Expression of Information Structure in Mawng: Intonation and Focus[1]

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Abstract

Many Australian languages have relatively free word order and the main function of word order is the encoding of information structure. This generalization also applies to Mawng, a non-Pama Nyungan language of Arnhem Land, Northern Territory. Demonstratives are also used to encode the information status of a referent. In addition, intonation clearly plays a role. Work on Mawng intonation is at a very early stage but some characteristic patterns have been identified, which are associated with particular sentence types. In these three ways Mawng fits in with our general understanding of the way that information is expressed in Australian languages.

Keywords

Australian languages, information structure, intonation, topic, focus, word order

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Introduction

Publications on information structure on Australian Aboriginal languages are relatively rare. This may be because Australian languages usually lack specific morphology for encoding information status such as articles or focus particles. Instead elements with a much broader grammatical function such as case markers or verbal suffixes are used to encode information structure (Evans, 1988; Heath, 1985; Merlan, 1981; Verstraete, 2005). It is observed that word order is pragmatic and new information often occurs clause initially in Australian languages (Mushin and Simpson, 2005). In the non-Pama-Nyungan language Mawng a wide range of resources are drawn on to encode information structure. This paper looks in detail at the ways in which word order and intonation are used to encode focus and touches on some other ways in which information structure is encoded.

Mawng basics

Mawng is a member of the Iwaidjan language family, part of the non-Pama Nyungan group of Australian languages. The largest community of Mawng speakers live at Warruwi Community, South Goulburn Island in North-West Arnhem land. Mawng is spoken by around three hundred people as their main language and is still being acquired by children. Mawng could be characterised as mildy polysynthetic because verbs cross-reference up to two arguments. Mawng has relatively free ordering of NPs with respect to the verb.

Background to this research

There are a wide range of ways of expressing information structure in Mawng. Word order and intonation have already been mentioned. In addition there is the foregrounding/backgrounding suffix *-(a)pa*. When attached to nouns this suffix usually acts to foreground the noun. When attached to verbs this suffix usually backgrounds the verb but can be used to foreground the verb. There is also a wide range of ways of referring to participants. It is possible to use verbal cross-referencing alone. If an overt nominal is used to refer to a participant this can be a simple free pronoun or a demonstrative. Alternatively a lexical NP can be used, in which case there is a choice or whether or not to use the article. It is also possible to choose from two main types of complex NP.

The work in this paper has arisen from two main paths of research. Mawng is unusual among Australian languages in having an article. This article is more like those found in Oceanic languages than those found in European languages. Research on the distribution of the Mawng article has not succeeded in pinpointing a general function for the article, which does not encode straightforward definiteness or specificity. Another path of research was undertaken as part of a cross-linguistic typology project on intonation and information structure which required the researcher to apply

structured elicitation tasks aimed at elicitating useful material on the interaction between intonation and information structure. This paper draws on both naturally recorded narratives and responses to the structured elicitation tasks to look at the interaction of focus and intonation. What follows are some preliminary results which help to shed some light on the function of the article in Mawng.

There are three main parts to this paper. The first section describes the use of free demonstratives and pronouns in Mawng. Lone pronouns and demonstratives encode topics of low discourse prominence although pronouns can encode a degree of contrastiveness. There is a special type of pronominal/demonstrative NP which encodes topics of high discourse prominence. We find that the degree of discourse prominence of these two types of NP corresponds to their tendency to receive the most prominent accent or not. However, both types of NPs typically precede the verb, which seems to be related to their use to encode topics. The second section looks at evidence from naturally occurring discourse of the use of preverbal lexical NPs to encode both broad and narrow focus. The final section looks at some of the responses to structured elicitation tasks. These are mostly similar to naturally recorded data but the artificial nature of some of the tasks seems to elicit unnatural data.

Demonstratives and free pronouns in word order

In order to describe word order in Mawng we need to distinguish two types of NPs: pronominal NPs and lexical NPs. Pronominal NPs include two types of NPs: single pronouns or demonstratives used alone and special complex NPs consisting only of a pronoun or demonstrative with a single lexical noun. We find that these pronminal NP usually precede the verb while other types of NPs typically follow the verb. Lexical NPs include single lexical nouns, which may or may not have an article, and normal complex NPs, which have linking articles linking each nominal in the NP.

It is typically claimed that free pronouns have an emphatic function in languages in which arguments are already encoded by verbal cross-referencing. Mawng has two types of free pronouns: cardinal and contrastive. Cardinal pronouns are fairly common so they only encode a very weak emphasis. In (1) the pronouns encode a weak contrast or change of topic.

(1)

Inyanat	*iny-uraka-ngung,*	***ngapi***	*warrwak*	*ng-arra-ngung.*
3FE	3FE-go.first-PC	1sg	later	1sg/3MA-go2 -PC

She went in front and I went along behind.

C+H Text 1:8[2]

2 Examples coded C+H are sourced from Capell and Hinch (1970) but glosses and translations may be modified.

Free pronouns almost always encode subjects but can occasionally be used to encode objects as in (2).

(2)
Ngapi *ngani-wu-ng.*
1sg 3MA/1sg- hit -PC

He hit me.

(Hewett et al., 1990)

The rarer contrastive pronoun is used to encode a stronger contrast between participants. In (3) the action of the subject of the second clause is directly opposite to the action of the subject in the first clause.

(3)
K-inyi-lakajpu-n. ***Inyamin*** *k-inga-lakajpu-n.*
PR- 3MA/3FE-ask-NP 3FE.CONTR PR- 3GEN/3MA- ask -NP

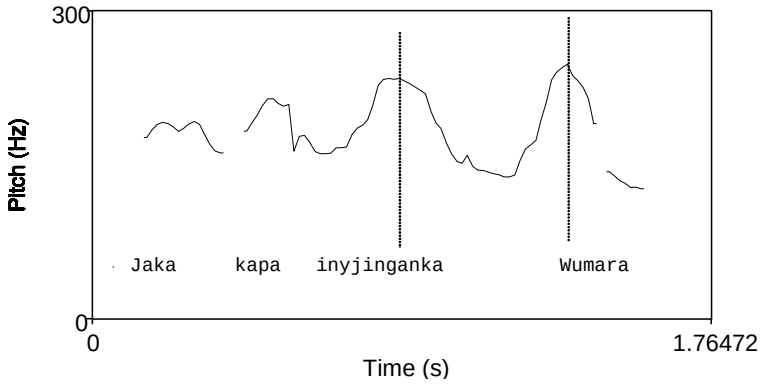
He asks her. Then she asks him.

Reciprocals4 002

Lone demonstratives have a similar function to lone free pronouns. Both are usually ordered before the verb and refer to given arguments. Mawng demonstratives have two different forms. The forms with the base *-uka* are used for close and given referents while the forms with the base *-aka* are used for more distant and less accessible referents. An example of the use of a demonstrative is shown in (4).

(4)
Jaka *kapa iny-ji-ngan-ka Wumara.*
DEM.S.FE there 3FE-come.from-PP-H place name
Her, she came from Wumara. (We both come from the same area) RU Text 1:63

Figure 1. Pitch trace of example (4)[3]



3 Note that vertical lines indicate which part of a word a pitch peak aligns with. Note that sometimes a pitch peak aligns with a syllable or word boundary, as in Figure 2.

The pitch trace of example (4) in **Error! Reference source not found.** shows that all four words in the sentence get some type of pitch accent. Mawng is similar to the adjacent languages Bininj Gun-wok and Iwaidja in that all verbs and nouns usually receive a pitch accent, and other words may too (Birch, 2003; Bishop, 2002). Thus the fact that a word receives a pitch accent does not in itself tell us much about its information status. **Error! Reference source not found.** shows that even the demonstrative *jaka* receives a pitch accent, but this is clearly not the most prominent accent.[4] Lone demonstratives and pronouns do not usually receive a particularly prominent pitch accent within their intonational phrase.

The other type of NP that typically precedes the verb is a pronominal NP consisting of a pronoun or demonstrative followed by a noun. This is the only type of NP in which more than one nominal occur without a linking article. An example of this type of NP, referred to as a determiner NP, is delimited by brackets in (5).

(5)

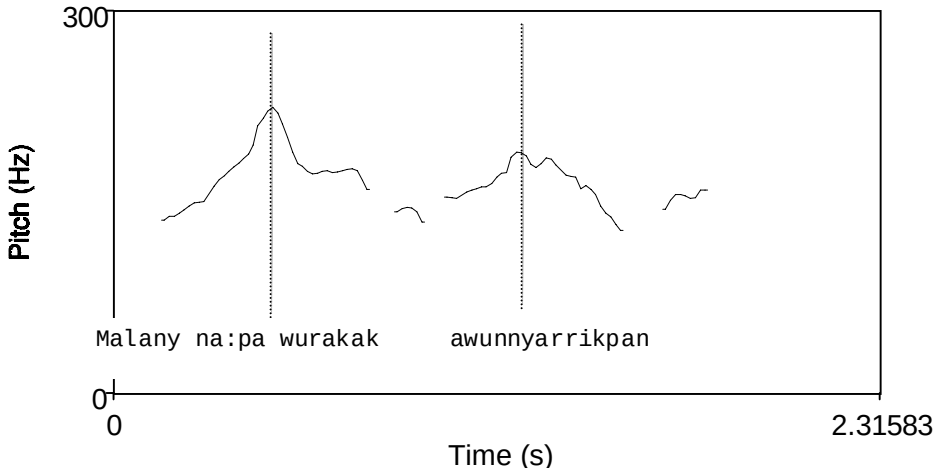
Malany	*[naka-pa*	*wurakak]*	*awunny-arrikpa-n.*
because	DEM.NV.MA-EMPH1	crow	3MA/3pl-ruin-PP

Because that Crow ruined everything for them.

Crow1 056

The pitch trace of example (5) in Figure 2 shows that the NP *nakapa wurakak* receives the most prominent accent.

Figure 2 Pitch trace of example (5)



Determiner NPs typically precede the verb but have a quite different discourse function to pronominal NPs consisting of a single pronoun or demonstrative.

4 The upstep in this example is probably due to the fact that this statement is a lead-in to the speaker's main point in the next sentence in which she states 'I think we come from the same area.'

Determiner NPs function to reactivate a discourse referent and give that referent some degree of prominence.

Word order and focus

The two types of pronominal NP described in the previous section typically precede the verb. The unmarked position for all other types of NPs, referred to as lexical NPs here, is to follow the verb. The following discussion looks at the use of lexical NPs before the verb and correlations with intonation. The current investigation of Mawng intonation is still at a very early stage. Patterns are described using a tone target model (Ladd, 1996). Intonational phrases are circumscribed by pauses and resetting of the pitch level. There has been no description of the tone inventory as yet so all tones are treated as simple H tones. The term 'most prominent accent' is used in this paper to refer to the accent in an intonational phrase that is perceptually most prominent. It is usually the highest pitch accent in the phrase but may not be the highest if processes such as downstep are evident. Other factors such as amplitude and vowel quality are also relevant to deciding which is the most prominent accent. Focus is defined pragmatically. Broad focus is defined as a type of focus that encodes new information while narrow focus can encode new or old information as long as it is contrastive (Ladd, 1996).

In example (6) broad focus has scope over both the noun and the verb.

(6)

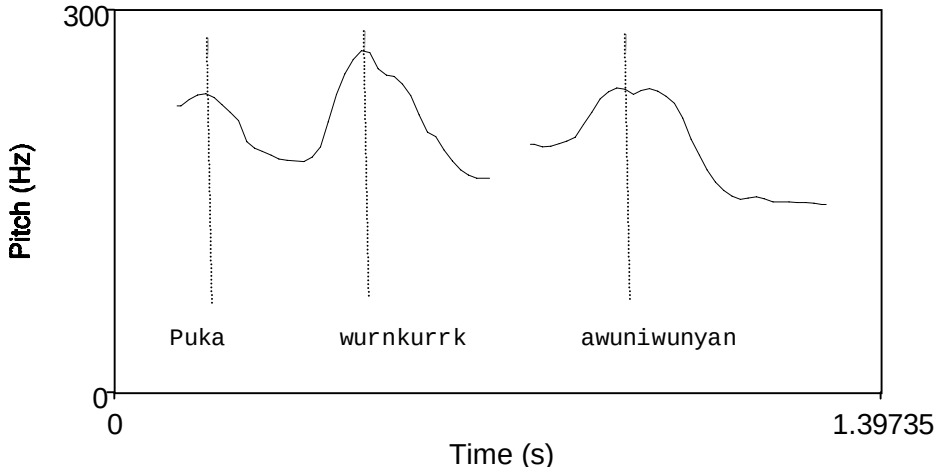
"Puka	*wurnkurrk*	*awuni-wunya-n.".*
DEM.P.PL	jellyfish	3MA/3pl-burn-NP

"(Maybe) a jellyfish stung them."

Ingeny 113

Example (6) was uttered by a protagonist in a story who spotted two children running towards him. He had no idea why they were running but conjectured that perhaps they had been stung by a jellyfish. Thus only the demonstrative *puka* 'them' is given information, the remainder of the sentence is new information. Broad focus is expressed by preposing the noun *wurnkurrk* and dropping the article. Figure 3 shows that the noun *wurnkurrk* has the most prominent accent. This indicates that both the noun and the following verb are under the scope of broad focus.

Figure 3 Pitch trace of example (6)



Usually only one lexical NP precedes the verb as the preverbal position is a marked position for lexical NPs although the unmarked position for pronominal NPs. So it is normal that both a demonstrative and a lexical NP precede the verb in (6).

Contrastive focus is expressed in a similar way to broad focus. Example (7) occurs in a typical context for contrastive focus. The preceding sentence, translated in brackets in the free translation line, refers to the two main protagonists in the story: native cat and the moon. The sentence in example (7) picks out one of these two referents, contrasting it with the other.

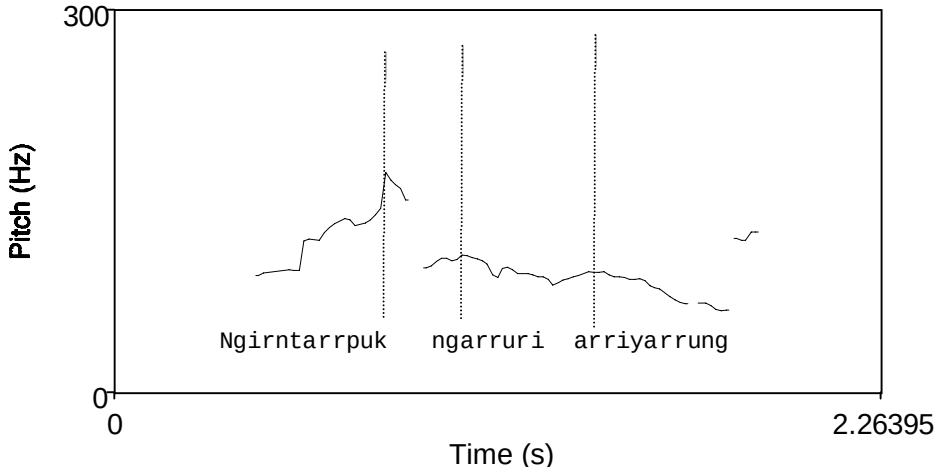
(7)
Ngirntarrpuk *ngarrurri* *arri-yarru-ng.*
native.cat 1pl.in 1pl.in/3MA- follow -PP

(That's the story of the fight between native cat and the moon).
We follow the native cat (not the moon).

Kurrana 045

The participant with contrastive focus on it is referred to by the lexical NP *ngirntarrpuk* 'native cat' which lacks an article and precedes the verb. Figure 4 shows that the most prominent accent falls on this focussed NP.

Figure 4 Pitch trace for example (7)



Another typical context for contrastive focus is when a speaker corrects themself. The speaker makes a mistake in (8) which she corrects in (9).

(8)

La	*k-anga-la-ø*		***ta***	***wupaj.***
and	PR- 3GEN/3LL-	drink -NP	LL	freshwater

Then she drinks freshwater.

Warlk1 032

(9)

Wupaj,	***wupaj***	*marrik*	*anga-la-ng,*
freshwater	freshwater	NEG	3GEN/3LL-drink-I1

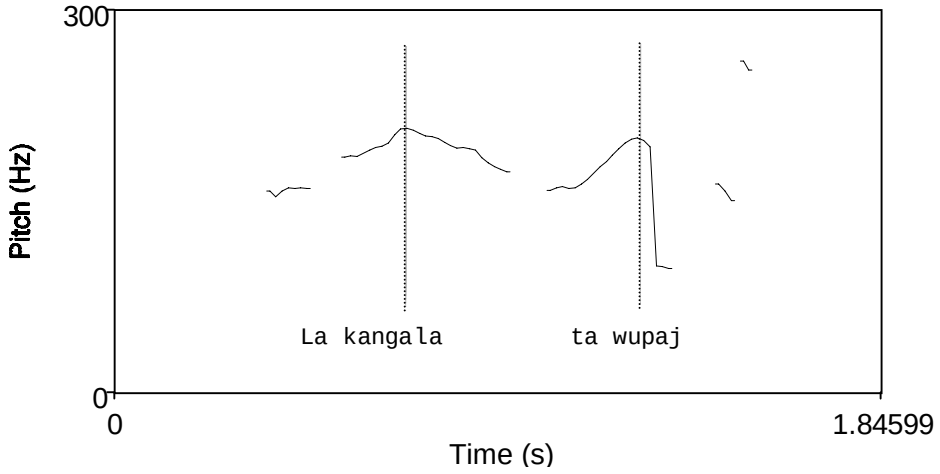
kurrula	*k-angala-ø.*
saltwater	PR-3GEN/3LL-drink–NP

Freshwater?! She doesn't drink freshwater, she drinks saltwater.

Warlk1 033

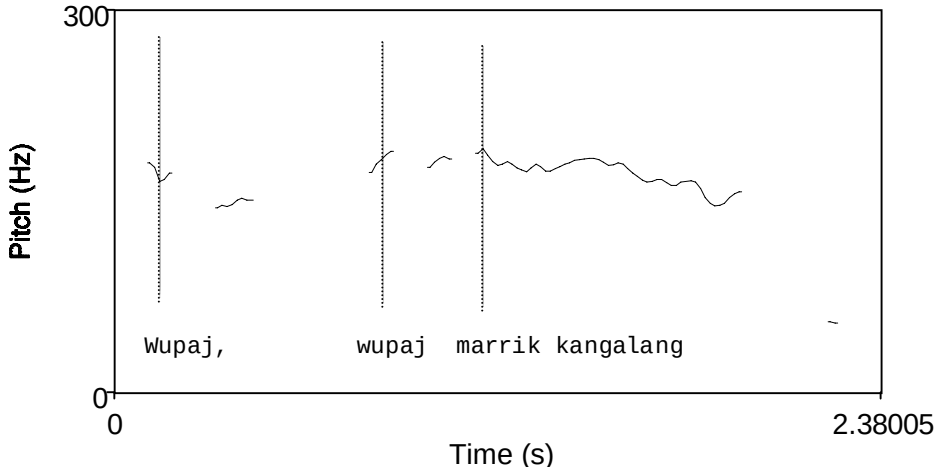
Note that the the noun *wupaj* 'freshwater' follows the verb in (8) and has an article. This is the typical way of expressing a new object that is not particularly important. In (9) both *wupaj* 'freshwater' and *kurrula* 'saltwater' precede the predicate and lack an article. The pitch trace for example (9) is shown in Figure 5 below.

Figure 5 Pitch trace for example (8)



The pitch trace for example (8) shows the typical shape for an unmarked clause. Both noun and verb have an accent. The most prominent accent is on the object NP, slightly lower pitch than the preceding accent because of downstepping. The most prominent pitch accent usually falls on the last lexical word of the phrase when no words have special focus so the most prominent accent has a phrase boundary marking function rather than a focus-marking function.

Figure 6 Pitch trace for first clause in (9)



In Figure 6 there are two intonational phrases. The first token of *wupaj* 'freshwater' forms its own intonational phrase. The second intonational phrase has a compressed pitch range. This compression of the pitch range functions to background a clause and has also been observed in Iwaidja (Birch, 2003). This utterance is just a preparation for the following one, in which the speaker gives the corrected utterance. The most

prominent accent is on *marrik* the negative particle. This particle always precedes the verb. We might expect the second token of *wupaj* 'freshwater' to have the most prominent accent and be in focus, but it appears that the negative particle attracts the most prominent accent instead. This is commonly observed in negated clauses cross-linguistically (Ladd, 1996).

Figure 7 shows the pitch trace for the final clause in (9) in which the speaker corrects herself.

Figure 7 Pitch trace of example (9) second clause

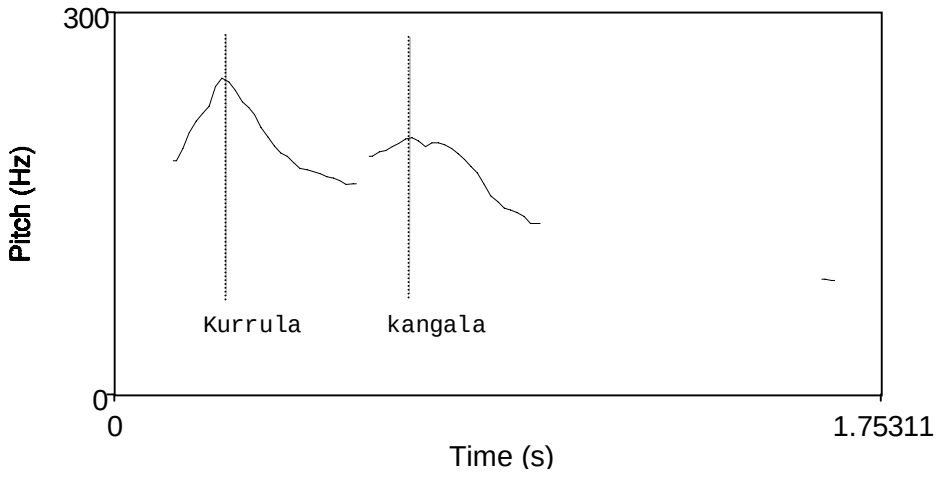


Figure 7 shows that as we would expect, the contrastive NP precedes the verb, lacks an article and has the most prominent accent. In this case the most prominent accent is realised as a very steep rise and fall.

Elicitation of intonation and information structure

In this section, I discuss some of the responses to the structured elicitation tasks carried out as part of a cross-linguistic project in which the same set of elicitation tasks are carried out with speakers of ten typologically diverse languages[5]. Three responses are compared here. The first response is a translation of the sentence 'The child is laughing' in (10).

5 Sonderforschungsbereich 632: Informations structure, project D2, Universität Potsdam and Humboldt Universität zu Berlin. Questionnaire on Information Structure. Reference Manual, Version 2.1.

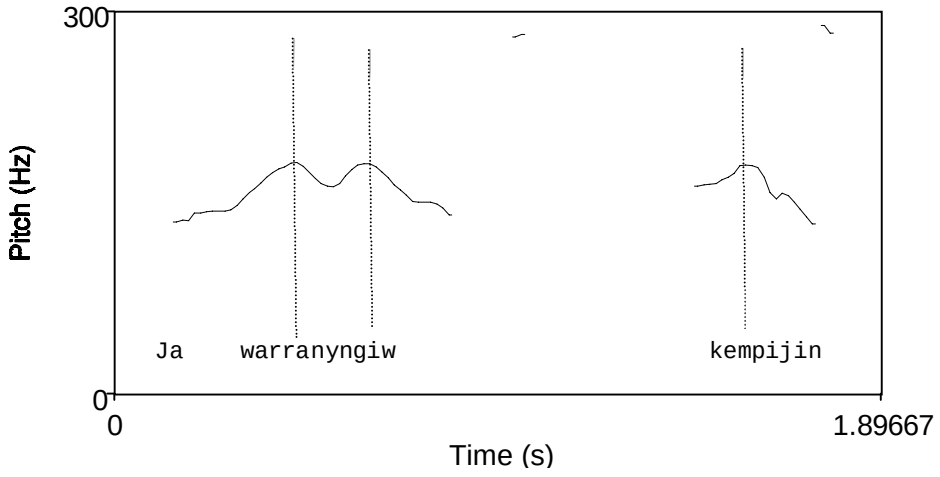
(10)
Ja *warranyngiw* *k-e-mpiji-n.*
MA child PR-3MA-laugh-NP

The child is laughing.

Split NPs 1-0

The translation given is slightly unnatural. Firstly, it is unusual for a lexical NP that precedes the verb to have an article. This may have been given as an approximation for the use of the English article *the* in the prompt. In addition, the pitch trace of the example shown in Figure 8 is very odd.

Figure 8 Pitch trace of example (10)



The three pitch accents in the example shown in Figure 8 are all almost exactly the same magnitude. It is also unusual for the word *warranyngiw* to take two pitch accents. This does not occur in the other examples elicited in the same session. The long pause suggests that the speaker is pronouncing the sentence as two separate intonational phrases.

Following the elicitation of the supposedly basic type of clause in (10) the speaker was asked to use exactly the same sentence to respond to two different questions. Some of these questions seemed to elicit relatively natural responses as the speaker did not use exactly the same sentence. For example, in response to the question in (11) the speaker gave the sentence in (12).

(11)
Nganti *k-e-mpiji-n?*
who PR-3MA-laugh-NP

Who's laughing?

Split NPs 1-1-Q

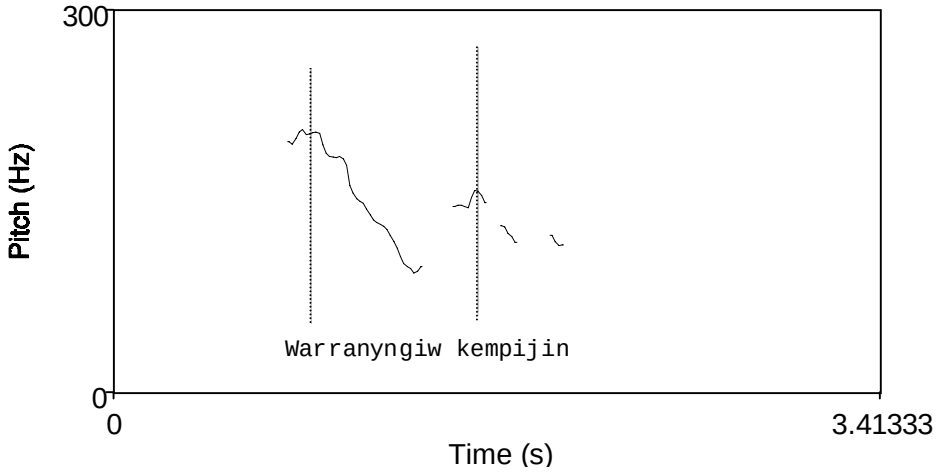
(12)
Warranyngiw *k-e-mpiji-n*
child PR-3MA-laugh-NP

A/the child is laughing.

Split NPs 1-1

Example (12) takes the same form and has the same intonation as the example from natural discourse shown in (9). Figure 9 shows the pitch trace for example (12). The most prominent accent clearly falls on the NP *warranyngiw* 'child'.

Figure 9 Pitch trace of example (12).



The designers of the elicitation task wanted to elicit responses that were identical in form but differed in intonation. In accordance with directions given in the elicitation materials, the speaker was requested not the change the sentence in any way from the translated sentence in (12). However, in order to give a natural response, the speaker changed the sentence by dropping the article. It is not possible to separate intonation and word order in Mawng as both act together to encode information structure.

In order to try and elicit an 'all new' sentence the instruction manual asked the researcher to ask a sentence similar to the English 'What's happening?'. The nearest translation of this sentence in Mawng is shown in (13) and the response given is shown in (14).

(13)
Kiki *k-ang-mi-n?*
What/how PR-3LL-be/do-NP

What's happening?

Split NPs 1-3-Q

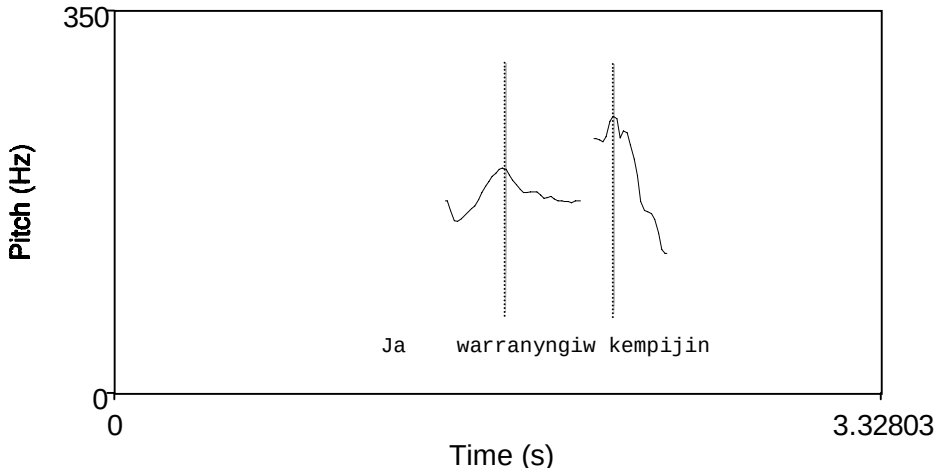
(14)
Ja warranyngiw k-e-mpiji-n.
MA child PR-3MA-laugh-NP

The/a child's laughing.

Split NPs 1-3

In giving the response to this question, the speaker has followed the instructions and has repeated the words of the sentence in (10) in exactly the same order. However the intonation used is quite different as shown by the pitch trace in Figure 10.

Figure 10 Pitch trace of example (14)



The most prominent accent in Figure 10 is a very steep peak, quite unlike the most prominent accent on the verb in example (8) which is a pragmatically unmarked sentence. The prompt in (13) has elicited a response which gives special intonational prominence to the verb due to narrow focus on the verb.

In summary, by comparing elicited responses with naturally occurring data, we can decide which examples are unnatural and jettison those. The remaining elicited data can be very useful for investigating the interaction of intonation and information structure, particularly when natural conversational data with question and answer pairs is lacking as is the case for Mawng.

Conclusions

Both natural and elicited data shows that the encoding of information structure in Mawng involves the simultaneous use of word order and intonation in many contexts. At this stage both broad and narrow focus seem to be encoded in the same way: by preposing a lexical NP without an article and giving it the most prominent pitch accent.

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