

Research Article

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Shared vs. Primary Epistemic Authority in Jaminjung/Ngaliwurru

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Abstract: This paper contributes to the typology of complex perspective markers by presenting an in-depth analysis of a system of epistemic authority marking which functionally overlaps with, but has no exact parallels in, similar systems attested cross-linguistically; it is also the first analysis of grammaticalised marking of epistemic authority in a language of Australia. Jaminjung/Ngaliwurru, a language of the Mirndi family, distinguishes between primary and shared epistemic authority by means of two non-obligatory clitics. By employing the first clitic, speakers claim privileged (asymmetrical) access to evidence informing their utterance; the holder of epistemic primacy shifts to addressees in questions. The second marker, which is transparently related to a 1st+2nd person minimal pronoun, indicates shared (symmetrical) epistemic access, but is further constrained in its distribution in that the evidence has to be accessible at the time of discourse and in that the encoded situation itself is not yet part of the common ground. In the light of the proposed analysis as well as cross-linguistic findings, it will be argued that epistemic authority markers more generally can be considered as part of a single functional domain with evidentials, and that this domain also includes egophoricity.

Keywords: evidentiality, epistemic authority, egophoricity, intersubjectivity, grammaticalisation

1 Introduction

This paper presents a detailed analysis of two clitics in Jaminjung and Ngaliwurru (Jam/Ngali henceforth), two named varieties of an Australian language of the Mirndi family, demonstrating that they encode a distinction between primary and shared epistemic authority. Neither marker is obligatory, and neither does Jam/Ngali have any other system of obligatory marking in the epistemic/evidential domain. However, both clitics clearly have a grammatical status in that they lack a lexical meaning; one of them, moreover, originates in a pronoun. The clitics are in complementary distribution in the same fixed position in a sequence of potential clitics (see Section 2.3). They thus form a rudimentary paradigm and contrast with unmarked clauses.

Introductory examples of the epistemic authority markers are provided in (1) and (2); the additions in brackets to the free translations are intended as an informal rendition of the pragmatic effect of the clitics. Example (1) is typical of the use of the first clitic, =*ngarndi*, in personal narratives where it signals the speaker's participation in the situation encoded by the utterance (in this case, the narrative was prompted by a set of photos depicting the building of a shed by members of the speaker's family). The addressee, on the other hand – in this case, myself – had had no such involvement. The gloss 'EGO' was chosen to reflect

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this epistemic primacy of the speaker (the discussion of whether this is in fact an instance of egophoricity will be postponed to Section 5.3). Epistemic primacy shifts to the addressee when the marker is used in questions (see Section 3.1).

- (1) *ngarrgina-ni=biya jayiny yirr gan-anthama*
 1SG:POSS-ERG=SEQ daughter's.child pull 3SG>3SG-bring.IPFV
trailer-mij warnda=ngarndi
 trailer-with grass=EGO
 'my granddaughter was pulling along grass with a trailer (I can tell you since I was there, while you were not)'
 [IP, ES97_A03_09.001]

Example (2), too, was elicited by means of a visual stimulus, but in this case the picture depicts a scene – of a boy lying on the ground (from the Frog Story picture book, Mayer 1969) – in which the speaker had no involvement and which was new and unfamiliar to her. As the further discussion in Section 4 will show, this example is typical of the use of *=mirndi* in that it comments on a situation that has just come to the speaker's attention, and in that the evidence for the situation (in this case, the picture) can be accessed by both speaker and addressee at the time of utterance. The marker is not used for established information shared by speaker and addressee, is restricted to 3rd person participants, and does not exhibit any shift in questions.

- (2) *digirrij=jung ga-rdba-ny=mindi *
 die=RESTR 3SG-fall-PST=EGO+TU
 '(The owl frightened the boy), and he fell down as if dead (or so it appears – you have access to the same evidence as me, so correct me if I am wrong)'
 [IP, ES97_A03_01.200]

The clitic *=mirndi* is transparently related to a 1st+2nd person minimal ('dual inclusive') pronoun ('you and me'); the gloss 'EGO+TU' is thus in fact a literal translation. This pronominal origin (see further Section 2.5) can be regarded as a remarkably transparent indication of the intersubjective nature of this marker.

Both markers are not obligatory in the sense that they have a relatively low discourse frequency (see Sections 3.4 and 4.3), and are not found in all contexts that meet the criterion of asymmetry or symmetry in epistemic status. Rather, as the discussion will show, they are employed in contexts where the speaker sees a reason to highlight the relative epistemic status of the interlocutors. In naturalistic discourse, speakers appear to employ the primary epistemic authority clitic *=ngarndi* to highlight the urgency or relevance of the information conveyed to the addressee in interaction, or to underline their knowledge of the events at crucial points in a narrative (see Sections 3.4 and 3.5). The shared epistemic authority marker *=mirndi*, on the other hand, appears to be employed in order to elicit a confirmation or correction of the speaker's interpretation of a newly arising situation, by conceding to their interlocutor equal access to the relevant information (see Sections 4.3 and 4.4).

As these introductory examples show, the notion of epistemic authority as employed in this paper is closely tied to perceived (a)symmetries between speech act participants in access to information. Research based on conversation analysis has stressed that in interaction, interlocutors tend to be aware of, and actively negotiate, their relative epistemic authority with respect to the information at issue, a point made very explicitly by Stivers et al. (2011: 13).¹

In social interaction people orient to asymmetries in their relative rights to know about some state of affairs (access) as well as their relative rights to tell, inform, assert or assess something, and asymmetries in the depth, specificity or completeness of their knowledge. This asymmetry can be termed epistemic primacy.

¹ It is impossible, in the space of this paper, to do justice to this strand of research; for recent overviews, see e.g. Stivers et al. (2011); Heritage (2012a).

As this definition also highlights, symmetry vs. asymmetry in epistemic status depends not only on an interlocutor's privileged access to the relevant evidence, but also on a socially sanctioned 'right to know', e.g. as a professional expert, or a close family member (see also Kamio 1997: 163; Raymond & Heritage 2006).

Kamio's notion of 'territory of information' (1994; 1995; 1997) encapsulates the notion of asymmetry, in that it is built on the metaphor of relevant information being relatively closer to the sphere(s) of the speaker, or hearer, or both (Kamio 1994: 82). Correspondingly it is characterised by Heritage (2012b: 5) as concerning 'the relative access to some domain of two (or more) persons at some point in time'.

Importantly for our purposes, the notion of "access to information" can be further refined. In many cases, the epistemic "origo" can be said to have privileged access to the actual information encoded in the clause featuring a marker of primary epistemic authority. This is the case in (1), for example: here the speaker, but not the addressee, was a witness to the event described by this utterance. This privilege of access is less clear in future statements or directives. If a situation has not yet occurred, neither of the interlocutors has a privilege based on their status as a witness or participant, but one of the interlocutors can assume the authority to predict a situation, or to issue a directive, on the basis of something that he/she already knows (and that the addressee, in the speaker's view, is less likely to know). This is the case, for example, in predictions based on the culture-specific stereotypical behaviour of animals or humans, when uttered to someone who does not fully share this cultural background (see the discussion in Section 3.3).

Such a distinction between the source of evidence and the encoded situation goes back to Jakobson (1971 [1957]) and has been adopted in the analysis of evidential systems, using a number of different terms, by Nikolaeva (1999), Speas (2010), Kalsang et al. (2013), and Gipper (2011); Gipper (2014), among others. Following Gipper (2011), I will employ the terms Source Situation and Target Situation for the source of evidence and the encoded situation, respectively, whenever this distinction is relevant, and will also distinguish these from the Discourse Situation (the context of the actual utterance). It is important to note that the Source Situation is not usually made explicit in discourse, and does not necessarily correspond to a single proposition.

The distinction will be particularly relevant to the analysis of the shared epistemic authority marker =*mirndi*, and can be further illustrated with reference to example (2). In this case, the Source Situation available to both the speaker and the addressee is the depiction of the boy lying on the ground, while the Target Situation ('the boy fell [in the past]') can only be inferred from the Source Situation. As will be argued in Section 4, =*mirndi* 'EGO+TU' entails that the epistemic "origo" is the speaker-addressee dyad, and that the Source Situation overlaps with the Discourse Situation, regardless of the tense specification of the clause hosting the clitic. In other words, for the clitic to be felicitous, both speaker and addressee have to be able to access the same evidence for the encoded situation at the time of utterance.

The domain of epistemic authority can thus be conceptualised as a continuum between the poles of asymmetry (primary epistemic authority resides with one of the interlocutors) and symmetry (epistemic authority is shared between the interlocutors). In addition, the epistemic authority holder (or epistemic origo) can be identified as the speaker or the addressee. As a further dimension, the relationship between the Source Situation (the evidence on access to which the epistemic status rests), the Target Situation and the Discourse Situation may prove relevant. This places epistemic authority markers in the vicinity of evidentials, an issue to be discussed in more detail in Section 5.2.

As Heritage (2012a) notes, the notion of epistemic authority can be fruitfully combined with the notion of common ground management: interlocutors with a claim to higher epistemic authority are in a position to offer information, while those assuming lower epistemic authority may request information; this initiates exchanges, which end in mutual acknowledgement of an update in the common ground. He thus compares asymmetries in epistemic status to an 'engine' that drives conversational sequences. Research in the conversation-analytic framework, based on a substantial pool of conversational data from well-described languages, has focused on the analysis of these exchanges and on the interplay of the many strategies interlocutors can use to indicate their assessment of their own and their conversational partners' epistemic status. These include 'relatively unobtrusive and off-the-record' ones (Heritage 2012a: 49), such as interjections, tags, and lexical evidential strategies (e.g. 'I heard', 'apparently'). Recent research – often without access to bodies of interactional data comparable to those used for research in the conversation-

analytic framework – is now gradually revealing the extent to which this domain receives specific grammaticalised expression in the languages of the world (see Section 5). This paper should be seen as a contribution to this latter research area, the grammaticalised encoding of multiple perspective (Evans 2005: 106) or complex epistemic perspective (Bergqvist 2017).

The remainder of the paper is structured as follows: Section 2 is an introduction to the language and the source of the data used for this study. The contextual distribution of each of the two markers and their interaction with person, tense/aspect, and modality, is investigated in detail in Sections 3 (= *ngarndi* ‘EGO’) and 4 (= *mirndi* ‘EGO+TU’) to support the analysis outlined above. Section 5 provides a discussion of the Jam/Ngali system, and its implications, in the light of cross-linguistic research on epistemic authority, evidentiality, egophoricity, and epistemic modality. It will be argued that the Jam/Ngali clitics indeed overlap functionally with grammatical markers in other languages which have been characterised as indicating (a)symmetrical access to information in those domains, but that they constitute a system of epistemic authority marking which has not previously been described. The analysis of the two clitics supports a close functional relationship between epistemic authority and evidential marking (in distinction to epistemic modality marking), and provides evidence for treating egophoric markers as a subtype within this larger domain, rather than as a separate phenomenon.

As well as being the first in-depth analysis of a system of grammaticalised epistemic authority marking in an Australian language, this paper therefore serves as a contribution to the emerging typology of markers of this type, which should ultimately result in a set of parameters accounting for the cross-linguistic range of their formal, semantic and pragmatic properties.

2 Background

2.1 The language and its speakers

Jaminjung and Ngaliwurru are two closely related and mutually intelligible named varieties, which together constitute the only language still in active use of the Western Mirndi branch of the discontinuous Mirndi language family (Chadwick 1997; Green & Nordlinger 2004; Harvey 2008). Traditional Ngaliwurru country is located south of the Victoria River between the present-day small settlements of Timber Creek and Victoria River Crossing (Northern Territory), and traditional Jaminjung country is located north of the Victoria River. Currently most speakers live in the townships of Timber Creek and surrounding outstations, and in two small towns located outside of their traditional country, Kununurra and Katherine. The language is no longer acquired by children; there are now probably fewer than 50 mostly elderly speakers, scattered across small communities in an area of at least 500 square kilometers. The language of daily interaction in the area is Kriol, an English-lexified creole language.

The differences between Jaminjung and Ngaliwurru are mostly lexical and only marginally grammatical; as far as the phenomena under discussion are concerned, the two varieties can be considered a single language. A number of shared grammatical characteristics of Jam/Ngali will be relevant for the discussion to follow. Unsurprisingly for an Australian language, constituent order is free in the sense that it is governed by information structure. Like other languages in a wider geographical area, Jam/Ngali has two ‘verbal’ parts of speech (Schultze-Berndt 2000; McGregor 2002; Schultze-Berndt 2003; Schultze-Berndt 2017). The first is a closed class of inflecting verbs (IVs or simply ‘verbs’ in the following), semantically generic lexical items which obligatorily inflect (by affixation and/or stem suppletion) for tense/aspect, modality, and person (e.g. *-anthama* ‘bring’ in (1)). The second is an open class of semantically specific items, variously termed uninflecting verbs (UVs), coverbs, preverbs or verbal particles in the literature. These cannot take any of the verbal inflections, and usually combine with IVs in complex predicates (e.g. *yirr* ‘pull’ in (1)).

Subcategorised arguments are optionally represented by case-marked noun phrases, and obligatorily cross-referenced by pronominal prefixes representing the single argument with intransitive verbs, and Actor and Undergoer/Recipient with transitive/ditransitive verbs. Crucially for our purposes, additional enclitic pronouns can cross-reference non-core arguments such as beneficiaries and maleficiaries (see

Section 2.5). The inflectionally marked tense/aspect system distinguishes present and past time reference, and within past tense only, perfective and imperfective aspect, the latter conveying habituality with non-stative predicates. Future time reference is accomplished by two inflectional modal markers which encode a basic distinction between potential modality (interacting with tense/aspect) and atemporal, hypothetical modality. The inflectional modals do not encode epistemic modality; the only general epistemic modal marker is a particle *majani* ‘maybe’ (see further Section 2.4).

2.2 Fieldwork and data

The current investigation is based on a corpus of audio-aligned fully annotated texts based on work with more than 20 speakers and compiled over a period of 20 years (14 field trips). The reference corpus (200 files amounting to ca. 14,800 annotation units and ca. 50,000 words) is a subset of the archived Jam/Ngali corpora (Schultze-Berndt et al. 2016). It consists of personal historical and everyday narratives, mythical narratives, elicitation by means of visual stimuli such as picture books, photos, and videos, and elicitation of a lexicographical or syntactic nature, using English/Kriol as a metalanguage.² While a number of short spontaneous conversations, as well as conversations within narratives and staged and fictitious conversations,³ are included, conversations are not prominently represented in the data, due to ethical considerations, the inability to recruit community members as co-researchers, and the fact that the language is rarely used as a medium of everyday interaction. The nature of the data therefore poses considerable limitations to the investigation of the conversational negotiation of access to knowledge, as undertaken in some recent cross-linguistic work on intersubjective evidentials and other markers of complex epistemic perspective (e.g. Gipper 2011, 2014; Hayano 2011; Hayano 2013). As it turns out, staged communicative events – in the sense of Himmelmann (1998) – actually provide valuable clues to the function of the two markers; in particular, responses elicited by means of visual stimuli unfamiliar to the speaker frequently triggered the shared authority marker =*mirndi* (see Section 4.3). Occasionally, quantitative information will be provided on the distribution of the two markers; while it supports the analysis of the clitics in terms of constraints on their occurrence and tendencies of usage, it is important to keep in mind that it reflects the distribution in the reference corpus which cannot be regarded as representative of naturalistic speech. Examples in the text are followed by speaker initials (unless these are provided within the examples, e.g. in a dialogue) and a unique reference code consisting of the file name and a line number which matches that in the archived corpora.

Attempts to control the contexts of use of the clitics in elicitation revealed limitations with regard to the reliability of speakers’ metalinguistic intuitions about the function of the clitics and to their acceptability judgments outside a fully naturalistic context. The core empirical evidence for the analysis presented here therefore comes from the corpus data. Some of the speakers’ comments on the functions of the clitics will, however, be considered in the discussion.

2.3 The formal status of the epistemic authority markers

Both of the markers under discussion here are unstressed clitics. In clauses with a verbal predicate they attach to the inflecting verb, with very few attested exceptions (of which (1) is one). In a non-verbal clause, they either follow the non-verbal predicate, as in (32), or a negative or modal particle, as in (58) and (55).

² The vast majority of these texts were recorded, transcribed and annotated by myself. A few of the texts were generously made available by Candide Simard and Mark Harvey; transcriptions and annotations in these cases were undertaken or checked by myself (the initials of the person responsible for the recording correspond to the first two letters of the file name). I am grateful for Dorothea Hoffmann’s assistance in the glossing of some texts; all were also checked by myself.

³ In notes on individual examples and elsewhere, I use *staged dialogue* for role-play involving multiple speakers, and *fictitious dialogue* for a conversation made up and enacted by a single speaker. Neither of these is equivalent to *staged communicative events*, a broader notion encompassing all speech events which happen at the instigation of the researcher (Himmelmann 1998).

As illustrated in (3) and (4), both clitics appear in the same position in the sequence of clitics permitted on inflecting verbs, following any enclitic pronouns (and also the collective and the contrastive clitic; see (58) for an example of the latter), but preceding the ‘sequential’ marker =*biyang* ‘and then’. Unlike =*biyang* (discussed in Ritz & Schultze-Berndt 2015), the evidential clitics are always found on the Comment part of an utterance, never on a Topic.

- (3) “*gud ba-wiyaj!*” *gan-unggu-m=nu=****mind****=biyang*
 get.up IMP-be 3SG>3SG-say/do-PRS=3SG.OBL=EGO+TU=SEQ
 “‘get up!’ she tells her now (by the looks of it)’ (The speaker is commenting on a silent video which shows two women – who are unfamiliar to the speaker – involved in various, not necessarily closely connected, activities. In the scene commented on here, one of the women gets up out of a chair.)
 [IP, ES96_A08_03.286]
- (4) “*diwu ganiny-bu-yu!*” *gan-unggu-m=nu=****ngarndi****=biyang *
 fly 3SG>2SG-POT-say/do 3SG>3SG-say/do-PRS=EGO=SEQ
 “‘it will throw you off!’ she (the mother) tells him (I vouch for it)’ (The speaker is commenting on a video of a young boy from the community riding a horse; the boy and his family are known to the speaker. The mother’s warning quoted here is not heard in the video and can only be inferred.)
 [IP, ES96_A06_01.295]

While the issue of truth-conditionality was not explicitly tested, an analysis of the clitics as non-truth-conditional is consistent with all data. In other words, any observed response to an utterance containing one of the clitics targets the proposition in the scope of the clitic, not the distribution of epistemic authority among the speech act participants. As the examples also show, the clitics are not part of the formal tense, aspect, and modality paradigm; as already indicated, they are not obligatory. They are the only grammatical markers in the epistemic domain to appear in this particular position; other relevant markers will be briefly discussed in the following subsection.

2.4 Other markers in the epistemic domain

A full discussion of Jam/Ngali strategies of indicating epistemic stance and distribution of knowledge between interlocutors is beyond the scope of this paper. A very brief overview is offered here as a background for the analysis of the two epistemic authority clitics.

Jam/Ngali does not have any grammaticalised evidential markers specifying the mode of access to a Source Situation. In particular, it does not have a grammaticalised reportative/hearsay marker of the type widely encountered cross-linguistically, and also reported for some Australian languages, e.g. Warlpiri (Laughren 1982: 137), Mparntwe Arrernte (Wilkins 1986), and Ngayambaa (Donaldson 1980: 276–278). The mode of access to evidence (e.g. eyewitness, report) can be specified lexically if required, in a similar way as described for another Australian language, Garrwa, by Mushin (2012a).

Epistemic modality is formally clearly distinct both from epistemic authority and from root modality (encoded by inflections). The main epistemic modal marker is the particle *majani* ‘maybe’, interpreted with variable modal force. The only other marker in this domain is a ‘dubitative clitic’ =*warra* (‘I don’t know wh...’, ‘wh...ever’; see examples (9) and (58)) which is mainly found on interrogatives. The combination of epistemic modality and the two epistemic authority clitics will be discussed in Sections 3.3, 4.2, and 5.4.

There are two further clitics, =*gun* ‘CONTRast’ (58) and =*ga* ‘as you should know’ whose functions are not fully understood at present but which appear in different positions in the clause from the epistemic authority clitics, and most likely serve as counterpresuppositional markers. According to Evans (2005: 107–108), such markers operate in a different subdomain from intersubjective epistemics within the overall domain of multiple perspectives. They will be left out of consideration here.

Linguistic tags have been discussed as linguistic means for negotiating the territory of information (e.g.

Heritage 2012b). For Jam/Ngali, the function of tags has not been examined exhaustively. Simard (2016), on the basis of their distribution as well as prosodic properties, proposes a functional distinction between two of the most frequent tags, *gurra* and *ngi*, as affirming the speaker's point of view and as seeking the interlocutor's response, respectively. The distribution of the two tags in combination with markers of epistemic authority is entirely in line with the proposed analysis of the clitics, although the dataset is too small to draw firm conclusions. Affirmative *gurra* is found with both =*ngarndi* 'EGO' (4 instances including (5) and (41)) and =*mirndi* 'EGO+TU' (2 instances), while confirmation-seeking *ngih* is only (once) attested with =*ngarndi* in a question (example (20)), and (once) with =*mirndi* in a declarative. Example (5) is from a fictitious dialogue in which one person accuses the other of stealing her drink; this utterance is part of the other person's denial. The clitic =*ngarndi* signals that the speaker, who is presented as having stayed in the same place as the contested drink, can state from a position of primary epistemic authority that the drink is, in fact, still in the glass. The pragmatic effect of the tag appears to be to induce the fictitious addressee – who is presented as voicing the accusation upon her return after a brief absence – to confirm this statement after checking for herself (see also the discussion of example (41)).

- (5) *thanthiya minyga=wung ga-yu yet*
 DEM what's.it.called=RESTR 3SG-be.PRS still
thamirri=wung ga-yu=ngardi gurra?!
 down/inside=RESTR 3SG-be.PRS=EGO TAG
 'that (drink) is still what's it called, is still inside (I vouch for it), isn't that right?!'
 [DBit, ES97_A08_01.030]

2.5 The pronominal origin of =*mirndi*

As already indicated, one of the clitics, the shared authority marker =*mirndi* 'EGO+TU' is transparently related to a 1st+2nd person pronoun.⁴ Formally, pronouns in Jam/Ngali form a minimal-augmented system with 1st+2nd person as a minimal form (i.e. patterning with the 'singular' forms), and a corresponding unit augmented pronoun (*yurrinyi* '1+2 and one other'). In actual practice, this unit-augmented form is rarely used and the system resembles a more familiar inclusive/exclusive system. For the sake of readability, *mirndi* as a pronoun will be simply glossed as '1+2', while the other pronouns will be glossed in the more conventional way as 'SG', 'DU' and 'PL' throughout this paper.

Like most Jam/Ngali pronouns, *mirndi* has a cognate possessive pronoun (not illustrated here) and a corresponding pronominal index prefixed to the verb, illustrated in (6).

- (6) *mirndi mundu-ruma-ny yina-ngunyi*
 1+2 1+2-come-PST there-ABL
 'you and me came from there (while she came the other way)'
 [ERa, ES08_A08_01.015]

Also formally related to the free pronouns are two series of enclitic pronouns. The first series, oblique pronouns (which all include a reflex of a dative/benefactive suffix *-(g)u ~ -g*), obligatorily index higher animates in the roles of beneficiary (7), addressee, topic of conversation, spatial goal, and sometimes possessor.

⁴ It is this pronoun that is the basis for the name of the Mirndi language family, since it is a unique trait of the otherwise highly divergent members of this family, as first noticed by Chadwick (1984).

- (7) *naliya ba-rri*ga=*mindag*
 tea IMP-cook=1+2.OBL
 ‘cook tea for you and me!’
 [IP, ES97_A03_06.306]

The enclitic pronouns from the second series – formally corresponding to the unmarked, absolutive free pronouns – form a defective paradigm in that they are attested for nonsingular forms only. They are much less frequent than their oblique counterparts and index humans and higher animates who are indirectly affected by an event but do not have one of the beneficiary-related roles mentioned above. Most of their attested uses are in malefactive contexts, as illustrated in (8) for the 3rd person plural form, but non-malefactive uses are attested as well (e.g. ‘I went away on the two’, with no negative effect apparent in the context).

- (8) *diwu gani-yu*=*burri*
 throw 3SG>3SG-say/do.PST=3PL
 ‘he threw it away **on them**’ (context: a policeman had destroyed a sling shot used by children)
 [IP, ES97_A01_01.064]

The 1+2 form of this absolutive enclitic pronoun, =*mirndi*, is identical to the ‘shared epistemic authority’ enclitic. As a consequence, there are some contexts which make it difficult to decide whether =*mirndi* is employed as a shared authority marker, or to index the speaker-hearer dyad as indirectly affected participants. An example is (9); the undergoer referent was the addressee’s daughter who was fishing near a crocodile-infested river, so the ‘negative affectedness’ reading is plausible.

- (9) *warrij-di*=*warra bulgub yan-arrga*=*mirndi*
 freshie-ERG=DUBIT sneak.up HYP:3SG>3SG-approach=1+2/EGO+TU
 ‘maybe a freshwater crocodile will sneak up on her’ (‘you and I would be negatively affected’, or ‘as you and I can surmise given shared evidence from background knowledge and extra-linguistic context’)
 [VP, ES99_V01_06_02.003]

The pronominal origin of the clitic =*mirndi* is recognised by speakers (see example (60) in Section 4.4). In elicitation, speakers also claim that the unit augmented, and augmented 1+2 pronominal clitics, =*yurrinyi* and =*yurri*, can be used on a par with =*mirndi*. Outside elicitation, these pronominal clitics are vanishingly rare compared with =*mirndi*, with only one attestation for *yurri* and three for *yurrinyi* in the reference corpus.⁵ The attested examples, of which (10) is one, are all compatible with an interpretation of indirect affectedness rather than shared epistemic authority.

- (10) *burdaj yatha ga-ram*=*yurrinyi gurra*!
 wind enough 3SG-come.PRS=1+2UA TAG
 ‘the wind is blowing (affecting us three), right?!’ (referring to wind noise on recording)
 [IP, ES08_A09_04.020]

Conversely, most uses of =*mirndi* are not accompanied by any hint of a potential adverse effect on the speaker/addressee dyad either in the verbal or nonverbal context; unless otherwise noted (see example (54)) this is true for the examples presented in Section 4. Moreover, =*mirndi* is attested when there is more than one potential addressee in the context, suggesting that it has grammaticalised as a shared epistemic authority marker neutralising the number distinctions of the various inclusive pronouns. In the discussion

⁵ Even including elicitation contexts, these two clitics are still rare – six attestations each, compared with 163 for =*mirndi*.

of shared epistemic authority marking in Section 4 we will therefore ignore the other pronominal forms and concentrate on =*mirndi*.⁶

The origin of the clitic =*ngarndi* is less clear, although it is tempting to link the form /*nga*/ to the first person bound pronominal prefix *nga*- (free pronoun: *ngayug*) which would mirror its function of signalling (in declaratives) the claim to primary epistemic authority by the speaker.

The grammaticalisation of a pronoun to an evidential (de Haan 2003; LaPolla 2003) or other epistemic marker is attested more widely; a recent overview with further references is provided by Bergqvist & Kittilä (2015), who propose the grammaticalisation path in (11).

(11) argument > argument/affected participant > (indirectly?) affected participant/attitude-holder > attitude-holder/epistemic marker > epistemic marker

All attested cases involve a speech act participant pronoun; the link between a speech act participant who is indirectly (possibly just psychologically) affected by an event and an attitude holder or knower is intuitively plausible. A full discussion of the likely grammaticalisation path of =*mirndi* from a pronoun to a marker of shared epistemic authority, including a closer investigation of potential bridging contexts, is beyond the scope of this paper. However, the pronominal origin is a clear formal reflection of its function of shared epistemic access, to be fully discussed in Section 4. It is therefore of particular relevance for generalisations about the grammaticalisation of intersubjectivity.

3 Primary epistemic authority: =*ngarndi* ‘EGO’

The first of the two clitics under discussion, =*ngarndi* (with variants =*ngardi*, =*rndi*, =*rdi*), glossed as ‘EGO’, indicates that one of the speech act participants claims epistemic authority over the proposition in question, in contrast to the second clitic, =*mirndi*, which indicates shared authority. In the terminology of Kamio (1994; Kamio 1995), =*ngarndi* indicates that the proposition falls into the speaker’s territory of information.

The clitic =*ngarndi* also meets the definition of egophoric marker in the broad sense of ‘markers as expressions of “primary knowerhood” that make a claim of intimate involvement with an event, but are not primarily concerned with indicating contrastive values of information source’ (San Roque et al. 2017: 138). In particular, it meets one of the primary diagnostics used for egophoric markers, which is that epistemic primacy is claimed by the speaker in declaratives but shifts to the addressee in questions. A full discussion of the relationship between primary epistemic authority and egophoricity, in the light of the findings from Jam/Ngali, will be offered in Section 5.3.

In the following subsections, we will first demonstrate that the use of =*ngarndi*, despite the identity of the epistemic origo with the speaker in declaratives, and with the addressee in questions, is largely independent of the grammatical category of person (Section 3.1). The applicability of the notion of epistemic authority to the Jam/Ngali data will be investigated in more depth in Section 3.2, showing that the marker is compatible with different types of relationships between Source Situation and Target Situation, and modes of access to the Source Situation, as long as the speaker has privileged access to the Source Situation. Further evidence for the analysis proposed comes from the compatibility of the marker with all inflectional tense/aspect and modal categories, including marking of epistemic modality (3.3). Finally, Section 3.4 considers the distribution of =*ngarndi* across genres. An interim summary is provided in Section 3.5.

⁶ Likewise, we will ignore in the subsequent discussion a rare use of the 2nd person singular oblique pronominal enclitic in a non-truthconditional function, as shown in (i). Only very few speakers used the 2nd person pronoun in this way and therefore, its precise function is unclear. The phenomenon may be the result of language contact with neighbouring Miriwoong/Gajirrabeng.

(i) *budok* *yirrinyji=ngunggu*
 footwalk 13PL-go.IPFV=2SG.OBL
 ‘(in my youth) we used to go on foot (?I tell you!)’ [IP, ES01_A07_03.293]

3.1 Distribution with respect to person in declaratives and interrogatives

As briefly indicated in Section 2, Jam/Ngali has a fully grammaticalised and obligatory person indexing system for the single argument of intransitive clauses (S) and the A and P arguments of transitive clauses; these indices are prefixes to the inflecting verb. In addition, pronominal enclitics can index beneficiaries and other indirectly affected (mostly animate) participants. Principally, therefore, epistemic authority marking and person marking in this language are independent of one another. This independence is further underlined by the observation that the two epistemic authority markers are relatively infrequent in discourse (see Sections 3.4 and 4.3 for further discussion).⁷ For example, out of over 2,300 utterances involving a first person in the reference corpus, only 88 (less than 4%) feature the EGO marker =*ngarndi*, as shown in Table 1. Table 1 further demonstrates that =*ngarndi* is amply attested with both 1st and 3rd person participants, and somewhat less frequently with 2nd person participants. Further illustration of these uses will be provided in the discussion below.

Table 1: Frequency of =*ngarndi* ‘EGO’ with different person categories (whenever encoded as S, A, or P)⁸

Person		Nr of tokens	Proportion of tokens of = <i>ngarndi</i>	Approximate proportion of clauses with this person category
1 st	ALL	88	34.4 %	3.8 %
	1sg/minimal	40	15.6 %	
	1+2	0	0 %	
	1+3	48	18.8 %	
2 nd	ALL	18	7 %	
	2 nd	10	3.9 %	1.6 %
	IMP	8	3.1 %	1.1 %
3 rd		150	58.6 %	2.8 %
TOTAL		256	100 %	

Not surprisingly given the preliminary account of its meaning as marker of primary epistemic authority, the clitic =*ngarndi* frequently does occur in statements about a first person’s current observations (24), past actions (12) or future intentions (13).

- (12) *yard=biyang nga-rra-ny=ngarndi, gurrangginy, ba-ngawu!*
 yard=SEQ 1SG>3SG-put-PST=EGO age.mate IMP-see
 ‘I put up a yard, friend, look!’ (during interactive game involving toy animals)
 [IP, ES96_A13_03.007]

- (13) *ngayug=ma ngaj=ngardi yagbali-ni!*
 1SG=CTOP 1SG-POT:be=EGO place-LOC
 ‘As for me I’ll stay in the camp!’ (from fictitious dialogue ascribed to toy figures)
 [JM, ES09_A01_01.175]

⁷ Here and elsewhere it should be kept in mind that this reference corpus is not representative of natural interactions; see Section 2.2.

⁸ Since preliminary observation showed that in clauses with 1st person involvement, the role of the speaker as actor, undergoer, or experiencer has no effect on the use of =*ngarndi*, all clauses involving a 1st and 2nd person as either S, A, or P (as indicated by indexation on the inflecting verb) were included under the 1st and 2nd person categories, respectively. Therefore, the 3rd person category only includes clauses with exclusively 3rd person core arguments. In order to calculate the percentage of =*ngarndi*-marked clauses per person category within the reference corpus, a global search for person prefixes on inflecting verbs of the relevant category was undertaken; again only exclusively 3rd person forms were included in the 3rd person category. Since in such a large-scale search there are possibilities of false hits and misses, the results in the rightmost column should be regarded as indicative only.

An argument in a clause hosting =*ngarndi* can be a first person exclusive non-singular pronoun, i.e. it can refer to a group of people of which the speaker is a member. An example is (14), from a procedural text presenting information about the cultural technique of making fire to an outsider (the linguist).

- (14) *warnda dud, larrman, ...*
 grass hold dry
andanith jarr yirr-arra-m=ngarndi thamurru-yun
 underneath put.down.one 1+3PL>3SG-put-PRS=EGO below-L_ABL
 ‘(we) pick up grass, dry (grass), (and) we put it underneath at the bottom’
 [IP, ES97_A01_04.018]

Examples (15) and (16) show that with 1st person arguments, the status of the speaker as undergoer and the lack of control and intentionality of the speaker over the action does not preclude the use of =*ngarndi*.⁹ This distinguishes primary epistemic authority marking in Jam/Ngali from some types of egophoric (“conjunct”) marking as described in the literature (see Section 5.3 for further discussion and references).

- (15) *Ya bun-garriga-na=ngarndi*
 yes 3PL>1SG-cook-IPFV=EGO
 ‘yes, they used to heal me with heat’
 [IP, ES97_A03_07.072]
- (16) “*barrngarrng nga-yu=ngarndi*”
 startle 1SG>3SG-say/do.PST=EGO
yu telim det peson maitbi fraitenim yu (Kriol)
 2SG tell:TR that person maybe frighten:TR 2SG
 “‘I startled (lit. ‘I did startle’)”, you tell (someone) that that person frightened you’
 [DP; ES03_A02_01.258-9]

An example involving only 3rd person participants is (17). It is from a longer segment of spontaneous discourse where the speaker informs the addressee (the researcher) of the habits of her pet bird; it is thus plausible for her to claim epistemic authority on this topic. Further illustration of 3rd person participants follows in Section 3.2 below.

- (17) *mangarra=gayi gani-mindi-ya=ngarndi*
 plant.food=also 3SG>3SG-eat-PRS=EGO
 ‘(the pet galah) also eats (cooked) vegetable food (I tell you!)’ (spontaneous)
 [NG, ES96_A09_04.586]

Table 1 also reveals a clear gap in the distribution of the epistemic primacy marker: first person inclusive (or rather, 1+2) core arguments do not co-occur with =*ngarndi*. This finding fully supports the analysis of =*ngarndi* as a marker of asymmetrical access to information. A claim of the speaker to higher epistemic authority in declaratives is compatible with direct involvement (in whatever capacity) of the speaker in the state of affairs, with a state of affairs being witnessed by them (but not the addressee) without their direct involvement, or otherwise falling into their territory of information, as will be shown in more detail in Section 3.2. However, a simultaneous involvement of speaker and addressee, as flagged by a 1+2 pronominal form, would make it difficult to conceive of either the speaker (in declaratives) or the addressee (in questions) as being assigned privileged, rather than shared, epistemic authority (although =*ngarndi* is

⁹ The use of the ‘say/do’ verb in (16) does not indicate control or volitionality, since this verb is used as the generic verb in a range of expressions of involuntary bodily reactions and physical and emotional conditions. See Schultze-Berndt (2000: 349–369) and Schultze-Berndt (2008) for details.

attested with 2nd person participants in declaratives; see the discussion of example (23)). As we will see in Section 4, under certain conditions such shared epistemic authority is actually explicitly marked by the second marker under discussion, =*mirndi*.

As Table 1 also shows, the epistemic primacy marker occurs with a second person argument much less frequently than with the other person categories. The combination is almost exclusively found in questions, marked by a distinctive steeply falling prosodic contour (Simard 2010; Simard 2013). These could be enquiries about past actions (18), present actions, perceptions (19), internal states, or intentions of the addressee (20). Here, the marker signals the speaker's expectation that the addressee will have primary epistemic access to the evidence (the Source Situation) which will enable their answer to the question. Such a shift of the epistemic/evidential origo to the addressee in questions is cross-linguistically attested for evidential markers and egophoric markers (see further Section 5.3).

- (18) “*nganth-arra-ny=ngardi=biyang guyug darlb?*”
 2SG>3SG-put-PST=EGO=SEQ fire light.fire
 “*yawayi, nga-rra-ny=biyang guyug darlb!*”
 yes 1SG>3SG-put-PST=SEQ fire light.fire
 “‘Did you already light a fire?’ – ‘yes, I lit a fire!’” (fictitious dialogue)
 [MM, ES15_A06_05.082-3]
- (19) ERa: *buru ga-ngga ... nganji-ngayi-m=ngardi?*
 return 3SG-go.PRS 2SG>3SG-see-PRS=EGO
 ‘she’s going back, do you see her?’
 JM: *mm! .. marndaj nga-ngayi-m yina walnginya*
 INTERJ all.right 3SG>3SG-see-PRS DIST walking
 ‘mhm! I see her all right over there walking around’ (staged online comments on a video showing a familiar person digging for yam)
 [ERa/JM, ES12_A04_01.074-7]
- (20) *mirdanguddawung na-w-ijga=rdi Darwin-bina ngih?*
 tomorrow 2SG-POT-go=EGO place.name-ALL TAG
 ‘tomorrow you will go to Darwin, right?’ (spontaneous)
 [JM, ES99_V05_05.151]

The clitic =*ngarndi* is also found in questions involving only third person participants. In the attested cases it is clear that the expected answer, likewise, falls into the territory of information of the addressee. In (21), the speaker asks me whether the recording equipment (generally under my control) is still running (and subsequently asks me to turn it off). Example (22) is from a staged dialogue concerning a real event, the burning of the addressee’s house in the previous year.

- (21) *gangga=wung=mindag=ardi?*
 3SG-go.PRS=RESTR=1+2.OBL=EGO
 ‘is it still running for you and me?’ (spontaneous)
 [JM, ES97_A04_01.218]
- (22) *yagbali=biji gan-angu=nggu=rdi?*
 place=only 3SG>3SG-get/handle.PST=2SG.OBL=EGO
 ‘did only your house catch (fire)’ (lit. ‘did it [the fire] only catch the place on you?’) (Response: ‘no, everything in it got burnt as well’)
 [ERa, ES12_A03_02.046]

Conversely, a second person actor or undergoer can occur in a declarative clause marked with =*ngarndi* if the speaker is in a position to claim epistemic authority over an event involving a second person as core participant. This is rare, but attested. Both the speaker and the addressees of (23) were participants in a bush trip also involving the researcher. The speaker has first-hand evidence for the proposition stated in the first line of (23) (she had been busy dealing with the fishing lines, but in close proximity to the others). The reason for explicitly flagging this situation as within her territory of knowledge is plausibly for pragmatic effect: her statement that the addressees have already eaten serves as a justification for her own suggestion for further action (in the third line). In another case (example (39)), the pragmatic effect of using =*ngarndi* with a second person participant is that of an accusation.

- (23) *olrait gurr-agba=ngarndi thawaya,*
 alright 2PL-be.PST=EGO eating
ngayug dumaji nga-jga-ny girrang wird-wird,
 1SG because 1SG-go-PST yet RDP-busy
jawaya=guji ngaj, yirngbi=biyang yirri-yu,
 eating=first 1SG-POT:be talking=SEQ 1+3PL-be.PRS
 ‘all right, you have already eaten, because I was busy going around; I will eat first, then let’s talk’
 (spontaneous, though prompted by a question about food distribution earlier on in the session)
 [MM, ES15_A03_01.003-6]

In sum, the investigation of the distribution of the ‘EGO’ marker with person categories reveals that it is commonly associated with first person in declaratives and with second person in questions. However, the association is not a strict one, and the marker is also frequently found in clauses involving exclusively third person participants. Ultimately the distribution of the clitic is governed by whether the speaker (or addressee, in questions) can claim epistemic authority over the proposition, which is often, but not necessarily, based on direct involvement, i.e. on participatory evidence – hence the principled independence from the person category.

3.2 Epistemic authority vs. mode of access to evidence

This subsection provides further evidence for the claim that =*ngarndi* is not an evidential in the sense of encoding a manner of access (visual, auditory) to the Source Situation, or a direct vs. indirect (inferential) relationship between Source and Target situation. Rather, the use of the clitic (in declaratives) signals the speaker’s claim to privileged access – of whatever kind – to the Source Situation, compared with the addressee.

Very frequently, and rather unsurprisingly, the speaker’s epistemic authority is indeed based on direct – not necessarily visual – evidence for the reported event, e.g. where the speaker is aware of an event at utterance time (24), or has personally witnessed a single occurrence (25) or habitual occurrence (26) of a past event.

- (24) “*wind ga-ram=ngarndi, gabardag burduj ba-jga:, gabardag!*
 wind 3SG-come.PRS=EGO quick go.up IMP-go quick
burdaj ga-ram=ngarndi gujugu! yani-ma!”
 wind 3SG-come.PRS=EGO big HYP:3SG>3SG-hit
 ““(There’s) wind coming! quick go up! quick! A big wind is coming! It might hit it!”” (direct speech within a personal narrative about building a bough shade, urging the speaker’s relatives to secure the roof of the structure)
 [IP, ES97_A03_10.125-27]

- (25) *barrajjung ganayarlmu=ni gani-wa=ngarndi*
 again/further flying.fox=ERG 3SG>3SG-bite.PST=EGO
yina ngarrgina jayiny
 DIST 1SG:POSS daughter's.child
 'also / another time a flying fox bit my granddaughter over there' (from a narrative; speaker but not addressee [= researcher] had been present on the occasion)
 [IP, ES97_A03_02.126]

Note that in (26), the clitic occurs in an utterance describing an internal condition – the preferences and tastes – of a third person participant. However, the immediate context makes it clear that there was observable evidence for the women liking a particular kind of tobacco: their preparing and consuming it.

- (26) *olga-olgaman-ni laikim burra-mila=ngardi*
 RDP-old.women-ERG like:TR 3PL>3SG-get/handle.IPFV=EGO
 ... (brief intervening conversation)
gardaj=biya burr-arra-nyi=ngardi, ...
 grind=SEQ 3PL>3SG-put-IPFV=EGO
 'the old women used to like it ("olden-days" tobacco), (...), they used to grind it, ...'
 [IP, ES08_A05_01.172-3]

However, the clitic is also used in contexts where the speaker does not have direct evidence. In order to test the distribution of the clitic, I asked a group of speakers whether someone could use the marker with the utterance 'the child fell' when they did not see the child fall. In the ensuing discussion speakers stated explicitly and repeatedly that the fictitious speaker did not see the event; yet they used the clitic in fictitious dialogue reporting the event, as in (27). Interestingly, the spontaneous translation ('my child') and further discussion reveals that they construed the child to be the fictitious speaker's own child or grandchild (the noun phrase *jarlig* 'child' in the utterance is not marked for definiteness or possession, and the relationship of the child to the fictitious speaker was not stated in my scenario).

- (27) "*ga-rdba-ny=ngardi jarlig!*", you say *my* kid bin fall down
 3SG-fall-PST=EGO child
 "'the/a child has fallen down! (and I claim the authority to talk about it)", you say my child has fallen down'
 [Jos], ES15_A09_02.037]

It thus appears that using *=ngarndi*, the speaker can assume epistemic authority over an event concerning a close family member even if they did not witness it, since this falls within their sphere of knowledge. In other words, the Source Situation in such cases can be a report by a third party. Such an extension of direct evidentials, epistemic authority or egophoric marking to a state of affairs involving someone or something within the direct personal sphere of the speaker is widely reported cross-linguistically (see Section 5.3 for further discussion).

Epistemic authority concerning one's close relatives is not necessarily to be taken for granted, however. Example (28) comes from an account of a survey plane trip to Jaminjung traditional country (which Jaminjung people have rarely been able to visit for some decades). The speaker – a Jaminjung elder – recounts pointing out the significance of various sites to younger or less knowledgeable relatives (note that the kinship term *mugurla* 'aunt' can be used in a classificatory sense, i.e. the addressee may well be of a younger generation than the speaker). Earlier in this narrative, she frames herself as the respected knowledgeable person by stating explicitly that it was her who named the sites as they were going along, and by prefacing the entire account with a question from a relative "do you know?" (answered in the affirmative). Quoting her own utterance in (28), about the grave of the grandmother of the addressee, she uses *=ngarndi*, which further contributes to this impression. (The context does not make clear what her own evidence is, i.e. whether she witnessed the funeral or was told about the grave site; I did not enquire about this at the time).

- (28) *mugurla, ngajang ngunggina*
 father's.sister father's.mother 2SG:POSS
*ngiya mirrbba ga-yu=ngarndi \ gribyard *
 PROX buried 3SG-be.PRS=EGO graveyard
 'auntie – your father's mother, she is buried here, (in the) graveyard'
 [PW, ES01_A01_01.073]

Another spontaneous use of =*ngarndi* is illustrated in (29). The speaker comments on the late arrival of the addressee (the researcher) from another town due to a restriction on the travel of women during a men's ceremony. This restriction was propagated by word of mouth and not accompanied by any physical road blocks. Moreover, the (female) speaker had stayed in the destination of the addressee's travel all along and therefore was not affected by the road block. The basis for the speaker's epistemic authority in this case is plausibly the combination of verbal reports about the travel of men involved in restricted ceremonial business in a certain area (which were also available to the addressee), and the cultural knowledge about the appropriate behaviour of women during men's ceremony; it is the latter which is firmly in the speaker's but not the addressee's territory of knowledge.

- (29) *na-wu-ruma ngiya .. ani gara *
 2SG-POT-come.IPFV PROX only/but no
*gumard=biya ga-gba=ngarndi ... jubard .. thawug *
 road=SEQ 3SG-be.PST=EGO closed short.time
 'you were going to come here, but no (you couldn't), the road was ... closed, temporarily'
 [JM, ES12_A01_02.007-9]

The analysis of =*ngarndi* as being underspecified with regard to the relationship between Source and Target Situation and the mode of access to the Source Situation is further supported by its use with future-oriented modals. An example is (30), which predicts the actions of freshwater crocodiles in the upcoming season. In this case the Source Situation is the well-established set of observations regarding the behaviour of a species (which is, however, outside the sphere of knowledge of the addressee, who is the outsider researcher). The Target Situation is an instantiation of this generic pattern (compare this example with (53) below).

- (30) *burduj=biya gani-w-any=ngarndi,*
 go.up=SEQ 3SG>3SG-POT-bring=EGO
*gamu-wu-garra=biya yinjungiya \ yayilin-gi *
 3SG>3SG-POT-excrete=SEQ PROX sand-LOC
 'it will bring them (eggs) up (from the water), and it will lay them around here then, in the sandground'
 [ERa, ES15_A06_02.002-3]

The interaction of =*ngarndi* with modality and also tense will be further discussed in the following subsection 3.3.

3.3 Distribution with respect to tense, aspect and modality

This subsection presents an overview of the distribution of the primary epistemic authority marker with tense, aspect and (non-epistemic as well as epistemic) modality. In brief, there is no restriction on the co-occurrence of =*ngarndi* with any of the tense/aspect and modality categories.

Since one typical use of =*ngarndi* is in descriptions of past events that are either personally witnessed or fall into the personal sphere of the speaker, the clitic regularly co-occurs with both past perfective (see e.g. examples (12), (16), (25), (27)) and past imperfective tense/aspect marking (examples (31), (15),

(26)). Since the imperfective with dynamic predicates usually conveys habituality, the speaker claims epistemic authority over the habituality of the occurrence, not just a single occurrence, as in (31).

- (31) *nenigot=biyang yirrurra-wardagarra-nyi=ngardi garrb*
 goat=SEQ 1+3PL>3PL-follow-IPFV=EGO gather
 ‘we used to follow goats around, and gather (them)’ (from the beginning of a personal narrative about the speaker’s work on cattle stations in her youth)
 [IP, ES08_A04_03.003]

In combination with present tense marking, or nonverbal clauses with present time reference, =*ngarndi* indicates that the speaker claims epistemic authority over a state of affairs overlapping with utterance time. This could be a state of affairs observed at utterance time, as in (24), or a state (overlapping with utterance time) of which the speaker but not the addressee has knowledge, as in (28) and in (32).

- (32) “*gurrurrij marring=ngarndi, .. nawurlu!*”
 car bad=EGO woman’s.daughter
 ‘the car is no good, daughter!’ (the car belongs to the speaker; the addressee is a classificatory daughter, not a close relative of the speaker)
 [IP, ES08_A04_04.016]

Since no aspectual distinctions are made in present tense, present tense marking can also convey a habitual state of affairs. As with past imperfectives in habitual interpretation, the clitic then scopes over the multiple instantiations of the state of affairs; examples are (14) and (17). Notably, and in line with the analysis proposed for the two markers, present tense declaratives tend not to occur with =*ngarndi* if they describe a newly arising situation that is equally observable by speaker and addressee, since this is the main domain of use for the second clitic, =*mirndi* (Section 4). However, even in a constellation of the kind just outlined the speaker can frame herself as the primary authority, as for example in (24), where she is warning the addressees of a strong wind arising. Here the speaker – who also has a higher social status in that she is addressing her children and grandchildren – leaves no doubt about her claim to the appropriate interpretation of the situation, including the action to be taken as a consequence.

The clitic =*ngarndi* is also compatible with future orientation. In Jam/Ngali, future time reference is exclusively encoded by one of two inflectional modals. The first modal, glossed as ‘potential’, covers predictions based on circumstances at the time of speech as well as intentions, wishes and obligations. The second, hypothetical modal is employed to make predictions – in particular, predictions of undesirable outcomes – based on stereotypical properties and behaviours of the participants involved. It is also obligatory in all future-oriented negative clauses (Schultze-Berndt & Caudal 2016; Schultze-Berndt & Caudal in prep).

Clauses in potential modality featuring the primary epistemic authority marker fall into two types. They either concern the speaker’s own intentions (13) (or the addressee’s in questions; see (20)), or they involve background knowledge to which the speaker has privileged access compared to the addressee. For example, in (33), the relevant background knowledge is that a certain yam part indicates the presence of a larger edible root, and that this edible root is customarily dug up to eat (see also (47) and the surrounding discussion in Section 4.1).

- (33) *janju na, gani-w-ijja=ngarndi bulgarding-guluwa-ni,*
 DEM now 3SG>3SG-POT-poke=EGO father-KIN2-ERG
*binka-ngunyi *
 river-ABL
 ‘that one, your father will dig it up, from the river (bed)’ (from yam digging video; addressed to researcher; only the top part of the yam root has been uncovered at utterance time)
 [JM, ES01_V01_03.012]

In the case of predictive statements, the distinction between Source Situation and Target Situation serves to make more precise what is meant by epistemic authority, a point also made regarding the use of direct evidentials with future tense in Tibetan by Kalsang et al. (2013: 546–547): epistemic asymmetry applies to the Source Situation – the body of existing background knowledge – rather than the prediction as such.

Some occurrences of *=ngarndi* with the hypothetical modal, such as (34), similarly involve environmental or cultural background knowledge as the Source Situation. The hypothetical modal can be considered as encoding a generalisation over observed instances of a particular state of affairs. In this case, based on her own past experience and/or what she has been told, the speaker can make the generalisation that whenever one puts too much grass around a fire, it is possible that it catches fire. Since the addressee of this particular procedural discourse was the outsider researcher, access to the background knowledge can be framed as asymmetric.

- (34) *warnda=ma lubayi yanth-arra,*
 grass=SUBORD many/much HYP:2SG>3SG-put
thanthiya=mang .. wuthub yan-angu=ngarndi
 DEM=CTOP catch.fire HYP:3SG>3SG-get/handle=EGO
 ‘when you put a lot of grass (around a fire), that one ... might catch fire’ (procedural text about the traditional way of making fire, to prevent a bush fire)
 [EH, ES03_A01_04.069-70]

The combination of the potential modal with the past imperfective tense suffix is used to express past impossibility (35) and past counterfactuality;¹⁰ both are compatible with *=ngarndi*. The Source Situation for (35) is plausibly the totality of the actions of all members of the speaker’s party to which the speaker, by using *=ngarndi*, claims to have had access (therefore being able to state with authority that none of these actions included taking the interlocutor’s drink).

- (35) *a: gurrany nanggarni burlug gani-w-ina=ngarndi*
 ah! NEG who:ERG drink 3SG>3SG-POT-eat.IPFV=EGO
 ‘ah, nobody could have drunk it (I vouch for it)’ (from fictitious dialogue, countering an accusation that someone out of a group of people finished the interlocutor’s drink)
 [DBit, ES97_A08_01.029]

Interestingly, the epistemic primacy marker is also used in combination with the Imperative inflection, in utterances with directive illocutionary force, albeit infrequently (8 tokens in the reference corpus, 4 of which are found in the context of the elicitation session from which (36) is taken). This use is somewhat puzzling, since one would not necessarily expect that the distribution of knowledge and of rights to knowledge plays a role in directives: the directive itself presumably signals that the speaker sees herself as possessing the authority for uttering it. In fact Heritage (2012b: 24) explicitly claims that epistemic status is irrelevant in ‘imperatively framed utterances.’¹¹

One potential analysis of this phenomenon is in terms of an origo shift to the addressee, in other words, just like in questions, the speaker assigns the addressee primary authority over the implementation of the directive. The second analysis, which allows for a consistent analysis of directives and declaratives in terms

¹⁰ This analysis assumes a compositional semantic interpretation of the potential and past imperfective combination as ‘possibility in the past’, with the counterfactual reading arising from an implicature of non-realisation, along the lines of Verstraete and Van linden (2008). See Schultze-Berndt and Caudal (2016) for details.

¹¹ According to Aikhenvald’s survey of evidentials, non-reportative evidentials are rarely found in directives (Aikhenvald 2004: 250–253). However, the Warlpiri marker *karinganta*, which has many properties of an epistemic authority marker, is attested with imperatives, and according to Laughren (1982: 146) conveys that ‘the speaker asserts himself to be the author of the command related to himself’. A parallel to Jam/Ngali *=ngarndi* is also found in Kogi (Bergqvist 2016: 21–22), where a speaker-perspective, asymmetric epistemic authority marker in (formally declarative) directives can signal an ‘authoritative stance by the speaker’.

of access to information, does not involve origo shift. The distinction between Source and Target Situation is again helpful here: in the case of directives, the epistemic authority resides in privileged access by the speaker to the body of evidence that motivates the directive. In other words, using =*ngarndi*, the speaker signals to the addressee ‘I know best what you ought to do’. In (36), this supporting evidence is made overt: it is the Source Situation of the speaker feeling dizzy – information to which the addressee has no access – that provides the motivation (an excuse, as it were) for the directive. This example was offered in an elicitation session when I tried to probe for the acceptability of =*ngarndi* with the directive ‘light a fire’. Speakers were hesitant about accepting it at first, until one of them offered the context in (36) for this utterance.

- (36) *ba-rra=ngarndi girrang guyug dalb nami=biyang!*
 IMP-put=EGO yet fire light.fire 2SG=SEQ
xxx¹² gurunyunng wirriny nga-ngga
 head turn 1SG-go.PRS
 ‘you light this fire, you! ... I’m feeling dizzy’ (lit. ‘my head is spinning’)
 [MM, ES15_A06_05.076]

Example (37) is from a staged dialogue consisting of questions and answers about a video showing a familiar person digging for yam. Since the interlocutors are watching the video jointly, the shared epistemic authority marker =*mirndi* rather than the primary epistemic authority marker is appropriate in the question in the first line of (37). Yet, the following directive ‘look!’ is followed by the primary epistemic authority marker. In this case, it is not clear whether the use of =*ngarndi* is likewise motivated by asymmetric access to information motivating the directive in the view of the speaker, and due to the scarcity of examples the question cannot be resolved with certainty. The relationship between directives and epistemic authority marking, both in Jam/Ngali and cross-linguistically, is clearly an issue for further research.

- (37) JM: *jarlig=gayi bardawurru ganurra-maya=mirndi?*
 child=also many 3SG>3PL-have-PRS=EGO+TU
ngarla ba-ngawu=rdi Nalyirri!
 TRY IMP-see=EGO <subsection.name>
 ‘Does she have her many children there too? You try look, Nalyirri!’

ERa: *gurrany ya-ngurru-ngawu*
 NEG HYP-1SG>3PL-see
 ‘I can’t see them’
 [JM, ERa, ES12_A04_01.139-41]

To conclude this subsection, the effect of combining the marker of primary epistemic authority with an epistemic possibility modal will be given some attention, especially since the status of the categories of epistemic authority and evidentiality with respect to epistemic modality is a matter of debate in the literature. As indicated in Section 2.4, the only purely epistemic marker in Jam/Ngali is a particle *majani* ‘maybe’; there is no distinction in modal force (i.e. between possibility and necessity). At first blush, one would not expect a marker of primary epistemic authority and a marker of epistemic possibility, expressing less than full certainty, to be combined in the same utterance. However, such co-occurrences are attested, albeit infrequently (7 out of the 256 instances of =*ngarndi* in the reference corpus). This low frequency suggests that the combination is more constrained than would be predicted by an analysis where the epistemic authority marker simply scopes over the epistemic possibility marker (i.e. the speaker feels that they can assert with some authority that a situation may be the case). Moreover, such a scope relationship would be implausible if the ‘EGO’ marker in all cases indicated primary epistemic access to the reported situation itself (since in this case the speaker would presumably be certain of its truth). Again, the separation of Source

¹² Some unintelligible words.

Situation and Target Situation proves fruitful. For example, a speaker can discuss her own future plans using the epistemic authority marker, since she can vouch for her own intentions (the Source Situation), but can simultaneously present the actual occurrence of the Situation (Target Situation) as less than certain. In the case of (38), from a discussion on the topic of the speaker's planned eye operation, the realisation also depends on the doctor's opinion, available hospital places, etc.

- (38) *majani* . *nga-w-ijga=ngardi* . *gugu janyungbari=mindij* \
 maybe 1SG-POT-go=EGO water another=TIME
 'maybe I will go next year' (for an eye operation)
 [JM, CS15_A014_22.022]

An example of a combination of both markers in an utterance with past time reference is (39). The pragmatic effect of the use of *=ngardi* with a 2nd person subject (see also (23) above) is that of an accusation: the speaker in this fictitious scenario claims that her interlocutors have finished her drink. The Source Situation is (plausibly) the speaker's discovery that her drink has disappeared. Yet the accusation is hedged by an overt indication, by means of the epistemic modal, that the speaker does not have full knowledge of what actually happened; since she has been away from the scene, she cannot actually know whether or not one of the addressees drank it.

- (39) *mardi-* *burrb* *majani* *gurru-minda-ny=ngardi*,
 maybe finish maybe 2PL>3SG-eat-PST=EGO
mardi *yubala* *bin* *pinishimap* *bla mi* \
 maybe 2PL AUX.PST finish:TR:up for 1SG
 'maybe you lot ate/drank it all up, maybe you finished it on me!' (fictitious dialogue)
 [DBit, ES97_A08_01.025]

In the same text [ES97_A08_01.016], a person accused of stealing food also combines epistemic authority marking and epistemic downtoning when emphatically stating that 'someone else stole it' – the speaker can vouch for not having stolen it (*=ngardi*) but does not claim to know what actually happened and who took it (*majani*). The implications of this analysis of the interaction of epistemic authority and epistemic modality marking will be discussed in Section 5.4.

3.4 Genre and frequency

As has been pointed out above, the two Jam/Ngali markers of epistemic authority are not obligatory, and in fact are relatively infrequent in discourse. The reference corpus described in Section 2.2 includes 256 tokens of *=ngarndi* (amounting to ca. 5 per 1000 words), and *=ngarndi* is absent from the majority of files (attested in 82 out of 200 files in the reference corpus). This still gives it a broader distribution than that of its 'shared epistemic authority' counterpart *=mirndi* (see Section 4.3).

Table 2 provides an overview of the distribution of *=ngarndi* 'EGO' across genres. The information presented here is limited in the sense that information on the overall proportion of genres in the corpus could not be provided (this is because a single file can combine multiple genres such as narrative, procedural and conversational sections). It also needs to be stressed again that the reference corpus is not representative of naturalistic speech (see Section 2.2), and that it is not balanced for genres. Still, in terms of the tendencies observed, the distribution does support the analysis of *=ngarndi* as a marker of primary epistemic authority of the origo (usually the speaker) with respect to their access to the evidence for the reported event. By far the largest number (over 40%) of attestations are in conversational data in a broad sense, i.e. including direct speech within narratives, staged and fictitious conversations, observed interactions, as well as spontaneous interactions with the outsider researcher (myself). The clitic is also relatively frequent in descriptions of visual stimuli (but see the discussion in Section 4.3) and in procedural texts (in the corpus

data of this type, the addressee is the researcher, thus clearly someone with less authority than the speaker on any cultural knowledge).

Table 2: Distribution of =ngarndi 'EGO' across different genres in the reference corpus

	n	%
Mythological narrative	2	0.8
Personal narrative	29	11.3
Procedural or other cultural knowledge (addressee = researcher)	50	19.5
Conversation	106	41.4
Response to visual stimulus	60	23.4
Other elicitation	9	3.5
TOTAL	256	100

The clitic is attested, but not particularly frequent, in personal narratives. It is virtually absent from mythological narratives ('Dreamtime stories'), except for reported conversations between protagonists within those narratives (which were counted as conversational data). The two exceptions to this generalisation attested in the corpus (of which (40) is one) are not fully embedded in the narrative, but rather direct confirmations of the validity of the narrative addressed to an outsider researcher, so they too would perhaps be more appropriately classified as conversational.¹³ The occurrence of =ngarndi in (40) may be partly explained by the question posed by the outsider; note also that the speaker explicitly cites the evidence for the movements of the mythological Whirlwind, in the form of the tree that today remains in the landscape.

(40) MH: *and gamuyu?*

DM: *gamuyu... gamuyu ga-ruma-ny=ngarndi,*
 whirlwind whirlwind 3SG-come-PST=EGO
 (...)
*ga-ruma-ny gamuyu yina ga-yu *
 3SG-come-PST whirlwind DIST 3SG-be.PRS
*b.=biyang jard ga-rra-ja *
 tree.species=SEQ upright 3SG-put-REFL.PST
 'the Whirlwind came (from there the Whirlwind came too, it went past all the way), the Whirlwind came and is (now) over there, it turned itself into a *b.* tree'
 [DM, MH96_A19_02.258-263; recorded by Mark Harvey]

A similar point can be made about personal narratives. For example, (41) is the only utterance with =ngarndi in a lengthy narrative (627 annotation units) about an overnight bush trip by boat which includes the speaker and the co-narrator as protagonists but is addressed to the researcher (as indicated by the first person exclusive pronominal form). The cline in epistemic authority indicated by =ngarndi is thus presumably calculated by the speaker with respect to the addressee, but the tag is inserted to seek – successfully, in this case – confirmation from the co-narrator. Both introduce an interactional element into the narrative and

¹³ The second attestation of =ngarndi in a similar context is in MH96_A19_01.007 in the reference corpus.

could be a means of highlighting a particularly important episode of the narrative, which is the start of the actual journey by boat, following an account of the drive to the coast. In another personal narrative about the speaker's life and work on cattle stations in her youth, =*ngarndi* occurs only once, in the beginning of the narrative (example (31)).

- (41) IP: *dij* *yirra-gba*, *pek-im-ap*
 stay.overnight 1+3PL-be.PST pack-TR-up
 yirri-yu=biya \
 1+3PL>3SG-say/do.PST=SEQ
 bot *yirr-uga=ngarndi* *thawu* *gurra?*
 boat 1+3PL>3SG-take.PST=EGO immersed TAG
 'we stayed overnight, then packed up and took the boat to the water, right?'

EH: *yawayi*
 yes
 'Yes.'
 [ES08_A04_05.067-9]

In sum, the distribution of =*ngarndi* across genres is consistent with its analysis as a marker of primary epistemic authority, which is however not obligatory; rather, it appears to have an interactional component and to be used for specific pragmatic effect, highlighting utterances of particular relevance for the addressee, in the judgment of the speaker.

3.5 Summary: =*ngarndi* as a marker of primary epistemic authority

All evidence so far supports the proposed analysis of the clitic =*ngarndi* as an optional marker of primary epistemic authority of an epistemic origo – the speaker in declaratives, the addressee in questions – over the proposition encoded by the utterance (the Target Situation), grounded in the privileged access to a Source Situation which serves as the evidence. This separation of Source and Target Situation allows one to account for the use of the clitic in combination with the epistemic possibility marker *majani* (indicating less than full commitment to the actual occurrence of the Target Situation), with future-oriented modal markers, and with imperative marking (see Section 3.3). Here, the speaker cannot claim authority over the Target Situation as such, but only over the evidence that allows him or her to state the possibility of the Target Situation (epistemic possibility), to predict the Target Situation (future), or that provides the motivation for a directive. As shown in Section 3.2, the clitic does not give any indication of the nature of the evidence, or of the epistemic origo's manner of access to it (e.g. eyewitness, or hearsay). The proposed analysis is also in line with the co-occurrence of =*ngarndi* with all persons as core arguments except for the 'inclusive' 1+2 person pronouns (Section 3.1). An in-depth analysis of its use and conversational effects in discourse is beyond the scope of this paper, and quite possibly beyond the scope of what can be achieved based on available data (see Section 2.2). Still, its distribution in the reference corpus (Section 3.4) shows that it is mostly employed in interaction, to highlight the urgency or relevance of the information conveyed to the addressee (or, in questions, the relevance of the request), and in narratives, to underline the speaker's authority at crucial points in the narrative.

Speakers' own metalinguistic statements, while difficult to obtain (see Section 2.2), also confirm the above analysis. The clitic has no equivalent in speakers' spontaneous Kriol/English translations of any Jam/Ngali utterance containing it. However, when questioned, one speaker offered both a speaker-perspective paraphrase (42) and a paraphrase highlighting the interactional function of the clitic (43) (compare with (60) in Section 4.4 on =*mirndi*).

- (42) "*ga-rdba-ny=ngarndi*", *I'll say for myself*, *ngarndi*

3SG-fall-PST=EGO

“‘she fell”, I’ll say for myself, *ngardi*”

[Jos]; ES15_A09_02.013]

- (43) “*ga-ruma-ny=ngardi*”, *I say for another mate mine, I’ll make im know imin come*

3SG-come-PST=EGO

“‘she came”, I say to a mate of mine, I’ll let her know she came’

[Jos]; CS15_a015_06.161]

The clitic enters into a privative opposition with utterances that are simply unmarked for epistemic authority. Its relatively low frequency suggests that unmarked clauses can also be used where epistemic authority could plausibly be claimed by the speaker as well in cases of mutual or established knowledge. As already indicated, there is one type of context that triggers a separate marker =*mirndi*, restricted to flagging shared epistemic authority in the case of new, non-established information. This is the topic of the following Section 4, and will be followed by a discussion of the status of both markers in the epistemic-evidential domain (Section 5).

4 Shared epistemic authority: =*mirndi* ‘EGO+TU’

This section presents details supporting the analysis of the second clitic, =*mirndi*, as encoding shared epistemic authority between speaker and addressee. This clitic is thus in direct paradigmatic opposition with =*ngardi* both formally (see Section 2.3) and functionally. As shown in Section 2.5, the clitic is unquestionably formally related to the first+second person pronoun (a minimal form in a minimal-augmented system), as is reflected in the gloss ‘EGO+TU’, and the semantic relationship linking the two functions is that between an indirectly affected participant, and a speech act participant holding a certain epistemic status.

The distribution of the clitic shows that it is only applied in a subset of contexts that qualify as involving shared epistemic authority of the hearer and addressee – those where shared authority is not based on information that is already established, or on general knowledge. In other words, the clitic is restricted to those contexts where a newly arising situation is not yet fully integrated into the common ground. As such, it bears a functional relationship to mirative markers (see further Section 5.2). This section presents the evidence for the above analysis, from different angles, mirroring the discussion of the primary authority marker =*ngardi* in Section 3: it investigates the distribution of the marker with respect to person (Section 4.1), tense, aspect, and modality (Section 4.2), and genres (Section 4.3), followed by an interim summary (Section 4.4). The position of both markers in the typology of complex epistemic perspective marking is the topic of Section 5.

4.1 Distribution with respect to person in declaratives and interrogatives

The first clue to the function of =*mirndi* comes from the distribution of the clitic with respect to person marking in both declaratives and interrogatives. Unlike the marker of primary epistemic authority =*ngardi*, which co-occurs with all person categories except for the 1st+2nd person (“inclusive”) ones (Section 3.1), =*mirndi* is, in the corpus data, restricted to clauses with 3rd person participants. This distribution matches the function of shared epistemic access / authority: under normal circumstances, a first or second person participant has privileged access to the evidence for the encoded proposition. The absence of 1st+2nd person (“first person inclusive”) participants in combination with =*mirndi* corroborates the finding that the clitic is not used to present shared established information: by virtue of joint involvement in or joint planning of an eventuality, the information would count as established rather than as yet to be integrated into the common ground. This, naturally, leaves utterances with 3rd person participants (with one attested

exception, to be discussed below) as the only context for (newly) shared epistemic access at utterance time. Typical examples of spontaneous usage are (44) to (46). Both (44) and (45) are conversational out-of-the-blue, all-new utterances, with no hint of an adverse effect on the speaker/addressee dyad in the context. In (44), the speaker comments on a stranger's car coming down the river bank where speaker and addressee (the author) were sitting; this was a spontaneous utterance not related to any preceding context.

- (44) *janyungbari yina motika jid ga-ram=mindi*
 another DIST car go.down 3SG-come.PRS=EGO+TU
 'Another car is coming down there (as you and I can see)!'
 [DB, ES97_A01_03.088]

Example (45) comes from staged online comments elicited by means of a video and co-constructed by two speakers. While the video shows a familiar person engaged in a familiar activity (fishing), both speakers were watching it for the first time. The first utterance by JM is made just when the video shows a fish being pulled out of the water. The second speaker, ERa, subsequently confirms the observation made by JM, without adding the clitic.

- (45) JM: *yaag gan-angga-m=mirndi*
 fish 3SG>3SG-get/handle-PRS=EGO+TU
 'looks like she's getting a fish!'
- ERa: *yawayi, gana-ngga-m=biyang jawaya-wu, gurrany wuju*
 yes 3SG>3SG-get/handle-PRS eating-DAT NEG small
 'yes, she is getting one to eat – (it's) not a small one!'
 [ES12_A04_02.015-6]

Another typical context for =*mirndi* (as for =*ngarndi*) is dialogue within a narrative, as in (46). The narrative is about two hunters who encounter two 'devil' kangaroos (which exhibit human behaviour, e.g. smoking and talking) and follow them. When one of them spots the two, he attracts his interlocutor's attention by uttering (46). (The interlocutor in the narrative does not reply, and the narrative subsequently switches to the kangaroos' perspective.)

- (46) *yina yina buny-angga=mirndi=biyang \ yangarra, yangarra!*
 DIST DIST 3DU-go.PRS=EGO+TU=SEQ kangaroo kangaroo
 'there, there the two are going, the kangaroos!'
 [DB, ES96_A10_01.073-4]

The single attested example involving a 1st person participant is (47). It comes from a video recording of several participants in a yam digging expedition; one of them is digging while the other two comment. The utterance comes shortly after the 'neck' (= top) part of a yam root has been found. In the utterances preceding (47), the speaker, quite excitedly, comments on the find in Kriol, then apologises for using Kriol and turns to the camera (operated by myself) to utter (47), while holding up the broken off top part. The shared epistemic authority holder invoked by =*mirndi* is therefore, quite clearly, the author (i.e. the outsider researcher). This utterance is, in turn, followed almost immediately by (33), using =*ngarndi*, again directed to the researcher. In other words, the speaker concedes shared epistemic authority with the addressee where the (visual) access to the result of finding the top part of the yam is concerned, but (justifiably) claims privileged epistemic authority where the further procedure of digging is concerned.

- (47) *birdij=biya yirr-arra-ny=mindi, majani luba-mij*
 find=SEQ 1+3PL>3SG-put-PST=EGO+TU maybe many-COM
 ‘we (excl.) have found it (as you and I can see), maybe it has a lot (of roots)’
 [JM, ES01_V01_03.009-10]

The analysis in term of Source Situation and Target Situation proves again fruitful, in this case to account for the person mismatch. While the Target Situation involves the speaker (and others) to the exclusion of the addressee, the Source Situation is actually the result of their finding the yam root – the existence of the broken off top part of the yam which can be seen by both speaker and addressee. This is made explicit in (47’):

- (47’) *Target Situation*: I and others (excluding you) have found it (a yam root).
Source Situation: There is a yam root part (which you and I can see)

From the analysis presented so far, it follows logically that the epistemic origo for =*mirndi* should not shift in interrogative contexts, since the marker encodes symmetrical access rather than asymmetrical access. Attestations of =*mirndi* in questions are in fact scarce in the corpus. Most, including (48) and (37), come from the context of two speakers jointly watching a video, having been instructed to ask each other questions about it, and are therefore not fully representative of naturalistic dialogue.

- (48) ERa: *yalugaja=biya ga-yu=mindi?*
 dig.with.stick=SEQ 3SG-be.PRS=EGO+TU
 ‘is she digging with a stick now?’
 JM: *yawayi, yalugaja*
 yes dig.with.stick
 ‘yes, (she is) digging’
 [ES12_A04_01.136-7]

The attested uses of =*mirndi* in interrogatives confirm the hypothesis about the lack of origo shift and moreover are consistent with the interpretation that the speaker, while requesting information from the addressee, does not necessarily expect the latter to have higher epistemic authority on the matter than herself, because they both have to rely on the same, newly emerging evidence. The attested responses, which include an affirmative answer to the polar question in (48) but also the admission of insufficient evidence in (37) above, further confirm this analysis.

4.2 Distribution with respect to tense, aspect and modality

Further evidence for the analysis of =*mirndi* as shared epistemic authority marker restricted to non-established information comes from its distribution with respect to tense, aspect and modality. In brief, =*mirndi* is restricted to cases where the Source Situation (but not necessarily the Target Situation) overlaps with utterance time. This is straightforwardly the case for present tense clauses such as (49) and verbless clauses with present time reference such as (55) and (58) where the Source Situation and the Target Situation are (usually) identical, and both overlap with utterance time. The context of (49) is that IP asks (in Kriol) what a person walking past is holding; her interlocutor (myself) suggests that it is a mobile phone; this is followed by the utterance in (49).

- (49) *langa-g.. gana-ma-ya=mindi*
 ear-LOC 3SG>3SG-have-PRS=EGO+TU
 ‘looks like she’s holding it by her ear’
 [IP, ES08_A05_01.089]

A case where Source Situation and Target Situation are not identical, but where both still overlap with utterance time, is (50), from an unprompted monologue about birds laying eggs at this time of the year. The relationship between the Source Situation (made explicit in the first line) and the Target Situation (in the second line) is one of inference, as also flagged by the use of the epistemic possibility modal *majani*. Even though the absence of birds in the vicinity is presented in the first line as perceived by the speaker only, the clitic in the second line plausibly indicates that the speaker considers the access to this evidence to be shared with the addressee.

- (50) *gurrany nga-ngayi-m jurlag yinjuwurla,*
 NEG 1SG>3SG-see-PRS bird PROX
*majani janggagu burru-yu=**mirndi***
 maybe above 3PL-be.PRS=EGO+TU
 ‘I don’t see any birds here, maybe they are all above’
 [JM, ES15_A03_06.017]

The clitic =*mirndi* is also compatible with past tense, but only in perfective aspect – past imperfective utterances are absent from the data.¹⁴ Moreover, in all attested examples, the Source Situation providing evidence for the Target Situation encoded by the utterance is observable at speech time, usually in the form of a result of the encoded event (but see (56)). Typical examples are (51), (52), (2) and (47).

- (51) *jungulug burr-angu=**mind**i \ ngayin \ yangarra *
 one 3PL>3SG-get/handle.PST=EGO+TU animal kangaroo
 ‘looks like they (dogs) have got one, an animal, a kangaroo!’ (spontaneous utterance upon seeing a dead kangaroo brought over by dogs, in view of both speaker and addressee)
 [JM; ES09_A01_01.190-2]
- (52) *yina burduj ga-jga-ny=**mind**i janju wirib*
 there go.up 3SG-go-PST=EGO+TU DEM dog
 ‘there it has gone up, that dog’ (from fictitious dialogue elicited by means of a picture showing a dog on a table)
 [JM, ES08_A20_03.073]

Taken together, such past perfective utterances in a perfect reading (29%) and present tense utterances (62%) account for the vast majority of attestations of =*mirndi* in the reference corpus. Utterances with future time reference using the potential or hypothetical modality, on the other hand, are only marginally represented (only two non-elicited examples of each, out of 163). The spontaneous utterances with potential modality, of which (53) is one, follow the same principle as the past perfective utterances. The prediction of a future Target Situation can plausibly be made on the basis of a Source Situation that is directly accessible to both speaker and addressee at utterance time (compare (53) with (30), a generic statement about the egg-laying behaviour of crocodiles not tied to evidence observable in the speech situation, and employing the epistemic primacy marker =*ngamdi*).

- (53) *burduj-burduj=mang ga-ngga, gani-w-arra=**mirndi**=biyang*
 RDP-go.up=SUBORD 3SG-go.PRS 3PL>3SG-POT-put=EGO+TU=SEQ
 ‘when/since it (the freshwater crocodile) keeps going up and down, it will lay (eggs) now’
 [JM, ES15_A03_06.008-9]

¹⁴ One speaker accepted =*mirndi* with a past imperfective verb form in elicitation [ES15_A09_02.112; 201], but did not produce such utterances spontaneously. As already indicated in Section 2.2, I did not consider acceptability judgments involving the epistemic clitics as particularly reliable.

The nature of the evidence is more difficult to judge in utterances with the hypothetical modal since by its very nature, this modal is used to encode hypothetical eventualities that can be predicted based on the stereotypical behaviour of the participants involved, such as laws of nature, etc., often in pragmatic contexts of a possible but undesirable eventuality (see Schultze-Berndt and Caudal, in prep.). In (54), the speaker was expressing her dislike of playgrounds on the grounds of the dangers they present to children; however, this assessment was purely hypothetical; no actual playground or children were present. Since the hypothetical modal marker is usually employed to encode undesirable possibilities, the attested uses may represent a malefactive rather than a purely epistemic use of the clitic (see also the discussion of example (9) in Section 2.5). The interaction of the shared epistemic authority marker with hypothetical modality thus requires further research. The same is true for its compatibility with imperative marking; no naturalistic example is attested.

(54) *jag ya-wurr-irdbaj=mirndi digirrij=jung!*
 go.down HYP-3PL-fall=1+2/EGO+TU die=RESTR
 ‘they might fall down, really hurting themselves!’
 [IP, ES96_A09_02.384]

Just like its primary epistemic authority counterpart, the shared epistemic authority marker is compatible with the epistemic possibility modal particle *majani* ‘maybe’, indicating less than full commitment of the speaker to the realisation of a past, present or future eventuality. The compatibility of epistemic hedging with *=mirndi* is not particularly surprising if, as is proposed here, the clitic indicates that – in the view of the speaker – despite shared evidence the encoded eventuality (the Target Situation) has not yet been integrated as a fact into the common ground. Examples (50), (55) and (56) illustrate. In (55), the speaker, after further consideration of the evidence, arrives at a firm conclusion (in the second line, without qualification by either the epistemic possibility modal or *=mirndi*) that the toy figure in question is male.

(55) *majani=mindi malyju \ yawayi yawayi *
 maybe=EGO+TU male yes yes
*yinyju=biya het nga-ngayi-m \ malyju *
 this=SEQ hat 1SG>3SG-see-PRS male
 ‘maybe it’s a boy, yes yes, here I see the hat now, (it’s) a boy’ (describing a toy figure)
 [JM, ES09_A01_01.017]

In (56), the statement in the second line, plausibly corresponding to the Source Situation for the conjecture in the first line, itself receives the clitic *=mirndi*, presumably because it reports a newly arising observation.

(56) *majani guyawud ga-gba=mirndi*
 maybe hungry 3SG-be.PST=EGO+TU
gani-mindi-ya=mirndi ngabulu gujarding
 3SG>3SG-eat-PRS=EGO+TU milk/breast mother
 ‘maybe it (puppy) was hungry; it sucks (its) mother’s milk/teats’ (overheard comment while observing dogs)
 [JM; ES93_N01 – not in reference corpus]

4.3 Genre and frequency

The distribution of the clitic *=mirndi* ‘EGO+TU’ across the texts in the reference corpus (see Section 2.2) further corroborates its rather specialised function of marking a subtype of shared epistemic authority. It is less frequent than its primary epistemic authority counterpart *=ngarndi*, with 163 tokens of *=mirndi* (ca. 3 per 1000 words) compared with 256 tokens of *=ngarndi* (ca. 5 per 1000 words; see Section 3.4). Moreover, *=mirndi* is only found in 38 of the 200 files in the reference corpus (82 for *=ngarndi*).

As Table 3 shows, outside direct elicitation *=mirndi* is in fact only found in conversational data (which include direct speech within narratives, staged and fictitious conversations, observed interactions, and interactions with myself), and – very prominently – in responses to visual stimuli of various kinds, including picture story books, individual pictures, videos, and toy figures. Examples of the latter type from the previous discussion are (2), (3), (37), (45), (48), (52), and (55). While these responses of course cannot be taken as representative of naturalistic discourse, they provide a very clear clue to the function of *=mirndi*. It is used to flag shared epistemic authority with the addressee, or, more precisely, symmetrical access at the time of utterance to a Source Situation furnishing the evidence for the encoded eventuality (Target Situation), which is invariably an eventuality which has only just come to the attention of the speaker. By making explicit the shared nature of the evidence, the speaker at the same time concedes less than full confidence in their interpretation of the eventuality – in the case of the stimuli, due to their unfamiliarity and a lack of cultural context.

The complete absence of the clitic from narratives (except for reported interactions) and procedural texts shown in Table 3 is entirely consistent with the analysis just presented: in narratives, by definition, the evidence for the reported events is not accessible to the addressee(s) at the time of discourse. The same holds for procedural texts not accompanied by a demonstration, and even in the case of a demonstration, the speaker will be able to provide an explanation from a position of higher epistemic authority.

The primary epistemic authority clitic *=ngarndi*, too, is found in responses to visual stimuli. However, as already pointed out in Section 1, its use tends to reflect a greater familiarity of the speaker with the visual stimulus than the use of *=mirndi*. Out of the 60 tokens of *=ngarndi* in the ‘visual stimulus’ category, 22 are from just three files of descriptions of photos depicting events at which the speaker had been present ((1) is an example), rather than unfamiliar stimuli. In other cases, the visual stimulus triggering *=ngarndi* is a video depicting familiar people and activities; compare examples (4) and (3) in this respect. There are, however, some responses even to unfamiliar visual stimuli where the speaker simply appears to assume epistemic authority by the use of *=ngarndi* rather than conceding shared epistemic authority by the use of *=mirndi*.

Table 3: Distribution of *=mirndi* ‘EGO+TU’ across different genres in the reference corpus. Information for *=ngarndi* ‘EGO’ (Table 2) included for ease of comparison.

	<i>=ngarndi</i> ‘EGO’		<i>=mirndi</i> ‘EGO+TU’	
	n	%	n	%
Mythological narrative	2	0.8	0	0
Personal narrative	29	11.3	0	0
Procedural or other cultural knowledge (addressee = researcher)	50	19.5	0	0
Conversation	106	41.4	59	36.1
Response to visual stimulus	60	23.4	89	54.6
Other elicitation	9	3.5	15	9.2
TOTAL	256	100	163	100

A closer look at the actual contexts of use of the clitic in a single Frog Story picture book description (told while looking at the picture book, not a retelling of the story), in Table 4, further confirms the analysis just presented. The clitic is found 24 times in 425 intonation units, and it is indeed mostly found in the first description of a new scene, or in descriptions of a new aspect of a scene.

Table 4. Use of *=mirndi* ‘EGO+TU’ in one Frog Story narrative (IP; ES97_A03_01)

Context	Nr of occurrences	
Start of new scene (= new page in picture book)	8	
New aspect/participant of same scene, 1 st description	9	(1 in repeat)
New aspect of same scene, repeated description	3	
Other (new interpretation of scene, summary, reflection)	4	
Total	24	

The analysis presented for *=mirndi* as indicating shared epistemic authority with the addressee over a Target Situation which has not yet been integrated into the common ground but which is based on shared access, at time of utterance, to a Source Situation, also accounts for all of the conversational data. The clitic usually appears in out-of-the-blue comments on a newly arisen situation; examples are (44), (46), (47), (49), (51), and (56), as well as (57) and (58) below.

As in the case of its counterpart *=ngarndi*, the available data do not allow an in-depth analysis of its conversational effects in naturalistic discourse (see Section 2.2). However, the attested spontaneous responses by native speakers to declaratives involving *=mirndi* confirm the analysis presented here (see Section 4.1 for responses to interrogatives). They include explicit confirmations of the account presented by the speaker (45), implicit confirmations by providing additional supporting information (57), but also disagreements, as in (58).

(57) DB: *mali garrb burr-antha=nu=mirndi*
 clothes hold.many 3PL>3SG-take.PRS=3SG.OBL=EGO+TU
 ‘they are taking clothes for her!’ (spontaneous comment on observed actions of age care staff going up to an elderly lady)

BIL: *ngabulgja-wu burru – burru-w-uga,*
 bathe-DAT [false.start] 3PL>3SG-POT-take
 ‘they are going to take her for a bath’
 [ES97_A02_02.166-7]

The two speakers in example (58) jointly report an earlier event where they had been debating about the identity of a driver who had arrived in the community. ERa (in the second line) explicitly points out that her earlier suggestion as to the driver’s identity (reported by JM in the first line, using *=mirndi*) had been misguided. Indeed, JM reports her disagreement with ERa’s statement, after having assessed the situation herself; interestingly her negated statement (line 5) also employs the shared epistemic authority marker *=mirndi*, in line with her inability (line 6) to confidently identify the driver herself.

(58) JM: “*Nangari=gun=mindi*” *gani-yu *
 <subsection>=CONTR=EGO+TU 3SG>3SG-say/do.PST
 “‘(there’s) Nangari!’ she (i.e. ERa) said’
 ERa: *naja Nangari ai bin rekon C.*
 another <subsection> 1SG PST think [proper.name]
 ‘another Nangari, I thought it was C.’
 JM: “*a:, warna– warnang?*”
 ah [false.start] where
 ‘(I said) “ah, where?”’
maja=biyang mung nga-ngawu
 do.like.that=SEQ watch 1SG>3SG-see.PST
 ‘like that I was watching’
 “*ah gurrany .. mindi Nangari!*”
 ah NEG .. EGO+TU <subsection.name>
 “‘ah, (looks like that’s) not Nangari”
 “*janju gurrurij rait, majani nanggayin=warra*”
 DEM car right maybe who=DUBIT
 “‘that’s the car all right, (but) maybe (it is) whoever.”’
 [JM, ERa; ES08_A08_01.097–102]

In (59) (from a co-constructed response to a video) both interlocutors employ *=mirndi* in their assessment of a newly arising situation, that of a woman having taken a yam root out of the ground after digging for it.

In other words, it appears that neither of them assumes primary epistemic authority in this context. Upon additional evidence – of seeing the protagonist holding the yam root – the second speaker then follows up with an additional confirmation without *=mirndi*.

(59) JM: *gub=gurra gan-angu=mirndi*
 come.off=TAG 3SG>3SG-get/handle.PST=EGO+TU
 ‘looks like she’s taken it out, right?!’

ERa: *gan-angu=mirndi=biya ...*
 3SG>3SG-get/handle.PST=EGO+TU=SEQ
*gurrulub . gan-angu *
 take.out 3SG>3SG-get/handle.PST
 ‘looks like she’s got it now ... she’s taken it out’
 [ES12_A04_01.160–2]

4.4 Summary: *=mirndi* as a marker of shared epistemic authority

As the evidence presented in the preceding subsection has shown, the Jaminjung/Ngaliwurru clitic *=mirndi* ‘EGO+TU’ can be analysed as a marker of shared epistemic authority, i.e. symmetrical access to the evidence informing the speaker’s utterance. The epistemic origo is thus the speaker-addressee dyad, which is directly reflected in the formal identity of the clitic with the 1+2 minimal personal pronoun (Section 2.5). However, unlike markers of shared/symmetrical access to knowledge attested in a number of other languages, which can be felicitous in the context of established or generally known information, or even be restricted to such contexts (see Sections 5.1 and 5.2 for further discussion and references), *=mirndi* ‘EGO+TU’ exclusively indicates shared access at utterance time to information which has not yet been integrated into the common ground. Correspondingly, this clitic is exclusively found in the context of reactions to a newly arising situation in conversational data, and in responses to visual stimuli in elicitation, which constitute a staged subtype of an out-of-the blue, unexpected situation (Section 4.3). Like its counterpart *=ngarndi* ‘EGO’, it is mostly found in declaratives and only rarely in interrogative contexts, but its use in questions – which does not involve shift of epistemic origo – is consistent with the analysis (Section 4.1).

As in the case of its primary epistemic authority counterpart *=ngarndi*, employing the notions of Source Situation and Target Situation allows for the most elegant account of the distribution of this clitic with respect to tense, aspect and modal markers. While *=mirndi* is regularly found in utterances with present time reference it is also found in past perfective (but not past imperfective) clauses. Both have in common that the Source Situation (providing the evidence for the Target Situation) overlaps with the Discourse Situation (i.e. with the time of utterance), in other words, past perfective clauses are only compatible with the clitic in a resultative-perfect reading (Section 4.2). The clitic is furthermore compatible with future time reference if the Target Situation is predictable based on some evidence available at utterance time. In addition, the use of the clitic requires shared and simultaneous access by both speech act participants to the Source Situation at utterance time. The restriction in distribution to third person core arguments (Section 4.1) further supports the claim of a lack of privileged access of either the speaker or addressee to the Source Situation (since personal involvement in a situation would constitute a basis for claiming primary epistemic authority).

Based on this discussion, the term “shared epistemic authority” has to be qualified further to fully capture the analysis of the clitic: strictly speaking, by using *=mirndi*, the speaker acknowledges symmetrical, shared access to newly available evidence (the Source Situation), but at the same time flags a lack of epistemic authority of either discourse participant over the reported eventuality (the Target Situation).

Several different speakers, when questioned about the role of *=mirndi*, offered illustrations and explanations comparable to the one in (60). The metalinguistic discourse is in acrolectal Kriol (rendered here in English orthography).

- (60) “*ga-ram=mirndi motika*” (...) *motika* (...)
 3SG-come:PRS=EGO+TU car
 “there’s a car coming up!”
I say la ERa, “that motika coming up!”
 ‘I say to ERa, “there’s a car coming up!”’
I just tellim letting him know motika coming
 ‘I just tell her letting her know that a car is coming’
that mirndi, tubala
 ‘that *mirndi* is for / means (there are) two (of us)’
 [Jos], CS15_a015_06.103-7]

As in the case of *=ngarndi*, the clitic never receives a spontaneous translation, and speakers did not explicitly mention a difference in epistemic authority when questioned about the function of the clitics. However, very similarly to *=ngarndi*, the function of *=mirndi* is explained as ‘letting someone know’ (see example (43) in Section 3.5). While an in-depth investigation of the discourse function of the two clitics is beyond the scope of this paper (but see Sections 2.2, 3.4 and 4.3), this paraphrase provides us with a clue to the relatively low frequency of the two clitics. It seems they are not employed in every single case where asymmetrical or symmetrical access to a Source Situation may apply, but rather they appear to only be used in situations where the speaker imparts a proposition of particularly high relevance in the current interaction.¹⁵

5 Epistemic authority as a semantic category in the epistemic-evidential domain

The preceding Sections 3 and 4 presented detailed arguments for considering the Jaminjung/Ngaliwurru clitic *=ngarndi* ‘EGO’ as a marker of primary epistemic authority, and the clitic *=mirndi* ‘EGO+TU’ – which formally corresponds to the 1st+2nd minimal person pronoun – as a marker of shared epistemic authority. The two clitics were shown to be in paradigmatic opposition to each other (Section 2.3) and in privative opposition to the much more frequent clauses unmarked for epistemic stance.

In light of the distribution of the clitics, the notions of primary vs. shared epistemic authority were refined as asymmetrical vs. symmetrical access to the evidence (the Source Situation) for the situation encoded by the clause containing the clitic (the Target Situation). Superficially, this resembles Heritage’s (2012b: 4) definition of epistemic status as ‘relative epistemic access to a domain or territory of information’ which is ‘stratified between interactors such that they occupy different positions on an epistemic gradient (more knowledgeable [K+] or less knowledgeable [K–])’. However, in order to account for the distribution of *=mirndi* ‘EGO+TU’, it is not sufficient to identify symmetrical epistemic status (e.g. as K+) for both speaker and addressee. Rather, by using *=mirndi*, the speaker on the one hand indicates that the speaker and addressee jointly constitute the epistemic origo, with shared access (“K+”), in the Discourse Situation, to the evidence informing the speaker’s utterance. On the other hand, the clitic marks the situation actually encoded by the utterance (the Target Situation) as not yet fully integrated into the Common Ground, since the speaker has only just become aware of it; in this respect both speaker and addressee would have to be represented as K-. It can therefore be argued that the relevant asymmetry or symmetry in epistemic status is not one of knowledge as such, but pertains to an ‘evidential principle’ (Hargreaves 2005: 5) of privileged access. In comparison with *=mirndi* ‘EGO+TU’, the semantic characterisation of *=ngarndi* ‘EGO’ is relatively straightforward in that the access to the evidence is presented as asymmetrical, with the speaker as the epistemic origo in declaratives, and the addressee in questions.

¹⁵ This includes situations of describing a visual stimulus at the request of a researcher (Section 4.3); examples of spontaneous interactions in support of this observation include (12), (13), (17), (21), (23), (24), (32), (35), (36) for *=ngarndi*, and (44), (45), (46), (51), and (58) for *=mirndi*.

Distinguishing the evidence (the Source Situation) from the reported situation (the Target Situation) also helps to account for the occurrence of the clitics in future-oriented clauses and (in the case of =*ngarndi* ‘EGO’) with directives (Sections 3.3 and 4.2), and for an apparent person mismatch where the shared epistemic authority clitic is found in a 1st person statement (Section 4.1).

The following subsections consider the position of the Jam/Ngali clitics in comparison with other attested systems of epistemic authority marking (5.1), the relationship between epistemic authority and evidentiality (5.2), egophoricity (5.3), and epistemic modality (5.4). A concluding discussion is offered in Section 5.5.

5.1 Epistemic authority as a cross-linguistic grammatical category

Grammaticalised markers of epistemic authority which are comparable to the Jaminjung/Ngaliwuru clitics (in that they encode a primary distinction of asymmetrical access to information by one speech act participant vs symmetrical, shared access to information by both speech act participants) are attested in a number of unrelated languages, with differences in their formal manifestation and their contexts of use. For example, two Japanese sentence-final particles mark speaker primacy vs. shared epistemic access (Hayano 2011). A sentence-final marker for shared information is also found in Korean (Chooi 1995: 171). The German ‘modal’ particle *ja*, likewise, has been described as indicating shared epistemic access (Leiss 2012). Strongly grammaticalised markers of primary vs. shared epistemic authority are found e.g. in Andoke (Landaburu 2007: 31), in the perfective aspect in Kurtöp (Hyslop 2014: 114-115), and in Kogi (Bergqvist 2016). In Kakataibo, two sets of near-obligatory markers are reported to distinguish between addressee perspective and the absence of an addressee perspective (Zariquiey 2015). Bergqvist (2017) coins the term ‘complex epistemic perspective’ for the domain of encoding of speaker/hearer asymmetries of epistemic access, and gives an overview of attested systems of this type.

One of the parameters distinguishing between the different attested systems, also commented on by Bergqvist (2017: Section 3.3), is frequency: the Jam/Ngali clitics bear more resemblance to the ‘modal’ particles of German or Swedish than to the near-obligatory markers of Kogi (Bergqvist 2016) or Awetí (Drude 2005), in that they are apparently only employed for special pragmatic effect.

A second parameter is the distinction between speaker’s and addressee’s perspective, which, as Bergqvist (2016) convincingly shows, has to be separated from the distinction between asymmetrical and symmetrical access at least for some languages: in Kogi, four markers distinguish between asymmetrical and symmetrical access on the one hand, and speaker and addressee perspective, on the other hand. For Jam/Ngali, the distinction between asymmetrical and symmetrical access is sufficient to describe the system of epistemic authority marking, as captured by the analysis presented so far: symmetrical access (under specific conditions) is indicated by =*mirndi*, and asymmetrical access is encoded by the epistemic primacy marker =*ngarndi* which usually conveys speaker-perspective, but can shift to addressee-perspective in questions (see Section 3.1). As a typological generalisation, one would predict that epistemic markers that allow for origo shift only distinguish between asymmetrical and symmetrical access, but do not semantically entail either the speaker’s or addressee’s perspective (though pragmatically, they convey the speaker’s perspective in assertions).

A third parameter concerns specific subtypes of symmetrical, shared access markers. As shown in Section 4, the shared access marker =*mirndi* ‘EGO+TU’ in Jam/Ngali is restricted to information for which both interlocutors have shared evidence at the time of utterance and which has not yet been integrated into the common ground; it is not used in the case of established knowledge. This can be captured in the semantic characterisation of the clitic by requiring temporal overlap of the Source Situation with the time of utterance. A similar marker encoding ‘current evidence shared by both speaker and listener’ – which forms part of a larger evidential paradigm – has been described for the Nambikwaran language Lakondê (Telles & Wetzels 2006: 244). Some languages, in contrast, possess markers that are restricted to established shared knowledge. For example, Kalmyk has a ‘common knowledge’ marker which mainly occurs in proverbs (Skribnik & Seesing 2014: 154, 163), and Maimandê has a marker of general knowledge which is

found in myths (Eberhard 2009: 463-464). The ‘mutual knowledge’ marker *-cha:* in South Conchucos and Huamalíes Quechua, likewise, is employed specifically when consensus on an addition to the common ground is reached by participants, or in reference to previous joint experience or general knowledge (Hintz & Hintz 2017: Sections 6, 8.1). Yet other languages allow for the use of a shared access marker in all contexts, regardless of whether the information is new or established. This seems to be the case in Kogi (Bergqvist 2016) and in Japanese, although Hayano (2013: 51) comments on the near-obligatory nature of the ‘shared access’ particles *ne* or *yone* ‘when interactors are assessing an object that they are experiencing together’. Jaminjung/Ngaliwurrū presents a system of grammaticalised epistemic authority marking which shows overlaps with, but has no exact parallel in, the cases described so far in the literature. Further cross-linguistic research will no doubt enable a more fine-grained account of the distinctions and constellations that are possible in this domain.

A number of the authors just quoted subsume epistemic status, i.e. symmetrical vs. asymmetrical access to information, under evidentiality – in many cases, because they are formally identifiable as part of a larger evidential paradigm. In Section 5.2, it will be argued that epistemic authority and evidentiality can indeed be regarded as belonging to the same domain of ‘access to evidence’, and can be differentiated in terms of the degree to which the mode of access is specified.

If one is sympathetic to the view that the grammaticalisation of evidentials and related markers reflect cultural preoccupations with rights to speak on certain matters (Nuckolls & Michael 2012: 182), it is not surprising that markers of epistemic authority would be found in the Australian cultural context. In Jaminjung/Ngaliwurrū culture, like in other indigenous Australian cultures (Evans 2001; Newry & Palmer 2003; Mushin 2012b: 274–276), the right to speak on certain matters can be constrained by affiliation to a family or language group, gender, and age. Still, Mushin’s (2012b: 289) explanation for the lack of evidential markers (in the narrow sense) in many Australian languages potentially also serves to explain the low frequency of epistemic authority marking observed in Jam/Ngali.

One possible motivation for the lack of evidential coding is that it is not necessary to make source of information explicit in most ‘ordinary’ contexts. This may be because it is clear among members of this community where the epistemic authority lies, or it may be because much knowledge is publicly available and so evidence is not required when information is provided.

Whether speakers employ the epistemic authority clitics only when the access to the relevant evidence is at issue, or rather to highlight an utterance as particularly relevant to the addressee in a given context cannot be stated with certainty on the basis of the available data. In order to resolve this question, a detailed investigation of epistemic stance management in Jam/Ngali discourse – also taking into account other strategies than the two clitics discussed here – would have to be undertaken.

It is however surprising that marking of epistemic authority has not been reported more widely for Australian languages. This does not mean that other cases do not exist. The most detailed existing description of what appears to be a primary epistemic authority marker is that of Warlpiri *kari* and *karinganta* (Laughren 1982). The description of the markers *ma ~ mvrra* in Enindhilyakwa, glossed as ‘speaker focus’, in van Egmond (2012: 225-236) also shows clear parallels to the primary epistemic authority marker *=ngarndi* in Jam/Ngali. The underspecified direct evidential in Ngiyambaa, which is explicitly described by Donaldson (1980: 275–276) as not differentiating between manner of access (visual, auditory, other sensory) and only contrasts with a reportative, could potentially be reanalysed as a marker of primary epistemic authority, along the lines of the argument to be presented in Section 5.2.¹⁶ Future research on discourse data in Australian languages will quite possibly reveal that epistemic authority systems are more widespread in these languages than has been previously recognised.

¹⁶ A ‘sensory evidential’ clitic has also been described for Garrwa by Mushin (2012a: 232–233); judging from the examples, this marker has more characteristics of an epistemic possibility modal.

5.2 Epistemic authority and evidentiality

The widely shared definition of evidentials is as grammaticalised markers of ‘information source’ (e.g. Aikhenvald 2014: 1) or ‘source of evidence’ (e.g. Brugman & Macaulay 2015: 204). Prototypically, the label is applied to markers encoding some distinctions in the relationship between the encoded proposition and the evidence that exists for it – e.g. direct visual access, inference, or hearsay. Traditionally, moreover, the speaker is considered as the origo who accesses the source of evidence, as shown by definitions such as ‘a morpheme specifying the speaker’s evidence or source of information’ (Speas 2008: 940).¹⁷ Recent cross-linguistic research has shown, however, that the evidential origo is not necessarily the speaker: the origo of an otherwise speaker-based evidential can shift in interrogatives (see Section 5.3 for references). Moreover, it has been demonstrated that some evidential markers consistently encode an addressee origo – e.g. the evidential derived from the dative second person pronoun in Chechen (Molochieva 2007; Molochieva & Nichols 2011) – or a speaker-addressee dyad origo. The latter is the case for the ‘shared evidence’ inferential marker =*tiba* in Yurakaré (Gipper 2014: 795), the mutual knowledge marker of some Quechua varieties (Hintz & Hintz 2017), the ‘current evidence shared by both speaker and listener’ of Lakondê (Lowe 1999: 275; Telles & Wetzels 2006: 244), and evidentials marking the ‘symmetry of speaker and hearer information source’ in several languages of the New Guinea Highlands area (San Roque & Loughnane 2012). For example, Duna exhibits a systematic distinction between individual and ‘generally perceivable’ evidence for a visual, sensory, result-based, and reasoning-reported information source (San Roque & Loughnane 2012: 127). More generally, discourse-based research has established the interactive and intersubjective functions of evidential markers (e.g. Mushin 2000).

The fact that the primary distinction between the two Jam/Ngali clitics under consideration is that of asymmetrical (only speaker or addressee origo) vs. symmetrical access (speaker + addressee dyad origo) therefore does not automatically exclude them from the category of evidentials. Moreover, the two epistemic authority markers in fact bear a fundamental relationship to evidentials in that primary (asymmetrical) vs. shared (symmetrical) access pertains not to the situation encoded by the utterance itself (Target Situation) but to the situation providing the source of evidence for the former (Source Situation).

The two epistemic authority markers differ from typical evidentials in that the relationship between Source Situation and Target Situation is underspecified. It can be one of overlap (‘direct evidence’) or accessibility (‘evidence based on inference’), and, in the case of the primary epistemic authority marker =*ngarndi*, the Source Situation can even consist in a verbal report of the Target Situation (i.e. hearsay information; see Section 3.2). The Jam/Ngali system also differs from a more prototypical evidential system in that it has no grammaticalised reportative marker. As has been pointed out in the literature, however, reportative markers often have a distinct status even when they are found in languages with larger evidential paradigms (e.g. Dickinson 2000; Aikhenvald 2004: 369; Bergqvist 2016; Hintz & Hintz 2017) and therefore the presence of a reportative marker should probably not be taken as criterial for evidential status.

The Jaminjung/Ngaliwurru system exhibits another parallel with evidential systems, not yet commented on in the preceding discussion. This is the mirative nature of utterances involving the shared epistemic authority marker =*mirndi* ‘EGO+TU’ (amply illustrated with the examples in Section 4), due to the requirement that it is only applied in the context of observations not yet integrated into the common ground. On the one hand, the explicit marking of shared epistemic authority can be considered as an “invitation” to the addressee to participate in the joint construction of the common ground by confirming or disconfirming the information thus marked by the speaker. As a flip side of the same coin, it also serves to explicitly downplay the speaker’s epistemic authority in this context. The correlation between a lower degree of epistemic authority and information that the speaker has just become aware of, is explicitly commented on by Kamio (1995: 238; 1997: 155). This aligns with definitions of mirativity as indicating that information is not yet integrated into the speaker’s overall representation of the world, i.e. is new or unexpected to the speaker (e.g. DeLancey 1997: 35–36; 2001). Correspondingly, mirative effects have been widely described for

¹⁷ This view also seems to be largely implicit in the discussion of the relationship between evidentiality and person in Aikhenvald (2004: 217–239), although the existence of shared speaker/addressee origo markers is acknowledged briefly (2004: 234).

non-direct evidentials (sometimes in combination with first person). The explanation offered by Lazard (2001: 362) is that the use of such evidentials creates a distance between the speaker as the person acquiring evidence and the person expressing it ('mediative discourse') – an instance of what Peterson (2013) calls Parasitic Mirativity, where the mirative effect arises by conversational implicature from another category. Marking of shared epistemic authority is not among the types of Parasitic Mirativity surveyed by Peterson, but its use in this domain is highly plausible. By using a shared access evidential / epistemic authority marker – just as by using an indirect evidential, or a non-egophoric/conjunct form in the case of 1st person reference – the speaker downplays their own epistemic authority; this is an appropriate way of signaling the unexpected, unintegrated nature of the information. There is also some cross-linguistic evidence for a mirative use of markers of shared epistemic authority. A particularly striking parallel is the only other case reported in the literature of a 1+2 pronoun taking on an evidential/epistemic function. In Ingush, according to Nichols (2011: 282–283), a 1+2 pronoun can indicate 'that the speaker states an important generalization or point that is known to both speaker and hearer but is not in the hearer's immediate consciousness'; it is labelled 'inclusive mirative'. A parallel to the mirative use of =*mirndi* can also be found in the German 'modal particle' *ja*: its primary function is to indicate shared access to information (e.g. Leiss 2012), but in declarative clauses with exclamative prosody it conveys mirativity – though see Modicom (2012) for a different explanation of the link between the two functions.

So far, we have observed some similarities and differences between epistemic authority markers – including those of Jaminjung/Ngaliwurrū – and prototypical evidentials. In order to arrive at a full picture we will also have to consider the status of egophoric markers within this general functional domain.

5.3 Primary epistemic authority and egophoricity

In this subsection, we will consider the question whether the Jaminjung/Ngaliwurrū clitic =*ngarndi*, so far characterised as a marker of 'primary epistemic authority', could be categorised as an egophoric marker. As already indicated in the beginning of Section 3, it does fall under the definition of egophoric markers proposed by San Roque et al. (2017: 138) as 'expressions of primary knowerhood'. It also meets the criterion of origo shift, generally assumed to be indicative of egophoricity (see Section 3.1): In declaratives, it usually indicates the speaker's current or past participation in, or direct evidence of, a situation, or else the speaker's feelings or intentions. In questions, epistemic authority shifts to the addressee, in the sense that by using the clitic, the speaker expresses his or her expectation that the addressee will have access to the evidence which can inform their answer. This is, however, clearly not a characteristic which distinguishes egophoric markers from evidentials in all cases, since such shifts are also cross-linguistically attested for non-egophoric evidentials, e.g. in Tibetan (Garrett 2001: 228–229; Tournadre & LaPolla 2014), Tariana (Aikhenvald 2004: 245–247), Cusco Quechua (Faller 2002: 229–230) and the Papuan language Oksapmin (Loughnane 2011).

A second diagnostic that has been adduced for egophoric marking does not apply to Jam/Ngali; this is its logophoric use in reported speech constructions, where egophoric marking reflects the access of the speaker of the reported event, not the speaker of the speech event, to the information in question. The distribution of =*ngarndi* in reported speech in Jam/Ngali does indeed reflect the epistemic status of the speaker of the reported event. However, this is unremarkable in grammatical terms, since there is no specialised construction for reported speech and consequently, all reported speech is in the form of direct quotations accompanied by a complete shift to the deictic categories of the reported event.

The frequent coincidence of egophoric marking with 1st person subject in declarative clauses cross-linguistically has given rise to a view of egophoric markers as a type of person agreement in the literature (e.g. Aikhenvald 2004: 123–130; Bickel 2008) (though Aikhenvald recognises some evidential-like properties of such systems). This view has been strengthened by the finding that most languages for which egophoric marking has been reported to date do not grammatically index the person of the subject or other core arguments (San Roque & Schieffelin to appear). There is however ample evidence that egophoric marking is not restricted to first person reference (or 2nd person reference in questions), but can extend to 3rd persons

within the sphere of the speaker – just like the primary epistemic authority marker in Jam/Ngali (e.g. Dickinson 2000: 410; Garrett 2001: 193–205; Hyslop 2014: 114).

Egophoricity (conjunct marking) in some languages has also been characterised as belonging to a broader field of “ego evidentiality”, defined by Garrett (2001: 105) as being concerned with ‘immediate knowledge, [...] mediated by neither perception nor inference’. Hyslop (2014: 114) also considers the egophoric marker in Kurtöp as part of an evidential system. More specifically, this type of evidentiality can be described as participatory evidentiality – evidence gained by the participant through personal involvement rather than merely ‘witnessing’ (see the discussions in Loughnane 2011; San Roque & Loughnane 2012: 114–115; San Roque & Schieffelin to appear). This characterisation explains the restriction of so-called egophoric markers to volitional events in certain languages (see e.g. Dickinson (2000) for Tsafiki, Hargreaves (2005) for Kathmandu Newar, DeLancey (1990) for Lhasa Tibetan, and Creissels (2008) for Akhvakh). As cross-linguistic surveys of the phenomena that have been subsumed under egophoricity show, the type of involvement that provides the epistemic origo with privileged access can vary; in particular, a restriction to volitional predicates cannot be regarded as a necessary characteristic of egophoric markers (Knuchel 2015: 38; San Roque et al. in press: Section 4). An egophoric marker that is not restricted to participatory evidence, however, is then difficult to distinguish from a marker of primary epistemic authority like that of Jam/Ngali.

A close look at egophoricity thus reveals that the boundary between egophoricity and evidentiality on the one hand, and epistemic authority marking on the other hand, is fluid. While not going as far as subsuming egophoricity under evidentiality, San Roque et al. (in press) note the propensity of the same linguistic areas to harbour both evidential and egophoric marking. They also point out the particularly strong relationship between epistemic authority and participatory evidentiality (San Roque et al. in press: Section 4): ‘The prototypical way to be “primary knower” for something is to have purposeful, embodied experience of it.’ A similar point is made by Loughnane (2009: 253) and by Garrett (2001: 102–206). Loughnane discusses the Papuan Highland language Oksapmin, where the same evidential is used for personal involvement and for ‘uncontested facts for which the speaker has accumulated various types of evidence throughout his/her life, which is also available to others’ (2009: 249). For Tibetan, Garrett (2001: 104) argues that egophoric or ‘ego evidentiality’ marking is in fact an unmarked category which arises as a ‘default inference in the absence of overt evidential marking’.

More generally, it appears that the evidential marker highest on the scale of evidential strength in a given language – which can be a performative, but also a visual evidential – can extend to a default marker of what Faller (2002) terms ‘best possible ground’. In her discussion of Cusco Quechua evidentials Faller (2002: 130–144) characterises the ‘best possible ground’ evidential as applicable to any kind of information that is assimilated in that it is connectable to a network of related beliefs; she explicitly links it to the notion of the epistemic origo’s authority. Further strengthening the link between evidentiality and epistemic authority marking, Grzech (2016) convincingly demonstrates that in a lowland Quechuan language, Tena Kichwa, the cognate of the Cusco Quechua visual/best possible ground evidential consistently functions as a marker of primary epistemic authority.

Summarising the arguments just presented, I have proposed that the phenomenon of egophoricity is not distinct from the categories of either epistemic authority marking or evidentiality. What have been described as egophoric (or conjunct) markers can either be equated with a specific subtype of evidentials (participatory evidentials, highest in hierarchies of evidential strength); in this case, the language in question will have other evidentials contrasting with the ‘egophoric’ one. Alternatively, where such a contrast is absent, egophoric markers cannot be distinguished from markers of primary epistemic authority.

It was further argued that epistemic authority and evidentiality, likewise, are not strictly distinct either synchronically or diachronically. In the case of the Jam/Ngali clitics, the reliance in their interpretation on a distinction between Source Situation and Target Situation clearly places them in the vicinity of evidential markers, as does the functional overlap of the ‘EGO’ marker with generalised markers of ‘best possible evidence’, and the fact that the ‘EGO+TU’ clitic is restricted to contexts of temporal overlap between the Source Situation and the time of utterance. This *de facto* restricts the marker to situations of shared direct (usually visual) evidence, or shared access to the source for an inference. What differentiates the epistemic

authority markers from more typical evidentials is only that they are underspecified for the relationship between the evidence and the encoded situation.

The above is not meant as a claim that epistemic authority markers always originate in evidentials. On the contrary, the Jam/Ngali system provides evidence for a primary system of epistemic authority marking directly originating in a speaker+addressee pronoun (shared authority) and (plausibly) a speaker pronoun (primary authority), respectively; however, this system displays some aspects of a more typical evidential system.

From the argumentation presented so far it follows that the clitic =*ngarndi* ‘EGO’ could be justifiably characterised as an egophoric marker, as a marker of primary epistemic authority, and as an underspecified evidential with a speaker origo and origo shift in questions. Its functional counterpart =*mirndi* ‘EGO+TU’ can be characterised either as a ‘shared epistemic authority’ marker or as an underspecified evidential with symmetrical origo with the further constraint that the Source Situation temporally overlaps with the time of utterance (similarly to the ‘shared current evidence’ marker described for Lakondê; see above). The latter characterisation places it in the vicinity of those evidentials that have been described as displaying mirative functions (see Section 5.2). The findings from Jam/Ngali thus support suggestions that egophoricity, evidentiality and epistemic authority are not separate dimensions, but together constitute a single semantic dimension, that of epistemic access to a Source Situation, which serves as evidence for the Target Situation encoded by the utterance. In this specification, they contrast with markers of epistemic modality, as will be briefly discussed in the following subsection.

5.4 Epistemic authority and epistemic modality

As demonstrated in Sections 2.4, 3.3 and 4.2, in Jaminjung/Ngaliwurru, the two domains of epistemic authority and epistemic modality are formally and functionally distinct: epistemic possibility is marked by a particle *majani* ‘maybe’ (with no necessity counterpart). It meets the definition of an epistemic modal marker in that it conveys the speaker’s lack of knowledge about the truth of the proposition. While the compatibility of *majani* with the shared epistemic authority marker =*mirndi* (see Section 4.2) is unsurprising, its compatibility with =*ngarndi* shows that primary epistemic authority cannot be equated with certainty. This is easily accounted for if we consider that epistemic authority concerns the privileged access to a Source Situation which serves as evidence for the Target Situation: a speaker can claim such privileged access using =*ngarndi* ‘EGO’, whereas the epistemic modal serves to concede incomplete knowledge regarding the actual realisation of the Target Situation.

This clear distinction of epistemic authority from epistemic modality, at least in the case of Jaminjung/Ngaliwurru, again aligns epistemic authority marking with evidentiality; for the latter domain, the principled separation of ‘information source’ and ‘degree of certainty’ has been widely agreed on (for recent discussion and further references see e.g. Nuckolls & Michael 2012: 182-183; Aikhenvald 2014: 12-14).

5.5 Conclusions

As demonstrated in detail in this paper, Jaminjung/Ngaliwurru has a system of (non-obligatory) markers which encode a fundamental distinction between asymmetrical and symmetrical (shared) epistemic authority. The Jam/Ngali system has grammaticalised – evidently in the case of =*mirndi* ‘EGO+TU’, plausibly in the case of =*ngarndi* ‘EGO’ – from enclitic pronouns representing the 1+2 dyad and the 1st person, respectively, as indirectly affected participants. The findings thus provide further evidence for the grammaticalisation path in (11) proposed by Bergqvist & Kittilä (2015), repeated here for convenience.

(11) argument > argument/affected participant > (indirectly?) affected participant/attitude-holder > attitude-holder/epistemic marker > epistemic marker

The discussion showed that the first marker consistently signals primary epistemic authority ('EGO', asymmetrical access) and exhibits origo shift from the speaker in assertions to the addressee in questions. Its shared epistemic authority counterpart ('EGO+TU', symmetrical access) is much more constrained, in that it cannot be employed in the case of established shared knowledge, but only where access to the evidence for a newly arising situation is shared at the time of utterance. The shared epistemic authority marker thus also serves as a device for establishing shared attention – a paradigm case of intersubjectivity, according to Verhagen (2008: 309).

It was argued throughout this paper that the distribution of the two epistemic authority clitics is best accounted for by an analysis which recognises an evidential aspect in their semantics, captured by a distinction between a Source Situation (the evidence for the utterance, to which the asymmetry vs. symmetry of access applies) and a Target Situation (the situation described by the utterance). This places the Jaminjung/Ngaliwurru system in the vicinity of evidentials, for which such a distinction was first proposed (see Section 1 for references). The observation that pronouns can be the diachronic source of both evidentials (de Haan 2003) and of epistemic authority markers constitutes further evidence for a close link between epistemic authority and evidentiality marking.

Section 5 presented additional cross-linguistic evidence for the claim that evidentiality and epistemic authority form a single functional domain which also includes, as one sub-category, what has been described as egophoricity. As the discussion showed, individual evidential markers within attested evidential systems can exhibit characteristics of a generalised or 'default' primary or shared epistemic authority marker, and cognate markers in related languages can oscillate between epistemic authority marking and evidentiality proper. The opposite ends of this domain are characterised by a differentiation of the relationship between Source and Target Situations (evidential marking – e.g. overlap/direct evidence vs. conjecture) and conversely, under-specification of this relationship (epistemic authority marking), as in the case of Jaminjung/Ngaliwurru. The discussion also showed that while both the primary and the shared epistemic authority markers of Jaminjung/Ngaliwurru have close equivalents in other languages, the specific two-way distinction encoded in this language does not have a parallel described in the literature so far.

Apart from being of interest in terms of its diachronic origins, the system of epistemic authority marking in Jaminjung/Ngaliwurru therefore contributes to the typology of the evidential/epistemic domain, and of the grammatical encoding of complex epistemic perspective, and as such, it also contributes to mounting evidence for the fundamental role of interaction in grammar.

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Abbreviations

1, 2, 3	1 st , 2 nd , 3 rd person
1+2	1 st and 2 nd person (“inclusive”)
1+3	1 st and 3 rd person (“exclusive”)
ABL	ablative
ALL	allative
AUX	auxiliary (in Kriol)
CONTR	contrastive / emphatic marker
CTOP	contrastive topic marker
DAT	dative
DEM	demonstrative (discourse use)
DIR	directional
DIST	distal demonstrative
DU	dual
DUBIT	dubitative
EGO	primary epistemic authority
ERG	Ergative case
FS	false start
HYP	hypothetical modality
IMP	imperative
IPFV	(past) imperfective
INTERJ	interjection
KIN2	2 nd person possessor of kin
L_ABL	ablative with locational nominals
LOC	locative
OBL	oblique (pronominal clitic)
PL	plural
POSS	possessor
POT	potential modality
PROPR	propriative (‘having’)
PROX	proximal demonstrative
PRS	present tense
PST	past perfective
RDP	reduplication
RESTR	restrictive marker (‘just’, ‘only’)
SEQ	sequential marker (‘and then’)
SG	singular
SUBORD	subordination marker
TR	transitivity marker (in Kriol)
\	final (falling) intonation
<u>Underline</u>	marks Kriol words and passages in examples

References

- Aikhenvald, Alexandra Y. 2004. *Evidentiality*. Oxford and New York: Oxford University Press.
- Aikhenvald, Alexandra Y. 2014. The grammar of knowledge: a cross-linguistic view of evidentials and the expression of information source. In Alexandra Y. Aikhenvald, R. M. W. Dixon (eds.), *The Grammar of Knowledge. A Cross-linguistic Typology*, 1–51. Oxford: Oxford University Press.
- Bergqvist, Henrik. 2016. Complex epistemic perspective in Kogi (Arwako). *International Journal of American Linguistics*, 82(1): 1–34.
- Bergqvist, Henrik. 2017. The role of ‘perspective’ in epistemic marking. *Lingua*, 186–187: 5–20.
- Bergqvist, Henrik, Seppo Kittilä. 2015. *Non-selected arguments as epistemic marking*. Paper presented at the 48th Annual Meeting of the Societas Linguistica Europaea, Leiden, 2–5 September 2015.
- Bickel, Balthasar. 2008. Verb Agreement and Epistemic Marking: a typological journey from the Himalayas to the Caucasus. In B. Huber, M. Volkart, P. Widmer (eds.), *Chomolangma, Demawend und Kasbek. Festschrift für Roland Bielmeier zu seinem 65. Geburtstag*, 1–14. Halle: International Institute for Tibetan and Buddhist Studies.
- Brugman, Claudia, Monica Macaulay. 2015. Characterizing evidentiality. *Linguistic Typology*, 19(2): 201–237.
- Chadwick, Neil. 1984. *The relationship of Jingulu and Jaminjungun*. Batchelor, N.T.: School of Australian Linguistics.
- Chadwick, Neil. 1997. The Barkly and Jaminjung languages: a non-contiguous genetic grouping. In Tryon Darrell T., Michael Walsh (eds.), *Boundary rider: Studies in the lexicology and comparative linguistics of Australian languages*, 95–106. Canberra: Pacific Linguistics.
- Chooi, Soonja. 1995. The development of epistemic sentence-ending modal forms and functions in Korean children. In Joan Bybee, Suzanne Fleischman (eds.), *Modality in Grammar and Discourse*, 165–204. Amsterdam: John Benjamins.
- Creissels, Denis. 2008. Person variations in Akhvakh verb morphology: functional motivation and origin of an uncommon pattern. *Sprachtypologie und Universalienforschung*, 61(4): 309–325.
- de Haan, Ferdinand. 2003. *Visual evidentiality and its origins*. Manuscript, University of Arizona.
- DeLancey, Scott. 1990. Ergativity and the cognitive model of event structure in Lhasa Tibetan. *Cognitive Linguistics*, 1(3): 289–321.
- DeLancey, Scott. 1997. Mirativity: The grammatical marking of unexpected information. *Linguistic Typology*, 1: 33–52.
- DeLancey, Scott. 2001. The mirative and evidentiality. *Journal of Pragmatics*, 33: 369–382.
- Dickinson, Connie. 2000. Mirativity in Tsafiki. *Studies in Language*, 24(2): 379–422.
- Donaldson, Tamsin. 1980. *Ngiyambaa. The language of the Wangaaybuwan*. Cambridge: Cambridge University Press.
- Drude, Sebastian. 2005. *Tense, aspect and mood in Awetí verb-paradigms: analytic and synthetic forms*. Paper presented at the DOBES Symposium ‘Progress in Endangered Languages Research’, May 2005, Nijmegen.
- Eberhard, David M. 2009. *Mamaindê Grammar: A Northern Nambikwara language and its cultural context*. PhD thesis, Vrije Universiteit Amsterdam.
- Evans, Nicholas. 2001. The last speaker is dead - long live the last speaker. In Paul Newman, Martha Ratliff (eds.), *Linguistic Fieldwork*, 250–281. Cambridge: Cambridge University Press.
- Evans, Nicholas. 2005. *View with a View: Towards a Typology of Multiple Perspective Construction*. Paper presented at the Proceedings of the thirty-first annual Meeting of the Berkeley Linguistics Society, Berkeley.
- Faller, Martina. 2002. *Semantics and Pragmatics of evidentials in Cusco Quechua*. PhD thesis, Stanford University.
- Garrett, Edward J. 2001. *Evidentiality and Assertion in Tibetan*. PhD thesis, University of California, Los Angeles.
- Gipper, Sonja. 2011. *Evidentiality and intersubjectivity in Yurakaré: An interactional account*. PhD thesis, University of Nijmegen.
- Gipper, Sonja. 2014. Intersubjective evidentials in Yurakaré: Evidence from conversational data and a first step toward a comparative perspective. *Studies in Language*, 38(4): 792–835.
- Green, Ian, Rachel Nordlinger. 2004. Revisiting Proto-Mirndi. In Claire Bowern, Harold Koch (eds.), *Australian Languages. Classification and the Comparative Method*, 291–311. Amsterdam: John Benjamins.
- Grzech, Karolina Zofia. 2016. *Discourse enclitics in Tena Kichwa: a corpus-based account of information structure and epistemic meaning*. PhD thesis, School of Oriental and African Studies, University of London.
- Hargreaves, David. 2005. Agency and intentional action in Kathmandu Newar. *Himalayan Linguistics*, 5: 1–48.
- Harvey, Mark. 2008. *Proto Mirndi. A discontinuous language family in northern Australia*. Canberra: Pacific Linguistics.
- Hayano, Kaoru. 2011. Claiming epistemic primacy: yo-marked assessments in Japanese. In Tanya Stivers, Lorenza Mondada, Jakob Steensig (eds.), *The Morality of Knowledge in Conversation*, 58–81. Cambridge: Cambridge University Press.
- Hayano, Kaoru. 2013. *Territories of knowledge in Japanese interaction*. PhD thesis, University of Nijmegen.
- Heritage, John. 2012a. The Epistemic Engine: Sequence Organization and Territories of Knowledge. *Research on Language and Social Interaction*, 45(1): 30–52.
- Heritage, John. 2012b. Epistemics in Action: Action Formation and Territories of Knowledge. *Research on Language & Social Interaction*, 45: 1–29.
- Himmelman, Nikolaus P. 1998. Documentary and descriptive linguistics. *Linguistics*, 36: 161–195.
- Hintz, Daniel, Diane Hintz. 2017. The evidential category of mutual knowledge in Quechua. *Lingua*, 186–187: 88–109.

- Hyslop, Gwendolyn. 2014. The grammar of knowledge in Kurtöp: evidentiality, mirativity, and expectation of knowledge. In Alexandra Y. Aikhenvald, R.M.W. Dixon (eds.), *The Grammar of Knowledge. A Cross-linguistic Typology*, 108–131. Oxford: Oxford University Press.
- Jakobson, Roman. 1971 [1957]. Shifters, verbal categories and the Russian verb. In Roman Jakobson (ed.), *Selected writings Volume II: Word and language*, 130–147. The Hague: Mouton.
- Kalsang, Jay Garfield, Margaret Speas, Jill de Villiers. 2013. Direct evidentials, case, tense and aspect in Tibetan: evidence for a general theory of the semantics of evidentials. *Natural Language and Linguistic Theory*, 31: 517–561.
- Kamio, Akio. 1994. The theory of territory of information: The case of Japanese. *Journal of Pragmatics*, 20: 67–100.
- Kamio, Akio. 1995. Territory of information in English and Japanese and psychological utterances. *Journal of Pragmatics*, 24: 235–264.
- Kamio, Akio. 1997. Evidentiality and some discourse characteristics in Japanese. In Akio Kamio (ed.), *Directions in Functional Linguistics*, 145–172. Amsterdam: John Benjamins.
- Knuchel, Dominique. 2015. *A comparative study of egophoric marking: Investigating its relation to person and epistemic marking in three language families*. MA thesis, Stockholm University.
- Landaburu, Jon. 2007. La modalisation du savoir en langue Andoke (Amazonie Colombienne). In Zlatka Guentchéva, Jon Landaburu (eds.), *L'énonciation Médialisée II: Le Traitement Épistémologique de L'information: illustrations amérindiennes et caucasiennes*, 23–47. Leuven & Paris: Editions Peeters.
- LaPolla, Randy. 2003. Evidentiality in Qiang. In Alexandra Y. Aikhenvald, R.M.W. Dixon (eds.), *Studies in Evidentiality*, 63–78. Amsterdam: John Benjamins.
- Laughren, Mary. 1982. A preliminary description of propositional particles in Warlpiri. In Stephen Swartz (ed.), *Papers in Warlpiri Grammar, in memory of Lothar Jagst*, 128–164. Berrimah, N.T.: Summer Institute of Linguistics.
- Lazard, Gilbert. 2001. On the grammaticalization of evidentiality. *Journal of Pragmatics*, 33: 359–367.
- Leiss, Elisabeth. 2012. Epistemicity, Evidentiality, and Theory of Mind (ToM). In Werner Abraham, Elisabeth Leiss (eds.), *Modality and Theory of Mind Elements across Languages*, 39–66. Berlin: Mouton de Gruyter.
- Loughnane, Robyn. 2009. *A Grammar of Oksapmin*. PhD thesis, University of Melbourne.
- Loughnane, Robyn. 2011. *Conjunct-Disjunct Alignment in Oksapmin*. Paper presented at the Humboldt University Berlin.
- Lowe, Ivan. 1999. Nambiquara. In R.M.W. Dixon, Alexandra Y. Aikhenvald (eds.), *The Amazonian Languages*, 269–291. Cambridge: Cambridge University Press.
- Mayer, Mercer. 1969. *Frog, where are you?* New York: Dial Press.
- McGregor, William B. 2002. *Verb classification in Australian languages*. Berlin: Mouton de Gruyter.
- Modicom, Pierre-Yves. 2012. Shared knowledge and epistemic reductionism: Covert semantics of German Modal Particles. In Werner Abraham, Elisabeth Leiss (eds.), *Covert Patterns of Modality*, 281–311. Cambridge: Cambridge Scholars Publishing.
- Molochieva, Zarina. 2007. *Category of Evidentiality and Mirativity in Chechen*. Paper presented at the Conference on the Languages of the Caucasus, 7–9 December 2007, Max Planck Institute for Evolutionary Anthropology, Leipzig.
- Molochieva, Zarina, Johanna Nichols. 2011. *The diachronic trajectory of ethical datives: Chechen and Ingush*. Presentation given at the 44th Annual Meeting of the Societas Linguistica Europaea, 8–11 September 2011, Logroño, Spain.
- Mushin, Ilana. 2000. Evidentiality and deixis in narrative retelling. *Journal of Pragmatics*, 32(7): 927–957.
- Mushin, Ilana. 2012a. *A Grammar of (Western) Garrwa*. Berlin/Boston: Walter de Gruyter.
- Mushin, Ilana. 2012b. “Watching for Witness”. Evidential strategies and epistemic authority in Garrwa conversation. *Pragmatics and Society*, 3(2): 270–293.
- Newry, David, Keeley Palmer. 2003. “Whose language is it anyway?” Rights to restrict access to endangered languages: a North-East Kimberley example. In Joe Blythe, R. McKenna Brown (eds.), *Maintaining the Links: Language, Identity and the Land*. Proceedings of the Seventh FEL Conference, Broome, Western Australia, 22–24 September 2003. Bath: Foundation for Endangered Languages.
- Nichols, Johanna. 2011. *Ingush Grammar*. Berkeley: University of California Press.
- Nikolaeva, Irina. 1999. The semantics of Northern Khanty evidentials. *Journal de la Société Finno-Ougrienne* 88: 131–159.
- Nuckolls, Janis, Lev Michael. 2012. Evidentials and evidential strategies in interactional and socio-cultural context. *Pragmatics and Society*, 3(2): 181–188.
- Peterson, Tyler. 2013. Rethinking Mirativity: The Expression and Implication of Surprise. Manuscript. Retrieved from http://semanticsarchive.net/Archive/2FkYtg4O/Rethinking_Mirativity.pdf.
- Raymond, Geoffrey, John Heritage. 2006. The epistemics of social relations: Owning grandchildren. *Language in Society*, 35: 677–705.
- Ritz, Marie-Eve, Eva Schultze-Berndt. 2015. Time for a change? The semantics and pragmatics of marking temporal progression in an Australian language. *Lingua*, 166: 1–21.
- San Roque, Lila, Simeon Floyd, Elisabeth Norcliffe. 2017. Evidentiality and interrogativity. *Lingua* 186–187: 120–143.
- San Roque, Lila, Simeon Floyd, Elisabeth Norcliffe, in press. Egophoricity: an introduction. In Simeon Floyd, Elisabeth Norcliffe, Lila San Roque (eds.), *Egophoricity*, Amsterdam/Philadelphia: John Benjamins.
- San Roque, Lila, Robyn Loughnane. 2012. The New Guinea Highlands evidentiality area. *Linguistic Typology*, 16: 111–167.

- San Roque, Lila, Bambi Schieffelin. 2017. Learning how to know: Egophoricity and the grammar of Kaluli (Bosavi, Trans New Guinea), with special reference to child language. In Simeon Floyd, Elisabeth Norcliffe, Lila San Roque (eds.), *Egophoricity*, Amsterdam/Philadelphia: John Benjamins.
- Schultze-Berndt, Eva. 2000. *Simple and complex verbs in Jaminjung: A study of event categorisation in an Australian language*. PhD thesis, University of Nijmegen.
- Schultze-Berndt, Eva. 2003. Preverbs as an open word class in Northern Australian languages: synchronic and diachronic correlates. In Geert Booij, Jaap van Marle (eds.), *Yearbook of Morphology 2003*, 145–177. Dordrecht: Kluwer.
- Schultze-Berndt, Eva. 2008. What do “do” verbs do? The semantic diversity of generalised action verbs. In Elisabeth Verhoeven, Stavros Skopeteas, Yong-Min Shin, Yoko Nishina, Johannes Helmbrecht (eds.), *Studies on Grammaticalization*, 185–208. Berlin: Mouton de Gruyter.
- Schultze-Berndt, Eva. to appear. Two classes of verbs in Northern Australian languages: implications for the typology of polycategoriality. In Valentina Vapnarsky, Edy Veneziano (eds.), *Lexical Polycategoriality. Cross-linguistic, cross-theoretical and language acquisition approaches*. Amsterdam: John Benjamins.
- Schultze-Berndt, Eva, Patrick Caudal. 2016. *On the reality of hypothetical possibilities: evidence from Jaminjung / Ngaliwurru*. Paper presented at the SPINFEST (Semantics and Pragmatics in the North), York, 7 July 2016.
- Schultze-Berndt, Eva, Patrick Caudal. in prep. The semantics of modality in Jaminjung/Ngaliwurru. Manuscript, University of Manchester.
- Schultze-Berndt, Eva, Candide Simard, Mark Harvey, Dorothea Hoffmann, Jaminjung and Ngaliwurru communities. 2016. Annotated audiovisual corpus of Jaminjung and Ngaliwurru, 1993–2015. DOBES Archive, <http://dobes.mpi.nl/research/>.
- Simard, Candide. 2010. *The Prosodic Contours of Jaminjung, a language of Northern Australia*. PhD thesis, University of Manchester.
- Simard, Candide. 2013. *Prosodic encoding of declarative, interrogative and imperative sentences in Jaminjung, a language of Australia*. Paper presented at the INTERSPEECH conference 2013.
- Simard, Candide. 2016. *Requesting information or mobilizing response: the prosody of sentence-final tags in Jaminjung*. Paper presented at the 8th European Australianist Meeting, SOAS (London), 24 Sept 2016.
- Skribnik, Elena, Olga Seesing. 2014. Evidentiality in Kalmyk. In Alexandra Y. Aikhenvald, R.M.W Dixon (eds.), *The Grammar of Knowledge. A Cross-linguistic Typology*, 148–170. Oxford: Oxford University Press.
- Speas, Margaret. 2008. On the Syntax and Semantics of Evidentials. *Language and Linguistics Compass*, 2(5): 940–965.
- Speas, Margaret. 2010. Evidentials as generalized functional heads. In Anne-Marie Di Sciullo (ed.), *Interface legibility at the edge*, 127–150. Oxford: Oxford University Press.
- Stivers, Tanya, Lorenza Mondada, Jakob Steensig. 2011. Knowledge, morality and affiliation in social interaction. In Tanya Stivers, Lorenza Mondada, Jakob Steensig (eds.), *The Morality of Knowledge in Conversation*, 3–24. Cambridge: Cambridge University Press.
- Telles, Stella, W. Leo Wetzels. 2006. Evidentiality and Epistemic Mood in Lakondê. In J. Grazyna, J. Rowicka, Eithne B. Carlin (eds.), *What's in a Verb? Studies in the Verbal Morphology of the Languages of the Americas*, 235–252. Utrecht: LOT Publications.
- Tournadre, Nicolas, Randy LaPolla. 2014. Towards a new approach to evidentiality: Issues and directions for research. *Linguistics of the Tibeto-Burman Area*, 37(2): 240–263.
- van Egmond, Marie-Elaine. 2012. *Enindhilyakwa phonology, morphosyntax and genetic position*. PhD thesis, University of Sydney.
- Verhagen, Arie. 2008. Intersubjectivity and the architecture of the language system. In Jordan Zlatev, Timothy P. Racine, Chris Sinha, Esa Itkonen (eds.), *The Shared Mind: Perspectives on Intersubjectivity*, 307–331. Amsterdam: John Benjamins.
- Verstraete, Jean-Christophe, An Van linden. 2008. The nature and origins of counterfactuality in simple clauses: cross-linguistic evidence. *Journal of Pragmatics*, 40: 1865–1895.
- Wilkins, David P. 1986. Particles/clitics for criticism and complaint in Mparntwe Arrernte (Aranda). *Journal of Pragmatics*, 10(5): 575–596.
- Zariquiey, Roberto. 2015. The category of addressee's perspective in Kakataibo (Panoan, Peru). *Sprachtypologie und Universalienforschung*, 68(2): 143–164.