Instead, it seems to have an interactional purpose, but this would need to be confirmed through formal study of the gesture.

Ultimately, I hope my review of the literature on language and space in Malayo-Polynesian languages has revealed some of the areas where the study of language and space is still lacking. Though research on this topic has been extremely productive, there remains plenty of work to be done. In particular, the languages of the Philippines and West Nusantara would benefit from targeted description of spatial orientation and demonstratives, and all Austronesian languages would benefit from gesture research.


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## Appendix A

<table>
<thead>
<tr>
<th>Unmarked form</th>
<th>Marked form</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>aj’a</td>
<td>aj’e</td>
<td>‘to teach’</td>
</tr>
<tr>
<td>agu</td>
<td>ago</td>
<td>‘to take’</td>
</tr>
<tr>
<td>ami</td>
<td>ame</td>
<td>‘to ask’</td>
</tr>
<tr>
<td>aki</td>
<td>ake</td>
<td>‘to tie’</td>
</tr>
<tr>
<td>ègu</td>
<td>ègu</td>
<td>‘to bring’</td>
</tr>
<tr>
<td>hogo</td>
<td>hoge</td>
<td>‘to cook’</td>
</tr>
<tr>
<td>abu</td>
<td>abo</td>
<td>‘to find’</td>
</tr>
<tr>
<td>bèka</td>
<td>bèke</td>
<td>‘to split’</td>
</tr>
<tr>
<td>bèlu</td>
<td>bèlo</td>
<td>‘to forget’</td>
</tr>
<tr>
<td>boka</td>
<td>boke</td>
<td>‘to open’</td>
</tr>
<tr>
<td>bata</td>
<td>bate</td>
<td>‘to prevent’</td>
</tr>
<tr>
<td>bui</td>
<td>bue</td>
<td>‘to fall’</td>
</tr>
<tr>
<td>b’ui</td>
<td>b’ue</td>
<td>‘to spray’</td>
</tr>
<tr>
<td>b’uju</td>
<td>b’uje</td>
<td>‘to touch’</td>
</tr>
<tr>
<td>1 b’uki</td>
<td>b’uke</td>
<td>‘to write’</td>
</tr>
<tr>
<td>b’uri</td>
<td>b’ure</td>
<td>‘cut’ &amp; ‘hit’</td>
</tr>
<tr>
<td>d’e’u</td>
<td>d’e’o</td>
<td>‘to spark (e.g. a fire)’</td>
</tr>
<tr>
<td>dai</td>
<td>dae</td>
<td>‘to winnow’</td>
</tr>
<tr>
<td>dèla</td>
<td>dèle</td>
<td>‘to swallow’</td>
</tr>
<tr>
<td>diu-pedèd’e</td>
<td>dio-pedèd’e</td>
<td>‘to curse’</td>
</tr>
<tr>
<td>èba</td>
<td>èbe</td>
<td>‘to bring’</td>
</tr>
<tr>
<td>ègu</td>
<td>ègo</td>
<td>‘to bring’</td>
</tr>
<tr>
<td>èki</td>
<td>èke</td>
<td>‘to bind’</td>
</tr>
<tr>
<td>èmi</td>
<td>ème</td>
<td>‘to hold/grab’</td>
</tr>
<tr>
<td>èpi</td>
<td>èpe</td>
<td>‘to wind’</td>
</tr>
<tr>
<td>golo</td>
<td>gole</td>
<td>‘to free’</td>
</tr>
<tr>
<td>g’ètu</td>
<td>g’èto</td>
<td>‘to pluck’</td>
</tr>
<tr>
<td>hèmi</td>
<td>hème</td>
<td>‘to receive’</td>
</tr>
<tr>
<td>hengad’u</td>
<td>hengad’o</td>
<td>‘to kiss noses’</td>
</tr>
<tr>
<td>hèpi</td>
<td>hèpe</td>
<td>to pull</td>
</tr>
<tr>
<td>hero’o</td>
<td>hero’e</td>
<td>‘to clean’</td>
</tr>
<tr>
<td>hib’i</td>
<td>hib’e</td>
<td>‘to bite’</td>
</tr>
<tr>
<td>hogo</td>
<td>hote</td>
<td>‘to cook’</td>
</tr>
</tbody>
</table>

¹The b’uju-b’uje alternation appears to be an exception to the morphophonological rules of verb agreement. One would expect b’ujo in the marked form.
<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>hud’i</td>
<td>‘to hunt’</td>
</tr>
<tr>
<td>huru</td>
<td>‘to take rice’</td>
</tr>
<tr>
<td>jaga</td>
<td>‘to guard’</td>
</tr>
<tr>
<td>j’èga</td>
<td>‘to work on smth’</td>
</tr>
<tr>
<td>keb’ala</td>
<td>‘to ask again’</td>
</tr>
<tr>
<td>kelolo</td>
<td>‘to confess’</td>
</tr>
<tr>
<td>ketèri</td>
<td>‘to look, see’</td>
</tr>
<tr>
<td>ma’i</td>
<td>‘to release, to pay for’</td>
</tr>
<tr>
<td>mata</td>
<td>‘to wait’</td>
</tr>
<tr>
<td>menanu</td>
<td>‘to weave’</td>
</tr>
<tr>
<td>merèhu</td>
<td>‘to beat repeatedly’</td>
</tr>
<tr>
<td>nga’a</td>
<td>‘to eat’</td>
</tr>
<tr>
<td>nyèka</td>
<td>‘to reject’</td>
</tr>
<tr>
<td>pali</td>
<td>‘to mention’</td>
</tr>
<tr>
<td>peara</td>
<td>‘to take care’</td>
</tr>
<tr>
<td>perab’a</td>
<td>‘to help/support’</td>
</tr>
<tr>
<td>pèru</td>
<td>‘to grab’</td>
</tr>
<tr>
<td>pid’i</td>
<td>‘to choose’</td>
</tr>
<tr>
<td>pili</td>
<td>‘to sprinkle’</td>
</tr>
<tr>
<td>raja</td>
<td>‘to nail’</td>
</tr>
<tr>
<td>rènge</td>
<td>‘to hear’</td>
</tr>
<tr>
<td>tada</td>
<td>‘to know s.o.’</td>
</tr>
<tr>
<td>tali</td>
<td>‘to tie’</td>
</tr>
<tr>
<td>tèb’u</td>
<td>‘pierce, stab’</td>
</tr>
<tr>
<td>tuku</td>
<td>‘to throw’</td>
</tr>
<tr>
<td>wèla</td>
<td>‘to spread open and place’</td>
</tr>
<tr>
<td>wèru</td>
<td>‘to throw away’</td>
</tr>
<tr>
<td>wuni</td>
<td>‘to hide’</td>
</tr>
</tbody>
</table>

Table 7.1: A selection of transitive verbs that show alternation
<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>bani</td>
<td>‘courageous’</td>
</tr>
<tr>
<td>b’edó</td>
<td>‘to enclose’</td>
</tr>
<tr>
<td>b’éra</td>
<td>‘strong’</td>
</tr>
<tr>
<td>b’ita</td>
<td>‘to pull out’</td>
</tr>
<tr>
<td>b’uri</td>
<td>‘to cut’</td>
</tr>
<tr>
<td>d’èno</td>
<td>‘to listen’</td>
</tr>
<tr>
<td>d’ui</td>
<td>‘to carry’</td>
</tr>
<tr>
<td>ènye</td>
<td>‘to press smth’</td>
</tr>
<tr>
<td>ènyo</td>
<td>‘to weave’</td>
</tr>
<tr>
<td>hali</td>
<td>‘to fill’</td>
</tr>
<tr>
<td>heleo</td>
<td>‘to see’</td>
</tr>
<tr>
<td>henata</td>
<td>‘to greet’</td>
</tr>
<tr>
<td>henèru</td>
<td>‘to raise’</td>
</tr>
<tr>
<td>herani</td>
<td>‘to baptize’</td>
</tr>
<tr>
<td>hewina</td>
<td>‘to remember’</td>
</tr>
<tr>
<td>héko</td>
<td>‘to try’</td>
</tr>
<tr>
<td>hépo</td>
<td>‘to break’</td>
</tr>
<tr>
<td>hidu</td>
<td>‘to loosen’</td>
</tr>
<tr>
<td>i’a</td>
<td>‘can’</td>
</tr>
<tr>
<td>j’ula</td>
<td>‘to offer’</td>
</tr>
<tr>
<td>j’ule</td>
<td>‘to reach out’</td>
</tr>
<tr>
<td>lèba</td>
<td>‘to block’</td>
</tr>
<tr>
<td>lèka</td>
<td>‘to hit’</td>
</tr>
<tr>
<td>lèku</td>
<td>‘to bend’</td>
</tr>
<tr>
<td>lèta</td>
<td>‘to brush off’</td>
</tr>
<tr>
<td>liba</td>
<td>‘to scatter’</td>
</tr>
<tr>
<td>lita</td>
<td>‘to tell’</td>
</tr>
<tr>
<td>luji</td>
<td>‘to measure’</td>
</tr>
<tr>
<td>luu</td>
<td>‘to deceive’</td>
</tr>
<tr>
<td>maho</td>
<td>‘to enter’</td>
</tr>
<tr>
<td>meg’ig’i</td>
<td>‘to worry about’</td>
</tr>
<tr>
<td>nèj’i</td>
<td>‘to list’</td>
</tr>
<tr>
<td>péko</td>
<td>‘to break off’</td>
</tr>
<tr>
<td>pêlo</td>
<td>‘to place’</td>
</tr>
<tr>
<td>rab’a</td>
<td>‘to help’</td>
</tr>
<tr>
<td>raba</td>
<td>‘to seize’</td>
</tr>
<tr>
<td>rèda</td>
<td>‘to draw (sword)’</td>
</tr>
<tr>
<td>robo</td>
<td>‘to wrap’</td>
</tr>
<tr>
<td>tèb’o</td>
<td>‘to stab’</td>
</tr>
<tr>
<td>tunu</td>
<td>‘to burn’</td>
</tr>
<tr>
<td>wèli</td>
<td>‘to buy’</td>
</tr>
</tbody>
</table>

Table 7.2: A selection of transitive verbs that do not show alternation
Appendix B: Questions for the Millingen task

1. What was the village like when you were a child? What has changed since then?
   - Have new homes been built? Which ones?
   - Are there any new roads or paths in the village? Which ones? Where do they go? How were they built?
   - Are there any paths or homes you used to take/visit that no longer exist? What were they like?

2. Tell me about your life in this village.
   - Big life events (school, marriage, children, moving, etc.)
   - Where did your friends live?
   - Can you tell me about any memorable events that happened in the village/on the island in the past?

3. Tell me about your family
   - Do you have any siblings? Where do they live?
   - Do to have any nieces and nephews?
   - Where are your parents from?
   - Can you tell me about your ancestors?
   - How many children do you have?
     - Where do your children live?
     - What do their houses look like? Did they build them?
     - What schools did your children go to?
     - Did any of them go to universities? If so, where?

4. Where did you go to school?
   - Did you walk to school?
   - What route did you take?

5. Have you traveled anywhere?
   - Why did you go to that location?
   - Can you tell about your trip?

6. When did you get married?
   - How did you propose/how were you proposed to?
• How did the wedding happen?
• Can you describe the location where the wedding took place?
  – What church did you get married in?
  – Was the church the same as it is today? Can you describe it?
  – Where did you have the reception? What events took place during the reception?

7. Where do you work?/What jobs have you worked throughout your life?

• Where did you work these jobs?
• What were your tasks for these jobs?
• How did you complete these tasks?
  – If you collect palm juice, where is your grove?
  – If you farm, where do you plant your fields? What do you plant? How do you plant your fields?
  – Where do you collect wild fruits, vegetables, and medicines?
  – If you sell things, where do you sell those things? Who tends to buy those things? Where are they from?
  – If you work for someone (crushing rocks, harvesting rice, loading/unloading ships), where do you work? What is your job and how do they complete it?

8. Have you always lived in this village?

• Where did you live before?
• Do you have family that lives nearby?
• Do you have family that live in other villages? Which villages?

9. Have you always lived in the same home?

• Where did you live in the past?
• Can you tell me what your previous house was like?

10. Did you build your home?

• How did you build it?
• Can you describe the layout?

11. Where do you do your grocery shopping?

• How do you get there?

12. Where do you go to church?

• How do you get to church?
• Can you describe the layout of the church?
• Where do you usually sit?
Appendix C: Maps of interviewee location and orientation
Future directions

Figure 7.1: Ridolof’s orientation and his approximate location on Sabu island during the interview.

Figure 7.2: Marten’s orientation and his approximate location on Sabu island during the interview.
Figure 7.3: Stefanus’s orientation and his approximate location on Sabu island during the interview.