Jean-Christophe Verstraete

‘Perhaps’ in Cape York Peninsula

Ignoratives and verbs of visual perception in epistemic marking

Abstract: This paper analyzes a pattern of epistemic marking that is found in several Paman (Pama-Nyungan) languages of Cape York Peninsula, in the north-east of Australia. Formally, the pattern consists of a marker that is identical to the imperative form of a verb of visual perception, optionally accompanied by an ignorative of the ‘thing’ category or another type of marker. Semantically, these elements mark potential verification, i.e., a weak type of epistemic meaning. The pattern is interesting for two reasons. From a typological perspective, it adds to the inventory of direct lexical sources for epistemic modality that have been identified in the literature. The paper examines the semantics of the pattern in more detail, showing that, at least in its origins, its meaning can be linked to an instruction for verification marked by the imperative of visual perception, with the ignorative as a modal reinforcer. The pattern is also interesting from an areal perspective, because it is attested in five languages from three different subgroups of Paman, which neighbor each other geographically and which are linked by recurrent patterns of personal multilingualism. The spread of the pattern reinforces existing arguments for the identification of a small linguistic area centered on Princess Charlotte Bay and its hinterland, on the east coast of Cape York Peninsula.

Keywords: epistemic modality, ignoratives, perception verbs, Australian languages, linguistic areas

Jean-Christophe Verstraete, University of Leuven and Australian National University, Department of Linguistics, Blijde-Inkomststraat 21, PO Box 3308, 3000 Leuven, Belgium, jcv@kuleuven.be

Open Access. © 2018 Jean-Christophe Verstraete, published by De Gruyter. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 License. <https://doi.org/10.1515/9783110607963-010>

1 Introduction

This paper analyzes a pattern of epistemic marking that is found in several Paman (Pama-Nyungan) languages of Cape York Peninsula, in the north-east of Australia. The pattern is illustrated in the Umpithamu structure in (1), where the combination of *ngaani* and *ngamal* serves to mark epistemic possibility.

- (1) Umpithamu (Pama-Nyungan, Paman; Middle Paman)¹

Yupa miintha iluwa ngaani ngama-l
 today good 3SG.NOM IGNOR see-IMP
 ‘Perhaps she is better today.’

This pattern is interesting for two reasons. On the one hand, the markers involved can very easily be related to their lexical sources, as reflected in the glosses in (1). *Ngaani* is identical to an ignorative of the ‘thing’ category, basically a marker of lack of knowledge that can be glossed as ‘what’ or ‘something’ (see Section 3.1) while *ngamal* is identical to the imperative form of the verb *ngama-* ‘see, look’. The literature on the development of modality has often presented epistemic modal markers as “highly grammaticized” (Bybee, Perkins and Pagliuca 1994: 205) and has tended to focus on their origins in other, non-epistemic, modal markers (e.g., Goossens 1982; Traugott 1989; van der Auwera and Ammann 2013). However, more direct lexical sources for epistemic modals have also been identified, like ‘happen’, ‘seem’, ‘befall’, ‘I don’t know’ or ‘think’ (see Bybee, Perkins and Pagliuca 1994: 206; van der Auwera and Plungian 1998: 92; Boyer and Harder 2007). The pattern illustrated in (1) partly overlaps with one of these but also adds a new one. Given the remarkable transparency of the pattern, it is worth investigating in more detail how exactly its epistemic meaning relates to the meanings of its lexical sources.

On the other hand, this type of epistemic marking is found in a clear areal pattern. Markers that can be traced back to verbs of seeing, in combination with ignoratives or other elements, are attested in five of the about 40 different languages of Cape York Peninsula. These five languages belong to three different subgroups of Paman but they neighbor each other geographically, they are linked by recurrent patterns of personal multilingualism and there is good ethnographic

¹ The following abbreviations will be used here: 1,2,3 first, second and third person; ACC accusative; APP apprehensive; DAT dative; DEM demonstrative; DU dual; EXC exclusive; FUT future; GEN genitive; IGNOR ignorative; IMP imperative; LOC locative; NFUT non-future; NOM nominative; PL plural; POT potential; PRS present; PST past; RM remote; SG singular.

evidence for strong social links between the clans owning the languages (see Rigsby 1997; Verstraete 2012). In other words, there is good evidence for a small linguistic area here, of which the modal marker illustrated in (1) is just one reflection.

In this paper, I address both the semantics of the pattern of epistemic marking illustrated in (1) and its distribution in Cape York Peninsula as part of a linguistic area. In Section 2, I provide a morphosyntactic description of the pattern in Umpithamu, the best-documented language in which it is attested. In Section 3, I use these data to examine the semantics of the pattern in more detail, especially in relation to earlier analyses of ignoratives as markers of epistemic status (e.g., Mushin 1995) and the available literature on the development of verbs of visual perception (e.g., Van Olmen 2010; Takahashi 2012). I argue that, at least in its origins, the semantics of the pattern can be linked to an instruction for verification marked by the imperative of visual perception, with the ignorative as a modal reinforcer (confirming a combinatorial possibility identified in Boye 2012: 258–260). In Section 4, I examine the spread of the pattern in Cape York Peninsula, using a survey of modal marking in the available grammars for the region. I argue that the spread coincides nicely with the linguistic area identified with the Princess Charlotte Bay region, for which we have other evidence of *Sprachbund* phenomena, and I hypothesize that the marker itself arose in the Lamalamic subgroup of Paman languages. I also discuss interaction with other strategies for epistemic marking found in Cape York Peninsula and, specifically, developments from apprehensional markers, which, in at least one language, intermeshes with the pattern identified in (1).

2 Epistemic marking in Umpithamu

As a first step in the argument, I describe the pattern illustrated in (1) in some more detail. The pattern is attested in five languages of Cape York Peninsula but, in this section, I focus on Umpithamu, the best-documented of the five. Examples from the other languages, viz., Umbuygamu, Lamalama, Kuku Thaypan and Aghu Tharrnggala, can be found in Section 4. Unless otherwise marked, data for Umpithamu (as well as for Umbuygamu and Lamalama) are taken from my own field notes.

Umpithamu is a Pama-Nyungan language of the east coast of Cape York Peninsula, at the northern end of Princess Charlotte Bay (see Verstraete 2012 for more details). Genetically, it belongs to the Middle Paman subgroup of Paman lan-

guages (see Verstraete and Rigsby 2015: 173–194). Like most Pama-Nyungan languages, Umpithamu has a number of markers with modal values in its paradigm of verb suffixes. For instance, there is a counterfactual marker *-rra* for events that could or should have taken place but did not, and a potential marker *-ku* for events that are likely, weakly desired or simply located in the future (as well as an imperative marker *-l*). In addition, there is a slot right before the verb that can take negation markers, and a specialized apprehensive marker, which designates that an event is likely but undesirable. Verstraete (2011a) provides a more detailed analysis of these markers and their semantic values.

None of these features is remarkable for a Pama-Nyungan language, but the pattern in (1) is remarkable, both within Pama-Nyungan and in a broader typological perspective. There are quite a few Pama-Nyungan languages that have one or more epistemic particles (see Section 4 for some examples) but there are very few cases where they can be linked back to specific lexical sources, with such transparency. As already mentioned, the epistemic pattern in Umpithamu can be related to *ngaani*, an ignorative of the ‘thing’ category that can be glossed as ‘what’ or ‘something’, and to *ngamal*, the imperative of a verb stem glossed as ‘look, see’. The basic ignorative use of *ngaani* is illustrated in the question-answer sequence in (2) while the basic verbal use of *ngamal* is illustrated in (3).

- (2) A: *Amiya*, *ngaani* *ngaympi-n=inu*, *pigipigi?*
 mother IGNOR hit-PST=2SG.NOM pig
 ‘Mum, what did you get, a pig?’
 B: *Minya* *murrkan* *ngaympi-n=ayuwa*
 meat.animal fish hit-PST=1SG.NOM
 ‘I got some fish.’
- (3) *Ngama-l=inuwa* *yenu*
 see-IMP=2SG.NOM up
 ‘You look up there [up in the tree].’

The example in (1) illustrates the maximal extent of the epistemic pattern, i.e., *ngaani* and *ngamal* combined, in clause-final position. The Umpithamu corpus also shows a few permutations, however, which provide some indications about the origins of the pattern, as will be argued in Section 3.3. First, *ngaani* and *ngamal* can both occur independently with epistemic meanings, most typically so for *ngamal*. *Ngamal* occurs on its own quite frequently, without *ngaani*, as illustrated in (4). When it does, it is always clause-final. *Ngaani* can also occur without *ngamal*, as shown in (5), but much less frequently. In such uses, it usually takes

clause-initial position. There is no obvious semantic difference between *ngaani* and *ngamal* combined, or used independently, but, in Sections 3.1 and 3.3, I will argue that the greater ease for *ngamal* to be used independently suggests that *ngamal* may be the primary modal marker in the combination, with *ngaani* having arisen as a reinforcer.

- (4) *Yupa uyngka-n=ilu ngama-l*
 today break-PST=3SG.NOM see-IMP
 ‘Perhaps, nowadays, it’s broken.’ [discussing the current state of a particular rock feature]

- (5) *Ngaani miintha iluwa*
 IGNOR good 3SG.NOM
 ‘Perhaps she is better now.’

A second type of permutation found in the corpus concerns the position of the markers. While the combination of *ngaani* and *ngamal* typically occurs clause-finally, it is also found more rarely split over the clause, as in (6), with *ngaani* and *ngamal* in their typical initial and final positions respectively. Again, there is no discernible semantic difference between the two options but, as I will argue in Section 3.3, this type of variation may offer some clue to the development of *ngaani ngamal*. Finally, there is also one attestation of *ngaani ngamal* in initial position, in the ‘disjunctive’ use illustrated in (9) at the end of this section. The existence of these variants shows that we are really dealing with a set of markers in a range of patterns rather than one single pattern. In what follows, I will refer to the whole set as *ngaani/ngamal*.

- (6) *ngaani iya-ku=ayu ngama-l*
 IGNOR go-POT=1SG.NOM see-IMP
 ‘Perhaps I will go.’

The semantics of this pattern can be described broadly in terms of epistemic possibility, usually glossed by speakers as *mait* or *maitbe*, which is a typical possibility marker in local creoles and forms of Aboriginal English (see Crowley and Rigsby 1979: 192 on Cape York Creole; Schultze-Berndt and Angelo 2013 on parallel forms in Kriol). At first sight, this may seem to overlap with the meaning of the verbal suffix *-ku*, which marks potential realization of an event and often co-occurs with *ngaani/ngamal*, as in (6) above. There is an important difference, how-

ever. The feature of possibility marked by *ngaani/ngamal* does not refer to potential realization of an event but to potential verification – in other words, it is exclusively propositional in scope. *Ngaani/ngamal* is not only used with potential-marked verbs but also with verbs in the past or the present or with non-verbal predicates (which are implicitly present), as shown in (7) and (8). In such cases, potentiality does not relate to the occurrence of the event being described (which is marked as preceding or coinciding with the moment of speaking) but to verification of the speaker's claim about the event. The structure in (7), for instance, follows a lengthy description of an animal behaving strangely and states that this may be a sign: the predicate in (7) describes what may have happened while the animal was acting strangely, and *ngaani/ngamal* marks that this is subject to future verification. With potential-marked verbs, by contrast, both the realization of the event and the verification of claims about the event are potential.

- (7) *Omoro ingkuna ngaani wuyyu-n ngama-l*
 father 2SG.GEN IGNOR die-PST see-IMP
 'Perhaps your father has died.'

- (8) *Kaantyu ngama-l*
 kaantyu see-IMP
 'It might be a Kaanju person.'

In addition to the basic epistemic modal function of *ngaani/ngamal*, there is also one extended use, illustrated in (9). As in many languages, markers of epistemic possibility can also be used to convey a relation of disjunction between alternatives (see Mauri 2008). Thus, the two tokens in (9) are fully in line with the meaning of *ngaani/ngamal* as stated above but, in combination, they also serve to convey the existence of alternative interpretations of an event: the speaker is commenting on the fact that she has seen a man talking to a woman and offers two alternative interpretations of his motivations. As mentioned above, this use seems to be associated with a different position for *ngaani/ngamal*. There are not enough examples in the corpus to check if this is more than just a pragmatic strategy – the key would be to find examples that do not involve a feature of verification – but it is clearly in line with Mauri's (2008) findings about the semantic relation between epistemic modality and disjunction.

- (9) *Ngaani ngama-l wompil-ku, ngaani yaapala-ku*
 IGNOR see-IMP sweetheart-DAT IGNOR talk-DAT
 'Perhaps he wants to court her, perhaps just talk to her.'

3 Ignoratives, visual perception and the epistemic domain

Given that the sources of the pattern described here are so transparent, the next obvious question is how ignoratives and verbs of visual perception could come to function as markers in the epistemic domain. In this section, I first discuss how each of these two elements separately can be linked to epistemic modality and then I present a hypothesis about how they could have come to be combined in the pattern described in the previous section.

3.1 Ignoratives and epistemic modality

The use of *ngaani* in question-answer sequences like (4) suggests that it could simply be analyzed as a question word like English *what*. For most Australian languages, however, this is not an adequate analysis, and this is precisely why such forms are relevant to the epistemic domain. As shown by Mushin (1995), these forms can systematically be used both in questions and in statements about lack of knowledge, which suggests that they are not simply interrogatives. Following Durie (1985) and McGregor (1990), Mushin (1995) argues that apparent interrogative forms in Australian languages usually have a basic meaning of lack of knowledge. In Umpithamu, for instance, *ngaani* can be used in questions, as in (10), and in statements, as in (11). What the two uses have in common is that *ngaani* signals a lack of knowledge. The distinction between “question” and “other” uses simply falls out from the context, i.e., whether the clausal context has other features that mark it as a request for information and whether this gets picked up by the interlocutor as the first turn of an adjacency pair. In (11), for instance, there is no indication in the first clause that it is to be taken as a request for information. Accordingly, the same speaker simply continues the turn, in this case by specifying what exactly was being made.

- (10) A: *Minya* ngaani?
meat.animal IGNOR
‘What kind of animal?’
B: *Yaathantyi*
carpet.snake
‘A carpet snake.’

- (11) *Iluwa ngaani yula-n=iluwa. Wiingal yula-n=iluwa.*
 3SG.NOM IGNOR make-PST=3SG.NOM boomerang make-PST=3SG.NOM
 ‘He made something/I-don’t-know-what. He made a boomerang.’

This basic meaning shows some further extensions in Umpithamu, again in line with the general paths of development proposed in Mushin’s (1995) typological study. On the one hand, the ignorative can also be used as a hesitation marker, as shown in (12), where *ngaani* signals a brief word search that is immediately resolved locally. On the other hand, it can also be used as a determiner-like element (whose precise semantics remains unclear), as in (13).

- (12) *Ngaani, yeerra-mpal ungki-ngka=ilu-ungku*
 IGNOR coffin-LOC put-PRS=3SG.NOM-3SG.ACC
 ‘He puts it into, what-do-you-call-it, a coffin.’

- (13) *Yukurun ngaani yitha-n=antyampa kuurra*
 gear IGNOR leave-PST=1PL.EXC.NOM behind
 ‘We left some gear behind.’

Given that the basic meaning of apparent interrogative forms in Australian languages relates to lack of knowledge, Mushin (1995) proposes to call them “epistememes”, following Durie (1985). In the context of this analysis, I prefer the alternative term “ignorative” because it highlights the feature of lack of knowledge. Regardless of terminology, however, Mushin’s analysis shows quite clearly why such markers could come to serve as epistemic elements. Their basic function is already in the broad domain of marking knowledge states – in this case, marking lack of knowledge about a specific entity. How, then, could a marker of lack of knowledge become part of a larger pattern for marking epistemic possibility as described in Section 2? I believe this involves two steps, one explained in this section and a second to be explained in Section 3.3.

The first step is to consider the nature of the category targeted by the ignorative. As shown by Mushin (1995), Australian languages usually have a range of ignoratives for different categories, such as things, persons and places. In Umpithamu, *ngaani* is the ignorative for the ‘thing’ category, which contrasts with *wanthamu* for the ‘person’ category, *wanthawa* for the ‘place’ category and *angampal* for the rest (mainly manner, time and quantity). ‘Things’ are the most obvious referent for *ngaani*, as shown in the examples above, where the marker consistently targets a discrete non-human entity. But these are not the only possible targets. In Umpithamu, *ngaani* also serves as a more abstract ignorative,

marking a lack of knowledge about propositions and events rather than just entities. This is illustrated in (14), where *ngaani* does not mark lack of knowledge about a specific entity but about what is happening: the father's response to the child's ignorative is a full proposition describing an event rather than an entity. The structure in (15) illustrates a related use, also analyzed in Mushin (1995), where *ngaani* forms the basis for an ignorative of reason ('why, what for'), with the dative marker *-ku*. Again, the target of this marker is not an entity but a proposition or event: the people being addressed are crying because they thought the speaker had died.

- (14) "Yoompi-l=inuwa, yoompi-l!"
 stand-IMP=2SG.NOM stand-IMP
 Yoompi-n=ayu "Ngaani omoro?"
 stand-PST=1SG.NOM IGNOR father
 "Anharra alu wuna-ngka=iluwa."
 saltwater.crocodile DEM lie-PRS=3SG.NOM
 "Stop, stop!" I stopped, "Dad, what's going on?" "There's a saltwater crocodile over there."

- (15) Ngaani-ku mi'athi-ngka=uurra-athungku
 IGNOR-DAT cry-PRS=2PL.NOM-1SG.ACC
 'Why are you all crying for me?'

Thus, *ngaani* in Umpithamu is also a more abstract type of ignorative, which can mark lack of knowledge about events rather than just non-human entities. If its basic meaning is to express lack of knowledge about events, this is not actually that far from signaling potential verification, the basic meaning of *ngaani/ngamal* as discussed in Section 2. A very similar argument is actually made by Boye (2012: 24–27), who argues that these two meanings are different instantiations of what he calls "neutral support", the lowest value on a scale of epistemic strength. The two meanings are not entirely equivalent, of course, because expressing a lack of knowledge about an event need not imply a need for future verification. Conversely, however, signaling potential verification does typically imply that one lacks knowledge about the event being discussed. In this sense, uses of *ngaani* targeting events or propositions are semantically close to the meaning of *ngaani/ngamal*, but not equivalent. I believe this is also the reason why *ngaani* is not the dominant partner in the set *ngaani/ngamal* (see also Sections 2 and 4). In the next section, I will argue that *ngamal* has a more directly epistemic meaning

and, in Section 3.3, I will round off the analysis by providing some tentative evidence that *ngaani* may have arisen as a reinforcer of *ngamal*, semantically compatible with but not equivalent to the more basically epistemic marker *ngamal*.

3.2 Verbs of seeing and epistemic modality

At first sight, the use of verbs of seeing in epistemic marking may seem less surprising than that of ignoratives. There are well-known proposals about metaphorical links between the domains of vision and knowledge or understanding (most prominently, Sweetser 1990) and there is a rich literature about the grammaticization of imperatives of verbs of vision (e.g., Van Olmen 2010). Neither of these lines of argument can be used in a direct way to explain the epistemic meaning of *ngamal* in the *ngaani/ngamal* set, however. On the one hand, there is no evidence in Umpithamu (or in any of the other languages studied in this paper) that ‘see’ verbs have secondary senses of knowing or understanding, which could then serve as a bridge to epistemic uses. This is in line with the more general argument developed in Evans and Wilkins (2000) that, in Australian languages, the domain of understanding tends to be conceived in terms of hearing rather than vision,² as also reflected in the Umpithamu structure in (16), where wisdom is described in terms of strong hearing rather than strong vision. On the other hand, the typical grammaticization targets of visual perception verbs are in the domains of information structure and expressivity (Van Olmen 2010), with argument-introducing uses like the English structure in (17) coming closest to the epistemic domain (see Van Olmen 2010). Again, such uses do not provide any parallels to *ngamal* as studied in this paper, since argumentative uses are epistemically much stronger than the possibility markers studied here. For instance, the use of *look* in (17) suggests a strong degree of epistemic commitment to both the argument and the conclusion that can be derived from it.

- (16) *Omoro athuna wina wakara iya-n=iluwa*
 father 1SG.GEN ear strong go-PST=3SG.NOM
 ‘My father was clever.’

² In fact, the only exception described in Evans and Wilkins (2000) is in a number of languages of southern Cape York Peninsula, like Guugu Yimidhirr, where verbs of visual perception do have a sense of knowing (which may itself be due to a secondary development of seeing to hearing; see Evans and Wilkins 2000: 551). This pattern is not attested in any of the languages studied in this paper, however, and even if it was, a sense of knowing would be unlikely to develop into a weak epistemic marker like the one studied here.

- (17) *The end of the stage would be hard for any team to control, just look what happened to Movistar when Simon Yates won.*
 (<http://www.ciclismointernacional.com/vuelta-a-espana-2016-stage-9-preview>)

How, then, could the imperative form of a verb of visual perception develop into an epistemic marker? The first point to note is that *ngama-* in Umpithamu is vague between an intentional sense ('look') and a non-intentional one ('see'), as illustrated in (18) and (19). This is a well-known pattern in Australian languages, attested for many verb meanings besides visual perception (see Dixon 2002: 57).

- (18) Ngama-n=*ina-ingku*, *ngo'oyi*
 see-PST=3PL.NOM-3SG.ACC nothing
 'They looked at it, but nothing [it had disappeared].'
- (19) *Nhuwal* ngama-n=*ayu-ungku*
 bubble see-PST=1SG.NOM-3SG.ACC
 'I saw a bubble.' [speaker noticing a sign of an animal in the water]

This distinction is relevant to the current discussion, because many of the grammaticization targets for imperatives of visual perception described in the literature are in fact derived from verbs of intentional perception. As shown by Van Olmen (2010), these tend to develop into strong markers that imply or even encode relatively strong epistemic commitment on the part of the speaker, like attention-getters or argument-introducing markers like (17). This is precisely the type of development that is largely absent in Australian languages (see Evans and Wilkins 2000), and even if it were attested, it is unlikely as a source for weak epistemic markers like *ngamal*.

The development of verbs of non-intentional visual perception is much less well-studied in the literature, but if we look at what is available, there are indications that they tend to develop into weaker markers than their intentional counterparts, which do not imply or encode strong commitment on the part of the speaker. One path that has been reasonably well-studied is the development of verbs of seeing to conative meanings of trying (e.g., Voinov 2013), as illustrated in the Yimas structure in (20), where the conative marker is analyzed as deriving from a 'see' verb in a serial verb construction (Foley 1986: 152, as quoted in Voinov 2013). Conative structures like these do not encode modal meanings as such, but

if they trigger any modal inferences, they will not imply strong modal commitment, given that the speaker conceives of the event as being attempted rather than realized.

- (20) Yimas (Lower Sepik-Ramu, Lower Sepik)

Na-mpi-kwalca-tay-ntut

3DU>3SG-arise-see-RM.PST

‘They both tried to wake him up.’

(Foley 1986: 152)

There is another path, however, that is not really well-described in the literature but more immediately relevant to modality. The key to this path lies in the interpretation of the imperative marker in *ngamal*. In principle, an imperative form is most easily compatible with the intentional sense, because imperatives entail some degree of control over the action being described: thus, ‘look!’ is more easily interpretable than ‘see!’. As just mentioned, however, grammaticized ‘look!’ forms typically imply or even encode strong epistemic commitment and are therefore not a good candidate source for a weak epistemic marker. The alternative is the non-intentional sense, i.e., ‘see!’, but the question is how this could be interpreted with an imperative marker. As argued in Jary and Kissine (2016), in such cases, imperatives generally tend to coerce intentional readings: for instance, the use of the imperative with the uncontrolled verb *know* in English, as in (21), coerces an interpretation along the lines of ‘make sure you know the answer!’.

- (21) *Know the answer!*

(Jary and Kissine 2016: 143)

Along the same lines, in the case of ‘see!’ forms, one cannot be ordered to perceive something but one can be ordered to be open to such perception, i.e., to be receptive to information that is not yet available. Thus, for instance, in English, *see* can be used in imperatives and other deontic forms addressing the interlocutor, as illustrated in (22). In all of these cases, *see* can be analyzed as an instruction to be receptive to future information in order to make a judgement or decision: this information may concern the further course of current events in (22a), the results of one’s actions in (22b) or arguments for the validity of a proposal in (22c).

- (22) a. *Wait and see before you make a judgement.*

(<http://www.pbs.org/newshour/rundown/students-eastern-michigan-u-protest-kkk-racist-graffiti>)

- b. *Set aside \$25 for a test and see how you go.*
(<http://www.blogtyrant.com/start-a-blog-2014>)
- c. *"But, you know, Terry, the St. Anne's case is highly technical, and of course there's a lot at stake. I think it calls for the judicial temperament and expertise of someone who has experience in these difficult matters, someone like, say, Judge Irving Samuels." "Let's see." Terrence consulted the court docket and turned a few pages. "Yes, Samuels. He's sitting on criminal cases. But let me see what I can do."*
(Takahashi 2012: 29)

This type of use offers an interesting model to explain the contribution of *ngamal* to the *ngaani/ngamal* set. In the English examples in (22), the scope of the judgement is potential action: 'be receptive to future information in order to decide whether you (or we) should do X'. If the scope is propositional, however, i.e., knowledge rather than action, an instruction to be receptive to future information amounts to potential verification: 'be receptive to future information in order to decide if X is true'. In other words, if the model of structures like the ones in (22) is relevant, *ngamal* may have started its course toward epistemic meaning in *ngaani/ngamal* as a hedge, meaning something like '(let's) see if it's true'.

This type of analysis is tentative, of course, but it does account for some peculiarities of *ngamal* in *ngaani/ngamal* that are hard to deal with in alternative accounts, specifically: (i) the implausibility of the volitional sense of *ngama-* as a relevant source, (ii) the interpretation of the imperative with the non-volitional sense of *ngama-* and (iii) the specific meaning of potential verification associated with *ngaani/ngamal*. In addition, this analysis is also compatible with the few Australian cases for which extensions of visual perception into the domain of cognition have been observed: the data in Evans and Wilkins (2000: 575–576) suggest that if verbs of visual perception do develop meanings relating to the domain of cognition (e.g., meanings like 'recognize' or 'deduce'), the relevant source is usually the non-intentional sense rather than the intentional one.

3.3 Ignoratives and verbs of seeing combined

The two previous sections have presented hypotheses about how ignoratives and verbs of seeing could have developed epistemic meanings: ignoratives mark lack of knowledge about events while 'see' imperatives may have originated as instructions for verification. In this sense, the meaning of 'see' imperatives is semantically closest to the meaning of the *ngaani/ngamal* pattern as a whole, as also reflected in the fact that they are dominant overall. In this section, I present

a final hypothesis – more speculative than the other ones – about how *ngaani* and *ngamal* may have come to be combined. I suggest that *ngaani* may have originated as a reinforcer of *ngamal*, through a discourse pattern that favors initial indeterminacy. The resulting pattern is in line with Boye’s (2012: 257–274) typology of epistemic combinations, representing a “harmonic” combination of two distinct instantiations of the lower value of the epistemic scale (“neutral support”).

In order to substantiate this hypothesis, I start out from three relevant observations. One, just mentioned, is that *ngaani* is optional in the *ngaani/ngamal* pattern, with *ngamal* frequently occurring without *ngaani*. The second is that, when combined, *ngaani* varies between its typical position next to *ngamal* at the end of the clause and a rarer split pattern whereby *ngaani* is in initial and *ngamal* in final position, as shown in (23) and (24) (see also Section 2).

- (23) *Errpe-n=ilu-ungku* “*Omoro ingkuna ngaani ngama-l*”
 tell-PST=3SG.NOM-3SG.ACC father 2SG.GEN IGNOR see-IMP
 ‘He told him: “Perhaps it’s your father.”’

- (24) *Ngaani atha-ku=ayu ngama-l*
 IGNOR eat-POT=1SG.NOM see-IMP
 ‘Perhaps I’ll eat it.’

The third observation is that *ngaani* as a thing-ignorative is also found as part of a specific discourse pattern, whereby a referent is initially introduced by an ignorative and then further specified by the same speaker at the end of the same clause, as in (25) and (26), or in the following clause, as in (11). Examples like these are not just instances of word searches, unlike (12). In fact, this discourse pattern is in line with a marked preference for indeterminate expressions in many Aboriginal languages (e.g., Povinelli 1993; Blythe 2009; Garde 2013: 10–14), especially in contexts that require circumspection, like talking about supernatural beings or recently deceased people – both (25) and (26) describe the actions of supernatural beings.

- (25) *Ngaani maarra-n=ilu yaangkun*
 IGNOR bring-PST=3SG.NOM shell
 ‘He brought something, a type of shell.’

- (26) Ngaani *angampal* *yongki-n=ilu* *yawul*
 IGNOR IGNOR come-PST=3SG.NOM big
 ‘Something was coming like that, something big.’

Taken together, these three observations suggest a hypothesis about the relation between *ngaani* and *ngamal*. Given that *ngamal* is the primary epistemic marker, *ngaani* may have originated as a reinforcer, with the indeterminate-first discourse pattern providing a model for the use of the ignorative *ngaani* as a hedge preceding the description of the event. If *ngaani* can refer to both an entity and an event, as shown in Section 3.1, the indeterminate-first pattern *ngaani* X can apply not just to entities, i.e., ‘I don’t know what, X’ as in (25) and (26), but also to events, i.e., ‘I’m not sure but I say X’. In other words, an initial ignorative could serve as a general hedge for the proposition that follows (incidentally, this could also explain the rare cases where *ngaani* serves as an epistemic marker on its own, as in [5]). If that is the case, structures that are otherwise epistemically marked, like X *ngamal* ‘I say X, (let’s) see if it’s true’, could have been reinforced by an initial ignorative as a hedge. Thus, *ngaani* X *ngamal* could be glossed as ‘I’m not sure about this (initial hedge), but I say X (event), let’s see if it’s true (epistemic marker)’.

This is speculative, of course, but it is plausible in that it does account for some of the specifics of the relation between *ngaani* and *ngamal*: (i) the dominance of *ngamal* and the optionality of *ngaani* as described in Section 2, (ii) the more specifically epistemic meaning of *ngamal* and the more general meaning of *ngaani* as described in Sections 3.1 and 3.2 and (iii) the variation between split and joint final positions, with the split position possibly reflecting the origins of the structure. Interestingly, even *ngaani ngamal* in final position can (rarely) be accompanied by initial *ngaani*, which suggests that reinforcement could still be productive and work in a cyclical pattern.

- (27) Ngaani *kali-ku=ayuwa,* ngaani ngama-l
 IGNOR carry-POT=1SG.NOM IGNOR see-IMP
 ‘Perhaps I will take him.’

The broader regional survey in the next section provides a further argument in favor of the reinforcement hypothesis, in the sense that not all languages with ‘see’ imperatives combine these with ignoratives and one even combines them with another type of marker.

4 The pattern in its regional context

To round off this study, this section examines the pattern presented in (1) in its broader regional context, with a survey of epistemic particles in the languages of Cape York Peninsula. Similar patterns are found in four other languages in the region, which belong to three different subgroups of Paman but are linked geographically, socially and sociolinguistically in a small linguistic area centered around Princess Charlotte Bay, on the east coast of the peninsula. There is independent linguistic evidence for this areal grouping, which means that the epistemic pattern described here joins a number of other phenomena shared across the languages.

In order to place the pattern in its regional context, I examined all of the grammars, sketches, dictionaries and word lists of languages of Cape York Peninsula to which I have access. In total, I examined materials for 31 languages, 23 of which have epistemic particles with meanings that are broadly comparable to the pattern in (1). I also checked for potential sources for these particles, by further examining the word lists for related verbal or nominal roots and the grammars for related morphosyntactic elements. The majority of cases have no obvious source at all. There are a few particles with potential grammatical sources and, apart from the pattern in (1), there are no other lexical sources.

The grammatical sources found in the survey are mainly conditional and apprehensive markers. In Umpila, for instance, the conditional marker *achu* can mark epistemic possibility when suffixed by an epistemic clitic *-ki* (Thompson 1988: 48, 103). In Kuku Thaypan, there is an epistemic marker *ame*, illustrated in (28), which most likely derives from an apprehensive marker that is itself derived from the lexeme *ame* ‘person’.³ Conditionals and apprehensives are obvious grammatical sources for epistemic modality, because they already serve to mark potentiality for events – events in possible worlds in the case of conditionals, and

³ I could not find the apprehensive meaning in the (limited) materials I have access to for Kuku Thaypan, but it is attested in the closely related language Aghu Tharrnggala (e.g., Jolly 1989: 54; see also example [31]). Also, apprehensive and/or prohibitive markers derived from the lexeme ‘person’ are well-attested in the neighboring Lamalamic languages to the north of Kuku Thaypan.

potential but undesirable events in the case of apprehensives.⁴ The final step toward epistemic modality would then appear to be a transfer from potential events to potential verification, i.e., toward a strictly propositional scope.

(28) Kuku Thaypan (Pama-Nyungan, Paman, Alaya-Athima)

Ame *aca* *anhdhi-n* *anay*
 maybe mouth burn-NFUT 1SG.ACC
 ‘Maybe my mouth got burned.’
 (Rigsby n.d.)

Apart from the grammatical sources just mentioned, all of the lexical sources found in the survey follow the pattern observed in (1), i.e., an imperative of a ‘see’ verb, possibly accompanied by another element. In addition to Umpithamu, this pattern is found in Umbuygamu and Lamalama, two Lamalamic languages to the south of Umpithamu, and in Aghu Tharrnggala and Kuku Thaypan, two Alaya-Athima languages (see Alpher 2016) to the south and southwest of Lamalamic. The pattern in Umbuygamu is most similar to that in Umpithamu, consisting of a ‘see’ imperative with an optional thing-ignorative, as shown in (29) and (30). The available corpus is not large enough to be sure about positions but *magal* on its own appears to be mainly clause-final. The pattern in Lamalama only consists of a ‘see’ imperative in final position, as shown in (31), with no evidence for support from an ignorative. The same applies to Kuku Thaypan, for which *tang*, identical to *ta-ng* ‘see!’, is glossed as ‘perhaps’ (Rigsby 1976: 70). In Aghu Tharrnggala, finally, the same marker *tang* is found, again identical to *ta-ng* ‘see!’, optionally with the support of the apprehensive marker *me*, as shown in (32). The one constant element in all five languages is the ‘see’ imperative, which again confirms that this is the most basically epistemic element in the pattern and that other elements like ignoratives or apprehensives may have developed as reinforcers that are compatible with epistemic possibility but do not necessarily encode it (cf. Boye’s 2012: 258–260 harmonic combinations).

(29) Umbuygamu (Pama-Nyungan, Paman, Lamalamic)

Ani *maga-l* *pipim* *te-y=la*
 IGNOR see-IMP tomorrow come-POT=3SG.NOM
 ‘Maybe he will come tomorrow.’

⁴ In some cases, it is hard to distinguish between apprehensives and epistemic modality, especially if the only examples available are future-oriented, for which event potentiality and verification potentiality coincide.

(30) Umbuygamu

Udom maga-l
 salt see-IMP
 ‘Maybe it’s poisonous.’

(31) Lamalama (Pama-Nyungan, Paman, Lamalamic)

Lam 'awarr nua-y=ta makal
 hand three lie-POT=2SG.NOM perhaps
 ‘Will you stay three days perhaps?’

(32) Aghu Tharrnggala (Pama-Nyungan, Paman, Alaya-Athima)

Me ta-ng liə ta-ng tuə-gə ya ninh
 APP see-IMP now see-IMP hit-FUT 1SG.NOM 2SG.ACC
 ‘I might hit you.’
 (Jolly 1989: 104; partly re-glossed)

From a genetic perspective, the pattern described here is found across three distinct subgroups of Paman, viz., Middle Paman (Umpithamu), Lamalamic (Umbuygamu, Lamalama) and Alaya-Athima (Aghu Tharrnggala, Kuku Thaypan). This distribution is not random. First, the five languages are geographically contiguous, centered on Princess Charlotte Bay and its hinterland: Umpithamu is the only Middle Paman language that neighbors Lamalamic languages (to its south) and Aghu Tharrnggala and Kuku Thaypan are the only Alaya-Athima languages that neighbor Lamalamic (to their north and east). For Umpithamu and the Lamalamic languages, moreover, there is good evidence that the languages were linked through recurrent patterns of personal multilingualism, themselves mediated through patterns of intermarriage between Umpithamu-, Umbuygamu- and Lamalama-owning clans (for more details, see Rigsby 1997; Verstraete 2012; Verstraete and Rigsby 2015: 8–17). This strong social network has resulted in a small linguistic area, with a whole range of morphosyntactic features that are shared among the languages, usually transferred from Lamalamic to Umpithamu, which is structurally very different from other Middle Paman languages (see Verstraete 2011b, 2012 for some examples, including pronominal marking and impersonal constructions). We can now add the rare epistemic pattern in (1) to this set of features. It is unclear if there was a similarly strong social network linking Aghu Tharrnggala and Kuku Thaypan to Lamalamic clans, but there is again some evidence of patterns of multilingualism and intermarriage (Verstraete and Rigsby 2015: 62–63). In any case, the fact that the epistemic pattern is also shared with

these languages suggests that the linguistic area may have reached into neighboring Alaya-Athima languages. Moreover, it reinforces the idea that Lamalamic languages form the core of the area, from which features are spread to the other languages. In the case of the epistemic pattern described here, all of the Lamalamic languages show the pattern (except for Rimanggudinhma, the most poorly documented of the Lamalamic languages, for which no epistemic particle has been documented). Conversely, none of the Middle Paman languages other than Umpithamu shows the pattern. Nor do those Alaya-Athima languages for which I was able to check (Ikarranggal and Ogh Undjan; most of the other languages in this subgroup are very poorly documented). In other words, it is most likely that the pattern is an originally Lamalamic feature that spread to its Middle Paman and Alaya-Athima neighbors.

5 Conclusion

With this small study of an epistemic marker in a few languages of Cape York Peninsula, I hope to have contributed to our understanding of epistemic modality in a number of ways. First, the pattern studied here adds to the inventory of direct lexical sources of epistemic modality identified in the literature (Bybee, Perkins and Pagliuca 1994: 206; van der Auwera and Plungian 1998: 92; Boye and Harder 2007), with ignoratives and especially verbs of visual perception. Second, I have also proposed hypotheses about how these elements could be relevant to epistemic meaning, refining an earlier analysis by Mushin (1995) in the case of ignoratives and proposing a new path to epistemic meaning in the case of 'see' imperatives as instructions for verification. I have also presented a more speculative idea about how ignoratives may have originated as hedges reinforcing the more basically epistemic pattern of the 'see' imperative. Finally, the distribution of the pattern studied in this paper confirms the existence of an areal pattern in the Princess Charlotte Bay region, which may reach further than previously thought, also taking in languages from the Alaya-Athima subgroup.

Acknowledgement: I am pleased to offer this small study to Johan van der Auwera, who will recognize some of his own research interests in the topic. I am grateful to Florrie Bassani, Bobby Stewart and Daisy Stewart for teaching me about Umpithamu, Umbuygamu, and Lamalama and to Bruce Rigsby for providing access to his field recordings and for advice, friendship and mentorship over the years. I thank Eva Schultze-Berndt for an enlightening discussion of epis-

temic modality in Australian languages, Clair Hill for making me aware of discourse patterns involving vague expressions, and Valerio Cervoni and the reviewers and editors of this volume for very useful comments on an earlier version. The fieldwork on Umpithamu, Umbuygamu and Lamalama was funded by FWO-Vlaanderen, ELDP (MDP0133) and the University of Leuven Research Council (GOA 12/007).

References

- Alpher, Barry. 2016. Connecting Thaypanic. In Jean-Christophe Verstraete & Diane Hafner (eds.), *Land and language in Cape York Peninsula and the Gulf Country*, 39–59. Amsterdam: John Benjamins.
- Blythe, Joe. 2009. *Doing referring in Murriny Patha conversation*. Sydney: University of Sydney PhD dissertation.
- Boye, Kasper. 2012. *Epistemic meaning: A crosslinguistic and functional-cognitive study*. Berlin: De Gruyter.
- Boye, Kasper & Peter Harder. 2007. Complement-taking predicates: Usage and linguistic structure. *Studies in Language* 31 (3). 569–606.
- Bybee, Joan, Revere Perkins & William Pagliuca. 1994. *The evolution of grammar: Tense, aspect and modality in the languages of the world*. Chicago: University of Chicago Press.
- Crowley, Terry & Bruce Rigsby. 1979. Cape York Creole. In Tim Shopen (ed.), *Languages and their status*, 153–207. Cambridge, Mass: Winthrop.
- Dixon, Robert M.W. 2002. *Australian languages: Their nature and development*. Cambridge: Cambridge University Press.
- Durie, Mark. 1985. *A grammar of Acehnese on the basis of a dialect of North Aceh*. Dordrecht: Foris.
- Evans, Nick & David Wilkins. 2000. In the mind's ear: The semantic extensions of perception verbs in Australian languages. *Language* 76 (3). 546–592.
- Foley, William. 1986. *The Papuan languages of New Guinea*. Cambridge: Cambridge University Press.
- Garde, Murray. 2013. *Culture, interaction and person reference in an Australian language*. Amsterdam: John Benjamins.
- Goossens, Louis. 1982. On the development of the modals and of the epistemic functions in English. In Anders Ahlqvist (ed.), *Papers from the 5th International Conference on Historical Linguistics*, 74–84. Amsterdam: John Benjamins.
- Jary, Mark & Mikhail Kissine. 2016. When terminology matters: The imperative as a comparative concept. *Linguistics* 54 (1). 119–148.
- Jolly, Lesley. 1989. *Aghu Tharrnggala: A language of the Princess Charlotte Bay region of Cape York Peninsula*. Brisbane: University of Queensland BA Hons dissertation.
- Mauri, Caterina. 2008. The irreality of alternatives: Towards a typology of disjunction. *Studies in Language* 32 (1). 22–55.
- McGregor, William. 1990. *A functional grammar of Gooniyandi*. Amsterdam: John Benjamins.

- Mushin, Ilana. 1995. Epistememes in Australian languages. *Australian Journal of Linguistics* 15 (1). 1–31.
- Povinelli, Elizabeth. 1993. 'Might be something': The language of indeterminacy in Australian Aboriginal land use. *Man* 28 (4). 679–704.
- Rigsby, Bruce. 1997. Structural parallelism and convergence in the Princess Charlotte Bay languages. In Patrick McConvell & Nicholas Evans (eds.), *Archaeology and linguistics: Aboriginal Australia in global perspective*, 169–178. Melbourne: Oxford University Press.
- Rigsby, Bruce. n.d. *Kuku Thaypan / Awu Alaya*. Manuscript, University of Queensland.
- Schultze-Berndt, Eva & Denise Angelo. 2013. Kriol structure dataset. In Susanne Michaelis, Philippe Maurer, Martin Haspelmath & Magnus Huber (eds.), *Atlas of Pidgin and Creole language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. <http://apics-online.info/contributions/25> (accessed 27 February 2017).
- Sweetser, Eve. 1990. *From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure*. Cambridge: Cambridge University Press.
- Takahashi, Hidemitsu. 2012. *A cognitive linguistic analysis of the English imperative*. Amsterdam: John Benjamins.
- Thompson, David. 1988. *Lockhart River 'Sand Beach' language: An outline of Kuuku Ya'u and Umpila*. Darwin: Summer Institute of Linguistics.
- Traugott, Elizabeth C. 1989. On the rise of epistemic meanings in English: An example of subjectification in semantic change. *Language* 65 (1). 31–55.
- van der Auwera, Johan & Andreas Ammann. 2013. Overlap between situational and epistemic modal meaning. In Matthew Dryer & Martin Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. <http://wals.info/chapter/76> (accessed 2 March 2017).
- van der Auwera, Johan & Vladimir Plungian. 1998. Modality's semantic map. *Linguistic Typology* 2 (1). 79–124.
- Van Olmen, Daniël. 2010. The imperative of intentional visual perception as a pragmatic marker: A contrastive study of Dutch, English and Romance. *Languages in Contrast* 10 (2). 223–242.
- Verstraete, Jean-Christophe. 2011a. The functions of represented speech and thought in Umpithamu narratives. *Australian Journal of Linguistics* 31 (4). 491–517.
- Verstraete, Jean-Christophe. 2011b. Impersonal constructions in Umpithamu and the Lalmalam languages. In Andrej Malchukov & Anna Siewierska (eds.), *Impersonal constructions: A cross-linguistic perspective*, 607–625. Amsterdam: John Benjamins.
- Verstraete, Jean-Christophe. 2012. Contact-induced restructuring of pronominal morphosyntax in Umpithamu (Cape York Peninsula, Australia). *Diachronica* 29 (3). 326–358.
- Verstraete, Jean-Christophe & Bruce Rigsby. 2015. *A grammar and lexicon of Yintyingka*. Berlin: De Gruyter.
- Voinov, Vitaly. 2013. 'Seeing' is 'trying': The relation of visual perception to attemptive modality in the world's languages. *Language and Cognition* 5 (1). 61–80.