Polar Interrogatives in Bardi

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Abstract:

Bardi is a non-Pama-Nyungan Australian Aboriginal language in the Nyulnyulan family, spoken in northern Western Australia. Over the last ninety years, the speaking population has declined rapidly, as English has become the dominant language in the area—today, there are fewer than five fluent Bardi speakers. As a consequence, the language has undergone many rapid structural shifts during its obsolescence.

In this paper, I focus on one specific aspect of Bardi grammar—the structure of polar interrogatives in the language—in order to answer two questions:

a. What is the structure of polar interrogatives in Bardi?
b. How has that structure changed as the language has undergone obsolescence?

To address these questions, I compare the historical Bardi corpus with data collected during the last two years. After discussing the prior analyses of these constructions (including those of Metcalfe (1975) and Bowern (forthcoming)), I present my own interpretation of the structure of polar interrogatives in Bardi, and discuss ways in which this structure appears to have changed in recent years.

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1   Introduction

1.1   Background: language death phenomena

Linguists estimate that, of the world's six thousand languages, more than half will become extinct within the next fifty to one hundred years (Krauss 1992). Most of these are spoken in communities where another language is gaining prevalence—children learn the more prestigious or more prevalent language, and the endangered language is spoken only by the older population, becoming extinct when they pass away. The phenomena of language change associated with language shift and language death have come into a greater focus for linguists over the past few decades. Accounts of these situations range from the ethnographic to the extremely technical, and describe both social and structural factors.

Peter Austin's (1986) paper on structural changes in language obsolescence was published about ten years after linguists began paying substantially more attention to the issue of language death. After describing the current framework within which language death was analyzed at the time, Austin discusses the application of that framework to the cases of several eastern Australian Aboriginal languages. Austin describes both the documented changes and also the formulation of an approach to studying those changes, giving special attention to the challenges of systematically documenting a language with few or no fluent speakers.

Austin's discussion raises several key parameters that need to be remembered in analyses of language death. He divides speakers into the categories of fluent, semi- and former speakers, and includes rememberers as those who can produce a small amount of linguistic material—fixed utterances or specific vocabulary—but have never been able to productively form locutions (202). He discusses the forms that language obsolescence usually takes—a reduction in the social domains in which the language is spoken; then a reduction in the functional expressiveness of the language; and finally a reduction of the language's "repertoire," its stylistic variation and structural features (203). Austin then shows

the patterns of structural changes in the lexicon, phonology, morphology and syntax in his eastern Australian examples. These patterns vary in nature—in some cases, previously complex systems are simplified, while in other situations one form of expression simply replaces another. For instance, the paradigm of phonologically conditioned case-marking suffixes in Ngiyampaa was simplified considerably, such that the forms were fossilized and no longer dependent on their phonological environment (216). By contrast, in Kamilaraay, the derivational suffix that marked desire was replaced by an English-derived verbal construction to express the idea of "to want" (224). In this case, speakers had not entirely forgotten the older predicative structure, but did not actively use it until after "getting into practice speaking the language again" (224).

A further issue Austin raises is that of how to identify specific changes in a given language, particularly in cases where there is limited historical material, or where a language was not traditionally written down. He compares the approaches proposed in Hill (1980) of longitudinal study, or the examination of several texts of different dates, and the "simulation of time depth," where contemporary speakers of different ages or levels of fluency are taken to represent different historical states of the language (Austin 1986:205). Depending on the situation of a given language, one or a combination of the approaches may be preferable.

In a more recent paper, Maiden (2004) describes the changes observed in the speech of Antonio Udina, the last speaker of Vegliote, a Dalmatian Romance language. Udina, who died in 1898, was for many years the only speaker of Vegliote—he learned it in his youth, at a time when other community members were no longer acquiring the language. Udina thus developed a good knowledge of the language, but did not use it regularly, as those around him spoke Croatian or Italian. As Vegliote had not been documented previously, the bulk of the information about the language is based on Udina's testimony. Consequently, when a collapse in the distinction between the present and the past imperfect tenses was observed in recordings from 1897, a phenomenon that had not yet taken place when Udina's speech had been studied less than twenty years earlier, the change had to have occurred solely in Udina's mental grammar.

While Maiden's work shows that speakers may radically change their grammar in the absence of feedback from other speakers, Thurgood's (2003) paper on Anong, spoken in southeast Asia, describes a case of community-wide language changes taking place over a relatively short period of time. Anong, which is being replaced by Lisu for communication at the local level and Chinese for communication with outsiders, had about 60 fluent speakers and 300 semi-fluent speakers in 1999 (5). As all Anong speakers also spoke another language, and as Lisu had replaced Anong as the language of choice in nearly all domains of daily life, there was not enough linguistic input to enable Anong speakers to correct changes that arose in their grammars.

Thurgood focuses on the restructuring of the system of causatives in the language over a period of forty years. As the causatives were not used sufficiently often to reinforce their existing structure, they were reanalyzed at a rapid rate— during the lifetime of the older speakers. Although language contact may have played some role in their restructuring, the actual changes that took place were predictable and consistent with general trends in historical linguistics (8).

To date there has been no published work dealing specifically with structural changes in Bardi over the last several decades. However, McGregor (2002) discusses changes that took place in three Kimberley languages, including Nyulnyul—a language historically spoken near Bardi traditional lands, and the namesake of the Nyulnyulan language family of which Bardi is a member. Nyulnyul's speaking population decreased under similar circumstances to those that Bardi faced, and English has replaced Nyulnyul as the primary language of Nyulnyul people (172). Among the changes that McGregor describes are syntactic shifts toward usage of English-like structures in the speech of fluent Nyulnyul speakers. Some of these changes may be attributable to other causes—for instance, influence from other neighboring languages, or natural processes of language change (173). However, it appears that in some cases English-language calques may affect the structures used by bilingual fluent and semi-speakers of Nyulnyul—for example, usage of the verb for "to do, to say," rather than the noun for "knowledge, thought" to frame discussion of mistaken thoughts (174).

1.2   Background: Bardi

Bardi is a non-Pama-Nyungan language in the Nyulnyulan family, spoken at the tip of the Dampier Peninsula in the Kimberley region of northern Western Australia. The area is and has traditionally been rural, with Bardi people subsisting from fishing, hunting and gathering. In the 1920s, there were about 400 Bardi people, all of whom were fluent Bardi speakers. In the last ninety years, the population of Bardi people has grown to about 1000. There are two main Bardi communities of a few hundred people each—One Arm Point or Ardiyooloon, and Lombardina or Djarridjin—as well as Bardi populations in the Nyulnyul community of Beagle Bay and the nearby towns of Broome and Derby. Some Bardi people still live in the rural areas surrounding these communities, as well.

Although there are around 1000 Bardi people living today, there are fewer than five remaining speakers of the Bardi language. Bardi began to lose ground to English in the late 1800s due to the arrival of missionaries and pearlers, as well as increased contact with the English-speaking government. The mission at Sunday Island, near One Arm Point, closed in 1962, and the Bardi people there were forcibly relocated to an area near Derby (Bowern forthcoming:96). Since that time, many Bardi people have moved back to the One Arm Point area, but the moves precipitated a shift to the almost exclusive use of English. While there is extensive English-Bardi codeswitching, Bardi is seldom used as a language of daily interaction, and only elderly Bardi people are able to use the language productively.

Documentation of Bardi began in earnest in the early twentieth century, with fieldwork by W. H. Bird (1910) and Gerhard Laves (1920s) (Bowern forthcoming:52). The missionaries Hermann Nekes and Ernst Worms published the next extensive description of Bardi (and other Nyulnyulan languages) in 1953. Howard Coate also worked on Bardi in the 1950s and 1960s, and Toby (C.D.) Metcalfe's 1975 dissertation on Bardi verb morphology provided a formal description of Bardi grammar. Metcalfe also compiled a dictionary during his time in the area, as did Gedda Aklif in the 1990s (Aklif 1999). Throughout the 2000s, Claire Bowern made several trips to One Arm Point, to record oral history and more

completely describe the grammar of Bardi. The Bardi corpus is compiled mainly from these contributors, and is about 80,000 words.

The Bardi-speaking consultants who have contributed to the linguistic documentation of the language have varied throughout the century. Early consultants were mainly men, probably due to the fact that most of the early linguists were men. Gedda Aklif's consultants in the 1990s were mainly women, including LS, NI, JS and BE.[1] When Claire Bowern worked on Bardi in the early 2000s, she worked with NI, JS and BE. Bowern's field trips in 2008 and 2011, and my work in 2010, involved only JS and BE. Thus, any changes observed in the Bardi recorded from 1990 to 2011 are likely to be changes that occurred in the mental grammars of these individuals—changes are less likely to be due to variation among individuals.

1.3   Structure of Bardi

1.3.1   *Morphosyntactic structure*

Bardi is an ergative-absolutive language with highly inflected verbs—verbs carry marking for person, number and tense. Inflection in Bardi is fusional, polysynthetic and agglutinative (Bowern forthcoming:2). The language has mostly free word order, with most word-order constraints arising due to topics and focalization. A notable feature of Bardi predicate structure is the complex predicate, consisting of a noninflecting preverbal particle and an inflecting light verb, whose meaning is modified or bleached by the preverb:

(1)   *Roowil*   *innyagal.*
        walk   pick-up.3SG.PAST
        He was walking.

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[1] Throughout this work, initials will be used to refer to speakers. This is both to protect the privacy of living speakers, and to respect the Bardi cultural taboo against saying the names of the deceased.

In some cases, words that function as preverbs may also be used as other parts of speech (e.g. adjectives, adverbs and nouns); in other cases, as with *roowil*, above, the preverb can only be used with its associated light verb(s) (Bowern forthcoming:361).

Bardi has about ten cases, marking grammatical functions like the ergative, as well as location, direction, and similar relational concepts (Bowern forthcoming:2). Case marking is attached as suffixes to the nouns to which they apply:

Table 1.1: Cases

CASES	
Core cases	
Ergative	*-nim*
Absolutive	*-ø*
Dative	
Instrumental	*-nga ∼ -ng*
Local cases	
Locative	*-goon ∼ -oon ∼ -on*
Local Allative	*-goondarr*
Allative	*-ngan*
Ablative	*-go ∼ -o*
Lative	*-gony(i) ∼ -ony(i)*
Directional	*-madan*
Perlative	*-jarr*
Toponym Locative	*-i*
Adnominal cases	
Comitative	*-nyarr*
Source	*-joon ∼ -yoon*
Semblative	*-marr*
'Reason'	*-ganiny*
Causal	*-yi*

(Bowern forthcoming:179)

Case marking in Bardi operates at the phrasal level, and is typically attached to the first element of a clause (180):

(2)   *Aamba-nim   aarli   inarligal*

      Man-ERG   fish   eat.3SG.PAST

      The man ate the fish

Another feature of the grammar that will be relevant to the following discussion is the use of second-position clitics (Bowern forthcoming:530). Bardi has seven clausal clitics that are described in the reference grammar:

Table 1.2: Clitics

Bardi	English
=*min*	then
=*gid*	then
=*b(a)*	relator
=*gorror*	if
=*(j)amb*	thus
=*(g)ard(a)*	should (deontic)
=*(b)ard(a)*	maybe (epistemic)

(Bowern forthcoming:577)

Of these clitics, some function as adverbs, while others serve to connect the clause in which they appear to other clauses (530). A given clause may only have one clausal clitic (577). Clausal clitics can serve to advance a narrative (=*gid*), show that two actions are closely related (=*min*), or indicate a causal relationship (=*(j)amb*), among other functions:

(3)   *Barda=gid   angarranan=irr   niiman=angarr aarli baalingan.*

      Away=THEN   gave.1PL.PAST=them many=VERY   fish bough-shed.ALLATIVE

      We used to go home with lots of fish.   (AYI1.009)[2]

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[2] Examples taken from the Bardi corpus are cited according to the reference codes used in the corpus.

(4) *[Yaaga ininkalj]*   *[garanygarany=min ingalamankagal-jan]*
     hole   sit.3SG   footsteps=MIN   hear.3SG.PAST-1SG.IO

     [nganjalagal=min   inyjoordoogal   nalma.]³
     see.1SG.PAST=MIN   get-dry.3SG.PAST   head.3SG

     He was in a hole when he [a crocodile] heard my footsteps and I saw him

     raise his head.   (CAM1.039)

In the above examples, each clitic is attached as a suffix to the first element of the clause. Use of these clitics is attested in Laves's Bardi language materials from the 1920s; however, recorded instances of their usage are much more frequent in more recent texts (580).

1.3.2 Phonological structure

Bardi has seventeen consonants and seven vowels. There are no fricatives or contrastive voicing in the language; however, there are three sets of long-short vowel alternations:

Table 1.3: Bardi consonant phonemes

	labial	alveolar	apico-post-alveolar (retroflex)	lamino-palatal	velar
stops	b [p]	d [t]	rd [ʈ]	j [c]	g [k]
nasals	m	n	rn [ɳ]	ny [ɲ]	ng [ŋ]
laterals		l	rl [ɭ]	ly [λ]	
trill		rr [r]			
glides			r [ɻ]	y [j]	w

(Bowern forthcoming:68)

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³ Brackets are used to indicate individual clauses.

Table 1.4: Bardi vowel phonemes

i ii	oo (u, uu)
[e]	o
	a aa

<div align="right">(Bowern forthcoming:81)</div>

The phonology of Bardi is characterized by extensive lenition and vowel harmony. Lenition can take the form of obstruent-glide alternation or simple deletion of consonants, and is particularly apparent in verb morphology and in case-marking and clitic suffixes (116). Vowel harmony also occurs especially in affixes and verbs (127).

Many nouns in Bardi have optional final vowels; historically, this was a dialectical difference between the eastern and western varieties of the language, but there is considerable overlap between the two. Primary lexical stress in the language always falls on the first syllable of each word.

Several changes can be observed in Bardi phonology in recent years. The distinction between retroflex and alveolar consonants appears to have collapsed or to be variable in many cases. In addition, in some cases lenition processes appear to be less sensitive to the surrounding phonological processes—a phenomenon that will be discussed further in section 3.7.2.

2   Prior analyses

2.1   Questions in Bardi

2.1.1   *Overview of interrogatives*

Ultan (1969) provides a discussion of interrogative systems from a typological perspective, comparing the strategies employed by seventy-nine randomly selected languages (41). The main methods of question formation that are described include intonation, manipulation of word order, tags, and interrogative particles and words. None of the languages in the study mark questions with

intonation alone; all use some form of question word when marking information questions like "who" or "what" (41).

2.1.2   Content interrogatives

Questions in Bardi can be divided into two main categories—content interrogatives and polar interrogatives. Content questions are indicated lexically by one of a set of interrogative pronouns—e.g. *anggaba* "who"; *anggi* "what"; *jana(mbooroo)* "where". These pronouns can combine with some case-marking and other derivational suffixes, as in the form *janabooroongan*, or "to what place". Content questions are also indicated prosodically, through intonational focus on the pronoun and a rise in pitch at the end of the clause (Bowern forthcoming:579). This is a somewhat common phenomenon typologically; Ultan (1969) found that nine of the seventeen languages for which information was available exhibited rising intonation in co-occurrence with question words (47).

(5)   *Anggi   jarri?*
       What   that
       What is that?

(6)   *Janambooroo=ngan   arr   mindan?*
       Where=ALLATIVE   go   do/say.2SG
       Where are you going?

2.1.3   Polar interrogatives

There have been two main publications that have dealt with Bardi polar interrogatives in any detail. These are Toby Metcalfe's *Bardi Verb Morphology* (1975) and Claire Bowern's reference grammar of Bardi (forthcoming). According to these analyses, polar interrogatives have traditionally been constructed in two main ways—by use of a particle, *nga(a)nyj(i)* (hereafter *nganyji*) or by attachment of a clitic, either *=(b)ard(a)* (hereafter *=bard*) or *=(g)ard(a)* (hereafter *=gard*). This is also a very common strategy across languages: Ultan's (1969) paper describes

interrogative particles, including clitics, as the second most typologically common strategy for forming yes/no questions, after intonation (51).

Both clitics act as focus markers; *=bard* has an epistemic connotation and *=gard* has a deontic connotation. While linguists have traditionally assumed that both of these clitics were interrogative, the corpus does not contain many instances of unlenited *=gard* that are unambiguously interrogative in nature. For this reason, *=gard* will be left out of the majority of the discussion, and mentioned only in the context of older analyses—for further discussion, see section 4.3.

2.1.4 Etymology of terms

The etymology of *nganyji* is somewhat clearer than that of *=bard* and *=gard*—the term is reconstructible to proto-Nyulnyulan, and is attested in modern Nyulnyul as well as Bardi (McGregor forthcoming:430). The clitics *=bard* and *=gard*, on the other hand, are not reconstructible to proto-Nyulnyulan, and are not attested in other Nyulnyulan languages. As both terms historically served a focus-marking purpose and are phonologically quite similar, it is possible that they were constructed from an initial consonant (*b* or *g*) and a focus-marking element, *=ard(a)*. The postnominal clitic *=b(a)* is a relative clause marker in modern Bardi, and is a possible candidate for the source of the initial consonant in *=bard*. This derivation is difficult to confirm, however, as the linguistic record covers only the last century.

2.2 Metcalfe 1975

Metcalfe (1975) includes a brief discussion of polar interrogatives in Bardi. The analysis describes both the *nganyji* and *=bard* (recorded as *=arda*) constructions, although it is focused mainly on their structural features and does not delve deeply into their semantic or pragmatic differences. In Metcalfe's account, *nganyji* is described as a free pre-verbal morpheme which co-occurs with verbs in the indicative, and *=bard* is described as the "alternative interrogative," a bound morpheme that attaches as a suffix to a verb (24). In a later discussion, Metcalfe adds that *=bard* has few word-order restrictions and that it can be attached to any part of speech (104).

Metcalfe's description of polar interrogatives is sparse, and at times ambiguous. *Nganyji* is described as a "pre-verb morpheme," while other strictly preverbal particles are called "Pre-Stems". Metcalfe does not specifically address the distinction, if any, that he sees between these two types of particles. While Pre-Stems are discussed as a specific class of words with consistent terminology, they are also described as an open and quickly-growing class (59). Metcalfe does provide one example of *nganyji* co-occurring with a Pre-Stem (preverb):

(7)   *Nganyji   darr   oonkara*
        Nganyji   arrive   he.will
        Will he arrive?

In (7) *nganyji* is shown to precede the Pre-Stem; however, this example is only presented to show that the clitic *=bard* can attach to both the Pre-Stem and the "auxiliary", or light verb, in a contrasting example (105).

Metcalfe does not include any examples of *nganyji* appearing in positions other than immediately preceding a VP, nor does he include cases of interrogative sentences without verbs, although such sentences are attested in later recordings. There are several possible reasons why such examples might not have been included. First, it is possible that these constructions were ungrammatical in Bardi until recent years, and that use of *nganyji* was only lately extended to non-verbal constructions. Their absence may also be due to a simple gap in the data—it may be that there was no attempt to elicit such constructions, or that they were simply not recorded or included in the corpus. Furthermore, as Metcalfe's main focus was on verb morphology, he may have neglected to gather data on these non-verbal forms.

This narrow focus may also account for the lack of semantic differentiation in Metcalfe's account of the interrogative constructions. While he does acknowledge that *=bard* has variable placement, and that it can "question" any part of speech, he does not indicate (through discussion or implicitly, through changes in glosses) that there is any difference in meaning between the two constructions—*=bard* is treated simply as an alternative form of the interrogative, rather than a focus marker. As

such, he does not explore any changes in meaning that would result from attaching *=bard* to different elements of a given sentence—a phenomenon widely attested in later data.

2.3   Bowern 2004

The next analyses of Bardi interrogatives to be published were presented by Bowern (2004, forthcoming). Based on data gathered by Laves, Metcalfe, and Aklif, as well as her own field notes and recordings, Bowern proposed an analysis that differed significantly from Metcalfe's in several ways. First, *nganyji* is discussed, not as a preverbal free morpheme, but as a (usually) clause-initial particle that questions the entire clausal proposition (Bowern 2004:57). In her analysis, *nganyji* is discussed as "the most frequent way to form polar interrogatives," and it is treated as an unmarked, or general epistemic particle (Bowern forthcoming:561).

Bowern discusses two clitics, compared to Metcalfe's one—these clitics are *=bard(a)* and *=gard(a)*. Both clitics are treated as focus-markers that attach to constituents to question them specifically (Bowern forthcoming:561). While their syntactic distribution is said to be the same, the clitics have clearly distinct semantic contributions: *=bard* is an epistemic marker, with a connotation of questioning one alternative as opposed to another, as in (8). By contrast, *=gard* requires a deontic reading, as in (9)—this deontic reading restricts the clitic's distribution, as it requires the attribution of some degree of agency to questioned elements (561). Both clitics undergo lenition when following a vowel; thus, both frequently appear as *=ard(a)* (562).

(8)   *Ginyinggi   ball   garndi   inin   bardagon=bard?*
        3MIN   ball   on.top   3-sit-CONT   tree-LOC=bard
        Is the ball at the top of the tree?   (Bowern forthcoming:562)

(9)   *Gooyarr=arda*   *aarli*   *minnyagal?*

         Two=INT   fish   catch.2SG.PAST

         Was it two fish that you caught? [emphasis on *two*] (Bowern 2004:58)

         Bowern's interpretation of the clitics' distribution is more restricted than
Metcalfe's—while Metcalfe described the clitic *=arda* as a postverbal replacement
for *nganyji*, he also claimed that it could attach to any part of speech. Bowern, by
contrast, specifies that the clitics can attach to nouns, adverbs, and predicates, as
well as free (but not possessive) pronouns (562). Bowern also notes that the clitics
can be used to form questions about alternatives—that is, asking if one or another of
two propositions is true (578):

(10)   *Anggaba*   *ambooriny*   *nyoonamb*   *jirrjirr injoo,*   *oorany=bard*

         who   person   there=REL   stand do/say.3SG   woman=INT

         aamba=bard?

         man=INT

         Who is that person standing over there, a man or a woman?   (DCT.051)

This construction appears to have remained unchanged: speakers in 2010
confirmed that this was the appropriate way to ask alternative questions.

3   Data

3.1   Research question and methodology

         In 2010 I traveled to One Arm Point to work on the clarification and revision
of earlier recorded and written materials in Bardi. I spent eight weeks in the
community, working five days a week with JS and BE—the only speakers available
at that time to do language work. During this work, some inconsistencies arose
between previously recorded materials featuring polar interrogative sentences and
the sentences elicited from the language consultants. Further exploration of this

issue raised two main questions that will be discussed in the following sections: First, what is the structure of polar interrogatives in Bardi? Second, how has that structure changed over the last fifteen to twenty years? I hypothesize that Bardi's polar interrogatives have changed over the past few decades, and that these changes are attributable to language obsolescence, rather than natural processes of language change.

The interrogative data in question constituted about three hours of recording in 2010, for a total of 168 sentences. The primary methods of data collection were elicitation and grammaticality judgments, with supplementary discussion recorded to clarify the contextual constraints on some sentences. This work was followed up in 2011 by Claire Bowern, who spent several weeks in One Arm Point and collected about two more hours of recorded interrogative elicitation, grammaticality judgments and discussion, providing 70 additional sentences. These will be discussed in comparison with 20 sentences from 2008 and 48 from the older corpus, for a total of 306 sentences in all.

While the data from 2010 and that from 2011 are similar in many ways, and appear to be more similar to each other than to previous data sets, there are also several differences present. These issues will be discussed where relevant, and I will offer possible explanations for the differences in data after my analysis.

3.2   Present-tense polar interrogatives

3.2.1   Data from 2010

Of the 30 grammatical present-tense information questions collected in 2010, 20 are constructions using =*bard* (or =*ard*) and 10 are *nganyji* constructions. There are no examples of polar interrogatives using =*gard*; there are several reasons why this might be the case. First, based on corpus searching, it appears that =*gard* constructions have never been particularly frequent. In addition, none of the sentences elicited had a specifically deontic connotation in English, and I did not use =*gard* constructions in grammaticality judgment questions. As both =*bard* and =*gard* undergo frequent elision of the initial consonant, it is difficult to be certain that none

of the examples using *=ard* are not underlyingly *=gard*; however, I think that this is unlikely due to the reasons just given above.

   In 2010, there were ten present-tense examples with *nganyji* that did not have a distinct modal connotation (modality will be discussed in sections 3.5 and 3.6). However, many of these sentences were accepted as grammatical only after extensive consideration by the language consultants, and some required an enriched context to be deemed grammatical—it is probable that many of these sentences would be considered marked in natural speech. During the elicitation process, it was not until after a few sessions of interrogative work that any *nganyji* sentences were accepted. It is important to note that the proportional frequency of *nganyji* examples to *=bard* examples is not a reliable indicator of their presumed frequency in natural language, due to the methods of data collection. Additionally, the only examples of sentences deemed specifically ungrammatical are constructions using *nganyji*.

   Some sets of sentences gathered in 2010 showed a collapse in any semantic difference between *nganyji* and *=bard*—while JS was confident that she would say (11) in natural speech, she said that (12) and (13) were also grammatical, with no notable differences in meaning:

(11)   *Minan=bard=ngay mayi?*
     Give.2SG=INT=me food?
     Are you giving me food?   (LK fieldnotes, ex. 10.93)[4]

(12)   *Mayi=bard minan=ngay?*
     Food=INT give.2SG=me   (LK fieldnotes, ex. 10.94)

(13)   *Nganyji minan=ngay mayi?*
     INT   give.2SG=me food (LK fieldnotes, ex. 10.95)

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[4] Many of the examples used in these sections come from unpublished fieldnotes; these are labeled according to the linguist who collected the data (LK = Laura Kling; CB = Claire Bowern), the year (8 = 2008; 10 = 2010; 11 = 2011) and a reference number. For instance, (CB fieldnotes, ex. 11.01) is a sentence recorded by Claire Bowern in 2011.

This set of sentences is notable not only for the lack of distinction between *nganyji* and *=bard* examples, but also for the lack of explicit distinction between (11) and (12)—it is possible that a highly enriched context might lead to a preference for (12) in some situations, but JS interpreted it as simply marked during our elicitation session.

These sentences also reflect a salient trend in syntactic distribution among the constructions—while *=bard* was found attached to a preverb, an inflected verb, an adverb or a noun, *nganyji* was only found immediately preceding preverbs and verbs. This is consistent with Metcalfe's description of *nganyji* as a preverbal particle—while later examples will show that *nganyji* can also appear in other syntactic contexts, it appears that it continues to be mainly preverbal. As *nganyji* was interpreted in Bowern (forthcoming) as an interrogative that questions a proposition as a whole, this trend is perhaps unsurprising.

3.2.2 Data from 2011

Data collection in 2011 yielded ten grammatical present-tense polar interrogatives: four with *=bard*, one with *=gard*, and five with *nganyji*. Of these, two sets of sentences show an alternation between *nganyji* and *=ard* forms in which both constructions are acceptable. Two of the *nganyji* sentences have distinct modality readings (those of ability and permission), which will be discussed in more detail below.

The data from 2011 closely reflects that from 2010 in most ways. The syntactic distribution of the constructions is the same—*nganyji* appears only preverbally, while the clitics attach to verbs, preverbs, nouns and adverbs. In both 2010 and 2011 there is a strong preference for initial placement of interrogative markers—very few examples with clitics and no examples with *nganyji* show a non-initial placement.

3.2.3 Comparison to earlier data

A comparison of the present-tense information questions gathered in 2010-2011 to those gathered earlier does not yield many immediately salient differences, particularly when looking at data from 2008. Syntactic distribution is consistent with regard to the parts of speech associated with each construction. No present-tense questions from the Bardi corpus contain explicitly-marked usage of *=gard*. While initial placement of interrogative markers is still the most common, there are proportionally more examples of non-initial placement in earlier data—of nine grammatical examples using *=bard*, three show non-initial placement:

(14) *Garramal*   *minjal=bard?*
      Cunningham Point   see.2SG=INT
      Can you see Cunningham Point?   (DCT.524)

It is worth noting that all three examples of non-initial placement are from the older corpus, rather than from 2008.

3.3 Past-tense information questions

3.3.1 Data from 2010-2011

Information questions in the past tense are mostly similar to those in the present tense. *Nganyji* appears preverbally, while *=bard* is more distributed among different parts of speech. It may be notable that *=ard* forms are much more likely to be attached to nouns and preverbs, while *=bard* is more commonly found with inflected verbs; this may be due to the fact that inflected verbs (particularly in the past tense) are much more likely to end in consonants, while many nouns and preverbs have an optional final vowel. For more discussion on the *=ard/=bard* distinction, see section 3.7.2.

During these language work sessions, a trend emerged with regard to the distribution of *nganyji* and *=bard* across contexts. Through elicitation, speakers provided a *=bard* form. Subsequent grammaticality judgments (i.e. "Can you also say

x?") yielded most of the *nganyji* forms—as in the present tense, there was often no difference in meaning among constructions:

(15)   *Inarligal=bard*   *aarli?*

Eat.3SG.PAST=INT   fish

Did he eat fish?   (LK fieldnotes, ex. 10.27)

(16)   *Aarl=ard*   *inarligal?*

Fish=INT   eat.3SG.PAST   (LK fieldnotes, ex. 10.29)

(17)   *Nganyji*   *inarligal*   *aarli?*

INT   eat.3SG.PAST   fish   (LK fieldnotes, ex. 10.30)

As in (11-13) above, the focus-marking connotation of *=bard* appears to have been lost. Where before (15) would have meant something like "Was it eating that you did to the fish?" or "Was it you who ate the fish?",[5] and (16) would have meant "Was it fish that you ate?", the salience of the focus-marking appeared to be greatly diminished in 2010. The construction in (15) has replaced that in (17) as the preferred, unmarked way to question a proposition.

3.3.2   Comparison to earlier data

A comparison with past-tense data from the Bardi corpus shows a much sharper contrast than present-tense data did. Of the thirteen grammatical past-tense questions in the older corpus, only one uses an *=ard* construction:

(18)   *Gard=arda*   *goongarragal=ngay barnkarda*   *aarli?*
       Still=INT   give.2PL.PAST=me   enough   fish
       Is that all the fish you're giving me? (Are you done giving me fish?) (MNJ.036)

---

[5] This meaning could have been salient because the verb is marked for person— explicit personal pronouns are not always required in Bardi.

This sentence, an apparent protestation that not enough fish is being given, lends itself easily to an interpretation in which the first element is being focused. As the sets of both present- and past-tense polar interrogatives in the corpus are small, it is difficult to tell whether this difference in usage is significant or not. Regardless, it seems clear that *nganyji* constructions were considerably more common in the past, while they are proportionally less common now.

3.4 Contexts and speaker expectations

3.4.1 Data from 2010-2011

Despite an overall preference for *=bard* forms over *nganyji* forms, there were still some semantically conditioned cases in which a *nganyji* form was specifically preferred or dispreferred—indicating that the distinction between the two forms has not completely collapsed. These cases became more salient after a few days of work on the topic, so it is possible that the distinctions are less apparent to speakers than they were in the past. One of the ways in which these distinctions were most influential to grammaticality judgments was when a question was sensitive to the asker's expectations:

(19)   *Lol=bard*   *inyjiidigal*   *jan*   *mayar?*

Burn=INT   go.3SG.PAST   my   house

Did my house burn?   (LK fieldnotes, ex. 10.77)

(20)   *Nganyji*   *lol*   *inyjiidigal*   *jan*   *mayar?*

INT   burn   go.3SG.PAST   my   house

(LK fieldnotes, ex. 10.78)

While these sentences have the same translation equivalent in English, they are very contextually restricted. (19) is used when the speaker has no idea whether the house has burned or not, while (20) can only be used when the speaker has prior expectations that the house would burn. That is, the asker has a strong expectation

that the answer to the question will be yes. This distinction is salient in other
examples, as well:

(21)   *Goolboo*   *boordij=ard?*

                Rock   big=INT

                Is the rock big?   (LK fieldnotes, ex. 10.110)

(22)   *Nganyji*   *boordij*   *goolboo?*

                INT   big   rock   (LK fieldnotes, ex. 10.111)

As in previous examples from 2010-11, (21) is the basic, unmarked way to ask if a
rock is big or not. But rather than being simply marked or dispreferred, (22) carries
a specific discourse function—it asks if the rock is *big enough* for some purpose.

        The sense of expectations conveyed by use of *nganyji* does place some
restrictions on the contexts in which the construction can be used. For instance, (20)
was considered very bizarre to JS and BE at first, and was not accepted as
grammatical until a few days after it had first been presented. This difficulty in
judging the sentence's grammaticality appears to have arisen from the conflict
between its premise and the consultants' world knowledge—it is rather unusual to
expect a house to have burned down. In this case, I presented a story in which the
house was old and was scheduled to be burned down; this enriched context led the
speakers to accept the sentence they had initially rejected.

        However, there were some sentences that speakers could not reconcile with
an appropriate context, and which were rejected entirely:

(23)   **Nganyji*   *garnka*   *jarri* *mayi?*

                INT   raw   this   food

                Is this food raw?   (CB fieldnotes, ex. 11.13)

(24)   *Garnk=ard*   *jarri* *mayi?*

                Raw=INT   this   food   (CB fieldnotes, ex. 11.15)

In this pair of sentences, (24) is an acceptable way to ask if the food in question is not yet cooked, while (23) does not seem appropriate. This makes sense if the interpretation of (21-22) above is correct; that is, it is difficult to imagine a scenario in which the speaker wants food to be *garnka*, or unprepared, for some purpose. If this is the case, then the restriction on these sentences is semantic in nature. By comparison, both of the following sentences are grammatical:

(25)   *Nganyji*   *moola*   *jarri*   *mayi?*

          INT   cooked   this   food

          Is this food cooked?   (CB fieldnotes, ex. 11.10)

(26)   *Mool=arda*   *jarri*   *mayi?*

          Cooked=INT   this   food?   (CB fieldnotes, ex. 11.11)

As in English, *moola*, the word for "ripe," "cooked," or "hot," is the lexically positive term and the opposite of *garnka*, "raw". The *moola/garnka* distinction is thus comparable to English-language oppositions—classified as "contraries" in Horn (1989)—like *long* and *short*, or *old* and *young*. These sets of contraries are lexical items that are identical in all but one dimension of meaning—with regard to that dimension along which they differ, they "occupy opposing poles," creating a relevant framework by which to evaluate that quality (Cruse 1986).

    As Downing (2000) noted, it is often the case that the positive term in set of contraries becomes "neutralized," and is used to refer to the scale in general. This is the term that expresses a norm, or expected state. The negative term (in our examples, *garnka*, *short* and *young*) thus expresses a departure from the norm, or an absence of the expected state (47). It is from this conception of the norm that the markedness in (27b) arises:

(27)   a.   How long is the book?

       b.   ? How short is the book?   (Downing 2000:47)

As Lyons (1977:275-276) argued, sentences like (27a) are the unmarked way of making an inquiry into the number of pages in a book. By contrast, (27b) is only acceptable in contexts where it has already been established that the book is, in fact, short (Downing 47).

It appears that, as of 2010, Bardi polar interrogatives using *nganyji* are similarly subject to this constraint. For a *nganyji* sentence to be grammatical, it must be supported by its context. Thus, sentences that inquire as to the normal, expected state of things are unmarked, while sentences that inquire into qualities or states that are unexpected or abnormal (raw food, a burned house) require an enriched context to be accepted as grammatical.

3.4.2 Comparison to earlier data

Examination of data from the Bardi corpus does not immediately yield clues as to whether the current constraint on the use of *nganyji* is consistent with older usage, or if it is a recent innovation. As early linguistic documentation of Bardi did not focus on this specific issue, there are not clear sets of minimal pairs available for comparison. In addition, there is a lack of ungrammatical examples in the corpus in this area; thus, it is impossible to confirm the grammaticality of competing possible, but unattested, constructions. For example, the corpus contains sentences (28-30):

(28) *Nganyji*   *goorrin*   *miyala?*
      INT   sit.2PL   awake
      Are you (pl.) awake?   (DCT.1171)

(29) *Miyal=ard*   *minin?*
      awake=INT   sit.2SG
      Are you (sg.) awake?   (DCT.1170)

(30)   *Woorr=barda minin?*

       Sleep=INT   sit.2SG

       Are you sleeping?   (c.48)[6]

There are not, however, attested examples of a sentence meaning "Are you sleeping" using the *nganyji* construction. It is difficult to determine whether this is because such a construction would have been ungrammatical, or whether it simply did not come up in earlier elicitation sessions. Thus, while an interpretation of *nganyji* as sensitive to the constraints discussed above is consistent with older data, it is not necessarily the case that these constraints were present in Bardi before the language entered obsolescence.

3.5 Permission and requests

3.5.1 Data from 2010

Another difference between the *nganyji* and *=bard* constructions that became apparent in 2010 was their usage in requests for action or permission on the part of the interlocutor, as opposed to general requests for information. *Nganyji* appeared to be the preferred construction for these contexts, as it was overwhelmingly more common. In addition, *=bard* constructions appeared to carry a greater connotation of focus on the suffixed element, underscoring the request/epistemic distinction:

(31)   *Ngaland=ard*   *joo*   *ambooriny=nyarr?*

               Sit.2SG.FUT=INT   you   people=COMITATIVE

               Are you going to sit down (with the people)?

                                          (LK fieldnotes, ex. 10.157)

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[6] This sentence is included in the Bardi dictionary but does not have an associated reference number; the reference included is from my internal numbering system.

(32)   *Nganyji   ngalanda?*

           INT   sit.2SG.FUT

           Can you sit down?   (LK fieldnotes, ex. 10.159)

During our elicitation session, the consultants clearly indicated that (31) was an inquiry about the interlocutor's plans or expectations, while (32) was a request intended to influence the behavior of the addressee. The focusing quality of *=bard* is even more salient in examples where the focused element is not the proposition:

(33)   *Nganyji   anamarra   mayi?*

           INT   cook.2SG.FUT   food

           Can you cook the food?   (LK fieldnotes, ex. 10.135)

(34)   *Joo=nim=(b)ard   anamarra   mayi?*

           You=ERG=INT   cook.2SG.FUT   food

           Are you going to cook food [instead of someone else]?

                                    (LK fieldnotes, ex. 10.136)

In (34), the interrogative clitic is attached to the ergatively-marked pronoun, thus questioning the agent of the proposition (and not the proposition as a whole). The consultants were unambiguous in indicating that (34) is a request for information, while (33) is a request for cooking.

      This *nganyji/=bard* alternation appeared to be consistent throughout contexts, and was not dependent on the person involved in the proposition:

(35)   *Nganyji   jan   barda   aarli=ngan?*

           INT   I   away   fish=ALLATIVE

           Can I go fishing?   (LK fieldnotes, ex. 10.57)

(36)   *Nganyji   joo   aarli=ngan?*

                INT   you   fish=ALLATIVE

                Can you go fishing (with me)?   (LK fieldnotes, ex. 10.41)

In (35), the question is about the future actions of the speaker—in essence, whether the speaker will be allowed or able to go fishing. In (36), by contrast, the question is about the future actions of the addressee—it is an appeal for the addressee to accompany the asker while fishing.

        In addition to this difference in the distribution of the two constructions, speakers maintained sensitivity to the expectations present in the discourse context:

(37)   *Nganyji   ngalanda   boolngoorroo?*

                INT   sit.2SG.FUT   middle

                Will you sit in the middle?   (LK fieldnotes, ex. 10.82)

(38)   *Boolngoorroo=bard ngalanda?*

                Middle=INT   sit.2SG.FUT   (LK fieldnotes, ex. 10.83)

For sentence (38), speakers gave a specific context: the sentence would be used if the speaker had said to the addressee, "Sit on the side," and the addressee didn't move. The speaker could then say, "Oh, are you going to sit in the middle, then?", accomplishing this by using sentence (38). This appears to be another case in which *=bard* retains its function as a focus-marking clitic—the sentence could be rephrased as "Is it in the middle that you're sitting?" Sentence (37), by contrast, acts as a request. I do not have information on the pragmatic and socially conditioned differences between sentence (37) and an imperative, non-interrogative sentence.

        Despite speakers' intuitions and grammaticality judgments for the sentences above, there were cases in which the distinction between *nganyji* and *=bard* was less salient:

(39)   *Nganyji   ana=ngay   mayi?*

       INT   give.2SG.FUT=me   food

       Will you give me food?   (LK fieldnotes, ex. 10.87)

(40)   *Mayi=bard   ana=ngay?*

       Food=INT   give.2SG.FUT=me   (LK fieldnotes, ex. 10.88)

In this case, the consultants did not indicate a substantial difference in pragmatic function between the two sentences. There are several possible reasons for this inconsistency. First, as the information was gathered through elicitation and grammaticality judgments, with English as a contact language, it is possible that speakers' translations to and from English may have interacted with their production of Bardi. During the elicitation sessions, the consultants' repetitions of the English sentences to be elicited often exhibited unusual stress patterns—for instance, speakers typically phrased English-language requests with the word *can*, and put great stress on this word when repeating the requests to be translated. Further discussion of this issue is included below, in section 4.2.

        In addition, a majority of the requests translated used future-tense verbs or, if no verb was included, were presumed to be about events expected to transpire in the future. Particularly as Bardi is used today in very few natural-language domains, there are few circumstances under which speakers make inquiries about what is going to happen in the future. It is thus possible that *nganyji* is being used in a sort of fossilized construction—speakers may simply remember it as the way to make requests, without reconciling it with the rest of the interrogative paradigm. This theory is supported by a clearer sense of focus-marking apparent in future-tense *=bard* constructions—this appears to be a remnant from the older paradigm, not salient in modern usage in other tenses. Another possibility is that *=gard* may have been used in the past to form these constructions, but has fallen out of usage more recently, being replaced by *nganyji*—there is not sufficient data in the corpus to determine if this is the case.

3.5.2 Data from 2011

There are three sentences from 2011 dealing with issues of requests and permission. All of these use *nganyji*; one request using =*bard* was rejected as ungrammatical:

(41) *Nganyji*   *arra*   *milamanka*   *ginyinggi*   *ilma?*
      INT   NEG   hear.2SG   this   song
      Are you allowed to hear this song?   (CB fieldnotes, ex. 11.66)

(42) * *Anamoonkar=ard*   *jan*   *bag?*
      Carry.2sg.fut=int   my   bag
      Will you carry my bag?   (CB fieldnotes, ex. 11.67)

The data thus appears to be consistent with the trends observed in 2010.

3.5.3 Comparison to earlier data

The Bardi corpus contains six instances of future-tense polar interrogatives; of these, three could be considered requests for action or permission, and three are general information questions. All six use *nganyji*—I have no examples from the corpus of a future-tense question using a clitic.

(43) *Nganyji*   *ngankarla*   *loonggoordoo*   *jina*   *lagoorroo?*
      INT   eat.1SG.FUT   blue-tongued-lizard its   eggs
      Can I eat the eggs of the blue-tongued lizard?   (LIZ2.003)

With a sample size this small, it is difficult to draw conclusions about historical usage. If a shift in usage has taken place, however, it seems that it has been an extension of =*bard* to information questions, and a corresponding reduction in the usage of *nganyji*—this is consistent with observations of the past- and present-tense epistemic questions.

3.6   Ability

3.6.1   Data from 2010

The distribution of *nganyji* and *=bard* constructions in the context of requests is mirrored closely when making inquiries about ability. In several cases, consultants confirmed that there was an explicit difference between the two constructions:

(44)   *Minjal=bard   boorroo?*
          See.2sg=INT   kangaroo
          Do you see the kangaroo?   (LK fieldnotes, ex. 10.167)

(45)   *Nganyji   minjal   boorroo   nyanbirronony?*
          INT   see.2SG   kangaroo   on the other side
          Can you see the kangaroo?   (LK fieldnotes, ex. 10.168)

According to the context established during the elicitation session, sentence (44) is an appropriate inquiry as to whether the addressee is looking in the direction of the kangaroo (i.e. "Are you seeing the kangaroo?"), while (45) asks whether seeing the kangaroo is within the addressee's range of ability (i.e., "The kangaroo is very far away; are you able to make it out in the distance?").

In declarative statements, there is no consistent construction for expressing physical ability in Bardi. Rather than saying, "I can see the kangaroo," for instance, a speaker would simply say, "I see the kangaroo." Capability for learned activities can be explicitly expressed through the word for "knowledge," as in (46), below:

(46)   *Nganyji   nyimoonggoon   Bardi=ngan   mangankan?*
          INT   knowledge.2SG   Bardi=ALLATIVE   speak.GERUND
          Do you know how to speak Bardi?   (LK fieldnotes, ex. 10.162)

Inability in Bardi is similarly expressed, through negation of the proposition (saying simply "I don't swim" for "I don't know how to swim"), or through negation of declaration of knowledge:

(47)   *Arra   nimoonggoon   galgooriny=ngan*
         NEG   knowledge.3SG   swim=ALLATIVE
         He didn't know how to swim.   (DCT.675)

There is thus no explicit structural reason that would lead us to expect usage of one interrogative construction or the other in questioning ability.

3.6.2 Comparison to earlier data

There are two examples in the Bardi corpus of questions about ability:

(48) *Garramal   minjal=bard?*
      Cunningham Point   see.2SG=INT
      Can you see Cunningham Point?   (DCT.524)

(49) *Milamankan=bard=irr   jiidam?*
      hear.2SG=INT=they   thunder
      Can you hear the thunder?   (DCT.645)

While I do not have the larger surrounding context for (49), and therefore cannot confirm that it is not comparable to (44) above, the context for (48) is more explicit—the speaker is unable to see Cunningham Point through the fog, and asks if the addressee is able to make it out.

Based on this quite limited data, it does appear that a shift has taken place in the way to inquire about ability in Bardi. Where before, our only examples of ability questions used *=bard*, it appears that *nganyji* is now the construction of choice. It is difficult to offer a hypothesis for this change, as the supporting data is so limited, but one potential contributing factor is interference from English—as with requests, as

described above, ability is described in English through use of the word *can*. It is possible that, during elicitation sessions, speakers are consistently translating *can* as *nganyji*, regardless of the word's meaning in the given context. This is one possible explanation for what otherwise appears to be a complete switch in the distribution of *nganyji* and *=bard*.

3.7 Summary

While *=bard* was historically a focus-marking clitic associated with an epistemic meaning it appears to have shifted in distribution over the last decade or two—it is now the unmarked construction for past- and present-tense polar interrogatives, replacing *nganyji* in that capacity. This is a departure from Metcalfe's and Bowern's observations that *nganyji* is the most common polar interrogative marker (Metcalfe 1975:24; Bowern fc:576).

There are still significant contexts where *nganyji* appears to be the preferred construction, however. *Nganyji* is used to present questions in which the speaker has a clear expectation of what the answer will be, for instance. In addition, *nganyji* is used to mark requests, solicitations of permission and inquiries into ability. While these usages represent an apparent shift in the language, it is difficult to be certain about this, due to the limitations of the older corpus.

There do not appear to be major differences between data gathered in 2010 and that gathered in 2011. Minor differences that are present may be attributable to the same factors that influenced inconsistencies within a given period of data collection—for example, speakers needing to "warm up" to the topic, or requiring an enriched discourse context. These issues will be discussed in more detail in section 4.4.2.

3.7.1 Syntactic distribution

The syntactic distribution of both *nganyji* and *=bard* is overwhelmingly weighted toward initial placement of the interrogative marker. I have only one example of non-initial *nganyji* from 2010, and no examples from either 2011 or the older data sets of non-initial placement of the particle. In addition, *nganyji* appears

immediately before pronouns only in the context of verbless sentences, and appears only once immediately preceding a noun (that is, only once is the first non-interrogative element in the sentence an NP):

(50)   *Nganyji*   *nyimoonggoon*   *Bardi=ngan*   *mangankan?*

       INT   knowledge.2SG   Bardi=ALLATIVE   speak.GERUND

       Do you know how to speak Bardi?   (LK fieldnotes, ex. 10.162)

+moonggoon, the word for "knowledge", is an inalienably possessed noun. Inalienably possessed nouns in Bardi are inflected for person and number of the possessor of the noun (Bowern forthcoming:347). Most nouns in this set are body parts, but other properties of individuals, such as names, tastes, and knowledge, are also inflected in this way. It is thus arguable that the attribution of knowledge to a specific person (in this case, the addressee) constitutes a predicate, especially as the only verb in the sentence is an infinitive. If this is the case, then all instances of *nganyji* immediately precede the predicate in question. This is consistent with Metcalfe's and Bowern's observations, and does not appear to have changed in the last several years.

There are considerably more examples of interrogative clitics that are not attached to the initial element of the clause (that is, clitics that did not appear in second position), but these are also vastly outnumbered by the examples in which the clitic did attach to the first element. Most of the examples of non-initial or variable placement of *=bard* (ten of sixteen) come from the 2010 data set. In every example of non-initial placement, the initial word in the sentence is a noun or noun phrase, and the questioned constituent is immediately following:

(51)   *Iila*   *inyjiibigal=bard?*

    Dog   die.3SG.PAST=INT

    Did the dog die?   (LK fieldnotes, ex. 10.12)

Even in cases where =*bard* could be attached to different elements of the sentence, word order constraints still applied:

(52) *Minarligal=bard   aarli?*
      Eat.2SG.PAST=INT   fish
      Did you eat fish?   (LK fieldnotes, ex. 10.113)

(53) *Aarli=bard   minarligal?*
      Fish=INT   eat.2SG.PAST   (LK fieldnotes, ex. 10.114)

(54) **Minarligal   aarli=bard?*
      Eat.2SG.PAST   fish=INT   (LK fieldnotes, ex. 10.115)

Both (52) and (53) were accepted as grammatical by the speakers, while (54) was rejected—this appears to be due to the placement of the clitic. This is consistent with the historical use of =*bard* as a focus-marking clitic. It is possible that those sentences that allowed =*bard* to be attached to a non-initial item required prosodic support in order to be grammatical, making sentence (51) mean something closer to "The dog, is it dead?" However, this was not tested during elicitation sessions, and remains a speculative explanation.

3.7.2 Lenition

As discussed above, Bardi is a language with frequent elision of consonants, particularly in instances of clitics attaching to nouns. In Metcalfe's discussion of interrogatives, the clitic =*bard* was written as =*arda*, reflecting the frequent loss of the initial consonant (24). Bowern (forthcoming) discussed the issue of lenition in greater detail:

> "Both =*bard(a)* and =*gard(a)* lenite when attached to a stem with a final vowel; in both cases the form of the clitic becomes =*arda* and the vowel of the

clitic replaces the final vowel of the stem. This makes the two clitics identical in most cases." (562)

In 2010, the *=ard/=bard* alternation appeared to be phonologically conditioned in some cases, but in other situations the distinction appeared to have collapsed, or to be arbitrary:

(55) *Nyirroogoord booloo barnka*   *mool=arda*   *gardo inkoorr=bard?*
      How   place outside   hot=INT   or   cold=INT
      Is it hot or cold outside?   (LK fieldnotes, ex. 10.48)

(56) *Joo=nim=(b)ard*   *anamarra*   *mayi?*
      You=ERG=INT   cook.2SG.FUT   food
      Are you going to cook food?   (LK fieldnotes, ex. 10.136)

In (55), the adjective *moola* "hot" ends in a vowel, while *inkoorr* "cold" ends in a consonant. Consistent with Bowern's analysis, the clitic *=bard* undergoes lenition to become *=ard* when attached to *moola*, but retains the /b/ when attached to *inkoorr*. In (56), by contrast, speakers confirmed that both *joo=nim=bard* and *joo=nim=ard* were acceptable. These examples show that, while the lenition may still be phonologically conditioned in some cases, the distinction is no longer categorically based on the final phoneme of the suffixed word.

4   Actuation and influential factors

4.1   Background[7]

Over the last ninety years, the speaking population of Bardi has declined considerably, from around 400 (or 100% of the Bardi population) to fewer than five (< 1% of the Bardi population). In addition, all remaining speakers of the language

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[7] This section draws heavily from Kling (2011).

are bilingual and use Aboriginal English as their primary language in nearly all domains. As discussed in Section 1.1, such language shifts are frequently accompanied by large-scale reductions in the lexical, morphosyntactic and phonological structure of the language that is falling out of use. These structural changes are often marked by fossilization of common formulations, as well as the reduction and reanalysis of paradigms—this is particularly true of discourse within contexts associated with primarily English-language domains.

The current speakers of Bardi, all of whom are over the age of 70, do not consistently live in close proximity to each other, and therefore do not always speak with one another on a daily basis. It may be the case that this lack of daily Bardi use has had an especially strong effect on features found mainly in dialogue, such as interrogatives. In addition, code-switching between Bardi and English is extremely common—among both fluent speakers and other community members, who are familiar with some of the Bardi vocabulary.

4.2   Translation

All speakers of Bardi are fully bilingual in English and Bardi, and use Aboriginal English as their primary language of communication. In addition, frequent code-switching between English and Bardi is used when communicating in either language—both by fluent Bardi speakers and by other community members, many of whom are familiar with much Bardi vocabulary. It is therefore possible that English-language constructions may be influencing Bardi production, particularly in elicitation settings using English as a contact language. This is especially relevant when looking at the data from 2010, as I am a speaker of American English, rather than Aboriginal or Standard Australian English.

This possibility was most apparent in questions that involved ability or requests—both topics that may be expressed in English through use of the word *can*. While the use of *nganyji* in both of these areas may be a coincidence, it is worth noting that usage of *nganyji* in most general contexts has decreased considerably in recent decades. It seems clear, then, that questions of ability and requests are considered distinct from general information questions in Bardi.

As discussed in section (1.1), McGregor (2002) points out that it is important not to attribute all shifts to English-like constructions to the influence of English—often other factors must be taken into account, such as natural processes of language change and influence from other neighboring languages (173). However, it is possible that use of *nganyji* in questions of ability and requests represents an English-language calque, if both types of questions are strongly associated with the word *can* in English. While this explanation seems plausible, it is difficult to prove conclusively without extensive recorded dialogue.

4.3   Competing constructions

There are also sociolinguistic factors that may have contributed to the shift in polar interrogative formation. One of the most apparent of these is a social constraint against asking direct questions: in some Aboriginal communities, a direct question is considered confrontational and therefore inappropriate (Bowern forthcoming:560; Eades 1982:73). This is especially the case for what Eades (1982) describes as "orientation questions": those that seek further information about the topic already being discussed (73). A common strategy for seeking this clarifying information is for the speaker to make a declarative statement (sometimes with question intonation), with the expectation that the addressee will confirm or deny that statement:

(57)   A: Grandfather X used to live at Tirroan?
      B: Thornhill.   (Eades 1982:73)

This method of indirect questioning is well attested within the Bardi community (Bowern forthcoming:560). It is thus likely that a tendency to avoid direct questions, compounded with a lack of domains in which Bardi is used for dialogue, has made the polar interrogative an especially seldom-used construction. This may have contributed to rapid shift in the structure of these interrogatives.

4.4   Potential confounding factors

There are several factors that may affect or interfere with the conclusions we can draw from this data. Of these, two of the most pressing are the reliability of the data and the confidence of the language consultants in the judgments they gave.

4.4.1   Data reliability

Bardi is not a language with a long history of literacy—it was not written before the arrival of Europeans, and written materials are seldom produced outside of academic documentation and curriculum for the schools. In addition, work on the language has been sporadic throughout the twentieth century, and has varied in focus depending on the goals of the individual linguists doing the documentation. Most importantly, nearly all of the Bardi language that has been recorded has been in the format of elicitation or narration—there is very little dialogue that has been preserved. Thus, while the Bardi corpus is the largest of any language in the region, there are many gaps present in the data under consideration. For instance, we have only three examples prior to 2008 of sentences that could be considered appeals for permission or requests. It is therefore difficult to make a conclusive interpretation of these questions, particularly with regard to subtle pragmatic differences between sentences. In addition, the corpus lacks examples of sentences that were considered ungrammatical, making it difficult to say decisively that unattested constructions were not possible in the past.

4.4.2   Speaker confidence

Another potential confounding factor that may affect the analysis presented is the confidence of the speakers used as consultants. As Bardi is no longer the primary language of daily life for either of the speakers consulted in 2010-2011, speakers often had to "warm up" to get used to speaking precisely in the language. Even after a period of language work, both speakers were often hesitant to provide definitive grammaticality judgments, particularly with regard to subtle distinctions in the contexts given for specific sentences. Speakers often referred me to the Bardi dictionary and learner's guide for answers to my questions, trusting the written

word rather than their own intuitions—despite the fact that these speakers had provided much of the material for these works.

Many sentences were also presented as marginally acceptable, particularly those that relied on a greatly enriched context. This was particularly the case with grammaticality judgments about requests, probably due to the lack of real-life discourse contexts in which speakers could make these judgments. As the sentences were not being used with any real pragmatic function, speakers had to make their judgments based on their conscious impressions of how they would use the language—this may have confounded the data to some degree, as it was sometimes difficult to tell which sentences were actually requests, as opposed to statements or general epistemic questions.

There were also many instances of speakers changing their minds about the answers they gave. One especially notable case occurred in 2011, with respect to the particle *nganyji*. On one day of language work, one of the consultants provided this minimal pair:

(58)   *Nganyji*   *minjalagal?*
         INT   see.2SG.PAST
         Did you see it?   (CB fieldnotes, ex. 11.69)

(59)   *Ngaanyjə*   *minjalagal?*
         INT   see.2SG.PAST
         Can you see it?   (CB fieldnotes, ex. 11.70)

In this case, the particle *nganyji* was described as a general epistemic interrogative, while *ngaanyj(ə)*, with a long first vowel and an optional final vowel, carried a connotation of ability. However, a few days later, the same speaker was no longer sure that the minimal pair existed.

There are a few potential reasons why this might have occurred. First, it is possible that in the past, *nganyji* and *ngaanyjə* were separate (but related) particles with specific meanings, a distinction that has largely collapsed or is no longer

accessible to speakers. Another possibility is that there was historically only one particle, but that its current usages seem separate enough to speakers that they project a phonological distinction to differentiate them. Alternately, the difference may be one of dialectical preference—speakers of Bardi from western areas of the Dampier Peninsula tend to drop final vowels (referring to the language as Bard), while speakers from the eastern areas tend to retain those vowels. This dialectical variation may have been temporarily reanalyzed as a difference between lexical items by the consultant, who speaks the eastern variety of Bardi. Regardless, as the difference was not historically recorded, and as more recent analyses are so inconsistent, all examples used above are written with *nganyji*.

5   Conclusions

Based on the data and analysis presented above, I believe it is clear that a shift has taken place in the structure of polar interrogatives in Bardi. As no speakers have acquired the language in several decades, and as the speaking population is so small, it appears that this change must be attributable to processes of language obsolescence rather than other factors, such as language acquisition or social variation.

5.1   Implications for the academic community

There are several ways in which this research can be of interest to the academic community as a whole. In an attempt to understand the variation possible in human languages, linguists seek to document as many different kinds of languages as possible—languages that are diverse with regard to geographical area, cultural background of the speaking population, structural type, and language family. Bardi, as a non-Pama-Nyungan Aboriginal language from an area with a limited written historical record, thus represents a valuable contribution to the pursuit of diversity within documented human languages.

Additional factors make the study of Bardi an especially useful pursuit. With over a century of written linguistic records, and an 80,000-word corpus, Bardi is the

best-documented Nyulnyulan language, and one of the better-documented Aboriginal languages in the area (Bowern forthcoming:15). We have records of Bardi from different points throughout the last hundred years, as well as detailed historical accounts of when and how language contact has taken place. This means that we can identify changes in and influences on the language more precisely than we can in the case of many other obsolescent languages. Study of Bardi thus contributes to the pursuit of both depth and breadth in the typological linguistic record.

Research into polar interrogatives in the language raises some important issues. First, it shows that we can explore rather complex features of language—for example, morphosyntactically varied constructions that are sensitive to semantic and pragmatic distinctions—even in languages with unsustainably small speaking communities. This further contributes to efforts to show that less-documented languages can be as complex and as important to study as ones with larger speaking populations and larger linguistic records—this is true both of Bardi specifically and of endangered or less-documented languages in general.

A study of the change of polar interrogatives over time may be of interest to historical linguists in general, as well. While many of the processes of linguistic change that affect Bardi may be specific to cases of language obsolescence, languages under similar pressure often exhibit changes that follow natural trajectories of structural change, albeit over a much shorter period of time (Thurgood 2003:8). Thus the restructuring of Bardi interrogatives may provide clues into the ways that interrogative systems can change over time.

5.2 Relevance to the Bardi community

The majority of Bardi people do not speak the Bardi language; even among those who do, use of written Bardi is rare. The value to the community of an in-depth study of a single grammatical feature may therefore not be immediately apparent. However, there are several ways in which this work may be useful to the Bardi community. First, as the amount of recorded dialogue between native speakers is very limited, information on discourse structures such as interrogatives

is helpful, particularly for applications in language revitalization work. The school at the Bardi community of One Arm Point has already developed some Bardi language curricula, and any additional information on the pragmatic usage of Bardi enables curriculum development to expand beyond the linguistic information that can be gathered from narratives and elicitation.

Furthermore, linguistic documentation can have value beyond that of the information it preserves. Terrill (2002) discusses the case of documentation of Lavukaleve, a language spoken in the Solomon Islands: in this situation, while the community members did not frequently read or write their language, a dictionary and other reference works could "still serve as powerful cultural symbols of the importance and prestige of Lavukaleve" (205). Written materials have a similar value for some members of the Bardi community: as Bowern (2008) explains, "the elders feel it is important to show that Bardi is a rich and fully developed language" (71). Efforts to preserve and describe the language thus reinforce the language's prestige and value within the Bardi community.

References:

Austin, Peter. 1986. Structural changes in language obsolescence: Some eastern Australian examples. *Australian Journal of Linguistics, 6*(2), 201-230.

Bowern, Claire. 2004. Bardi Verb Morphology in Historical Perspective. PhD dissertation, Harvard University, Cambridge, Massachusetts.

—. 2008. History of research on Bardi and Jawi. In W. McGregor, ed., *Encountering Aboriginal Languages: Studies in the History of Australian Linguistics*, 59-84. Canberra, Australia: Pacific Linguistics.

—. Forthcoming. *A Grammar of Bardi*. Mouton Grammar Library. Berlin: Mouton de Gruyter.

Cook, Eung-Do. 1995. Is there convergence in language death? Evidence from Chipewyan and Stoney. *Journal of Linguistic Anthropology, 5*(2), 217-231.

Cruse, D. A. 1986. *Lexical Semantics*. Cambridge: Cambridge University Press.

Dorian, N. 1978. The fate of morphological complexity in language death: Evidence from East Sutherland Gaelic. *Language, 54*(3), 590-609.

Downing, Laura Hidalgo. 2000. Approaches to negation. In *Negation, Text Worlds and Discourse: The Pragmatics of Fiction*, 23-79. Stamford, CT: Ablex Publishing Corporation.

Eades, Diana. 1982. You gotta know how to talk ...: Information seeking in south-east Queensland aboriginal society. *Australian Journal of Linguistics,* 2:1, 61-82.

Garzon, Susan. 1992. Process of language death in a Mayan community in southern Mexico. *International Journal of the Sociology of Language, 93*, 53-66.

Horn, Laurence. 1989*. A Natural History of Negation*. Chicago: University of Chicago Press.

Huddleston, R. 1994. The contrast between interrogatives and questions. *Journal of Linguistics, 30*(2), 411.

Hudson, R. 1975. The meaning of questions. *Language, 51*(1), 1.

Krauss M. E. 1992. The world's languages in crisis. *Language* 68, 4–10.

Lyons, John. 1977. *Semantics*. Cambridge: Cambridge University Press.

Maiden, Martin. 2004. Morphological change in the dying years of Dalmatian. *Diachronica*, 21:1 (2004), 85–111.

Metcalfe, C.D. 1975. *Bardi Verb Morphology*. Canberra, Australia: Pacific Linguistics.

McGregor, William. 2002. Structural changes in language obsolescence: A Kimberley (Australia) perspective. *SKY Journal of Linguistics, 15,* 145-185.

—. forthcoming. A grammar of Nyulnyul. Pacific Linguistics.

Miestamo, M. 2011. Polar interrogatives in Uralic languages: A typological perspective. *Linguistica Uralica, 47*(1), 1.

Rooy, Robert van, & Maria Safarova. 2003. On polar questions. In R. Young, & Y. Zhou (Eds.), *SALT XIII*, 292-309. Ithaca, NY: Cornell University.

Siemund, P. 2001. Interrogative constructions. In M. Haspelmath (Ed.), *Language typology and language universals: An international handbook* (pp. 1010-1028) Walter de Gruyter.

Thurgood, Graham. 2003. The causatives in Sun Hongkai's Anong: language death and rapid restructuring. *Berkeley Linguistics Society* 29, 2003. Pp. 463-471.

Ultan, R. 1969. Some general characteristics of interrogative systems. *Working Papers on Language Universals, 1*, 41-63.