

View with a View: Towards a Typology of Multiple Perspective Constructions

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1. Introduction*

The human capacity for social intelligence depends on the ability to recognize that others may have a different perspective from ourselves. Yet though there is a vast literature on the effects of viewpoint on language, grammar, narrative, and conversational discourse, it largely assumes that a single viewpoint is operative at any one time: distinct viewpoints, to the extent that they occur, reflect shifts from one conversational participant to another, between clauses or turns. In this paper I develop a preliminary typology of how languages enable the encoding of two perspectives at once, whether between two conversational participants, or by taking two reference points in temporal, spatial, social, attentional or epistemic space. My main focus will be on grammatical subsystems, but I will also include certain tightly-organized lexical domains. Multiple perspective constructions, we shall see, are far more widespread than is normally believed, whether their guise is familiar – e.g. definite articles, complex tense – or exotic, like many of the examples to be presented here.

Let us begin with three orienting examples – first, two from my own field-work on Australian Aboriginal languages, then a more familiar one, complex tenses, from Standard Average European.

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1.1. Trirelational / Triangular Kin Terms in Australian Languages

Kinship terms like “mother” or “mum” are two place predicates, and reference can only be achieved once we know the “anchor” of the relationship. In English we can either specify this explicitly (“my mother”) or leave it to pragmatics. When a child says “mum” to an adult, this usually means “my mum,” when an adult asks a child, “Is mum home?” this is construed as “Is your mum home,” and when a child-care worker says “Johnny seemed unhappy today; I think its because mum’s sick,” this means “his mum.” In each case a single referent is selected to be the anchor. But a number of Australian languages have “triangular” or “trirelational” kin terms, which allow the specification of two anchors at once (Laughren 1982, Merlan 1989). One such language is Bininj Gun-wok (Evans 2003; Garde 2003), which possesses a tightly structured lexical set of around 100 terms known as *gun-dembui*; this set also has a number of morphological peculiarities, including formatives like *-ngu* only found in the *gun-dembui* register. The following examples illustrate these terms’ use:

- (1) (a) *al-garrng* ‘the one who is your mother and my daughter [assuming that I am your mother’s mother]’
- (b) *al-doingu* ‘the one who is your daughter and my mother [assuming that I am your daughter’s child]’

Gun-dembui terms thus simultaneously encode two perspectives on the referent: that of the speaker (‘my daughter’ with *al-garrng*) and that of the hearer (‘your mother’). The correct use of *gun-dembui* terms does not only require speakers to know how each community member relates to each other member, but it also fosters the ability to take two perspectives at once in acts of reference. This skill, though highly valued by the speech community, is rarely mastered before adulthood.

1.2. False Belief: Differentially Representing Who Knows What

Dalabon, closely related to Bininj Gun-wok, possesses a form *molkkûn(h)*-, generally used as an adverbial prefix inside polysynthetic verbs, though also sometimes as a free form (Evans, Merlan and Tukumba 2004). I first encountered this prefix in the collocation *molkkûnh-bon* [*bon*: ‘go’], with the translation ‘sneaking around’, denoting trespassers entering someone’s clan lands without permission. But consideration of a wider range of examples shows its semantics to be more complex:

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- (2) Deh- **molkkunh**-bo-ng dabangh nahda,
 2diff.sides.Assert- unknown- go-PstPerf yesterday here
 mak yila-bengkey.
 NEG 1pl- know.IRR
 ‘You two came here yesterday, without letting us know, we didn’t know it.’¹
- (3) Kardû ngah- **molkkûn**- do-niyan bo.
 maybe 1sg.Assert- unknown- die-FUT PARTICLE
 ‘I might die sometime without anyone [e.g. my family] knowing about it.’
- (4) Nunda nunh djayi- djangka- n
 DEM DEM 2sg:SUBORD- hunt- PR
 kah- marnu-barlok-wa- rru-niyan ngah- wanjingh
 2/1:Assert-BEN- quick- follow-RR-FUT 1sg:Assert-one
 nidjarra ngah- ni dja-rok- yawa- n kardu **molkkun**
 here 1sg:Assert-sit 1/2-appearance-search-PR maybe unknown
 rakalk wuku- marnu-burlhmu.
 murderer 3/3:APPR- BEN- appear.PR
 ‘This time when you go out hunting come back to me quickly, I’ll be here alone looking out for your return, maybe a murderer will ambush me without anyone knowing.’
- (5) (Of a situation where people are camped in seemingly dry country without realizing that water lies under the rocks where they are sleeping:)
 Kardû ka-h- **molkkûn**-kolh- yu
 maybe 3- Assert-unknown-water-lie.PR
 ‘Maybe there is water there that no one knows about.’

What is common to all these examples with *molkkûn*- is that the situation denoted by the rest of the clause is unknown to some unspecified person who one would expect to know: the speaker him- or herself at some prior moment (2), the speaker’s family in (3), the hearer and others in (4), and the people camping in

¹ The following non-obvious abbreviations are used in glosses: APPR(ehensive); Assert(ative); BEN(efactive); COMM(entative); ENG.EXCL (engagement excluding interlocutor); ENG.INCL (engagement including interlocutor); FP (Far Past); GEN(itive); INF(erential); IRR(ealis); LOG(ophoric); PR(esent); PC (Past Completive); POSS.JUICE (possessive classifier for objects used for juice); PstPerf (Past Perfective); REP(ortative); RR (Reflexive/Reciprocal); S (subject); SS (same subject). The numbers 1, 2, 3 represent first, second and third person respectively, with 3.I in Andoke representing third person, first agreement class; where two numbers are separated by a backslash (e.g. 2/1) this means ‘second person subject acting on first person object’ and so forth.

(5). The common use of *molkkûn-bon* for ‘sneaking, trespassing’ is simply a particular case of this, where the trespasser’s activities are unknown to the custodian of clan lands. The multiple epistemic perspectives on the represented event can be represented as follows:

- (6) Speaker knows and asserts: X
 Speaker knows and asserts: someone Y doesn’t/didn’t know that X

1.3. A More Familiar Example: Complex Tense

Complex tenses – sometimes known as “absolute-relative tenses” (Comrie 1985) – are familiar from West European languages (Bull 1963). More or less comparable phenomena are also found elsewhere in the world, such as the “double past” in Korean. Complex tenses locate a reported event with respect to two temporal reference points: the Speech Event, and a Secondary (Report) Frame. Thus in (7a) the reported event is after the Report Frame, which in turn is before the Speech Event, while in (7b) the narrated event is before the Report Frame, which is before the Speech Event.

(7a) John said he *would be* at work.



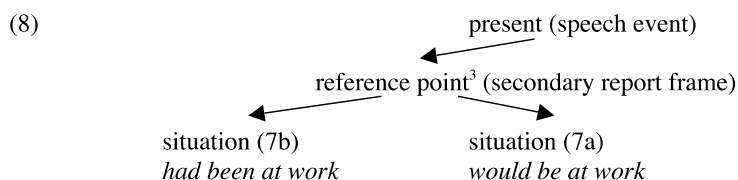
(7b) John said he *had been* at work.



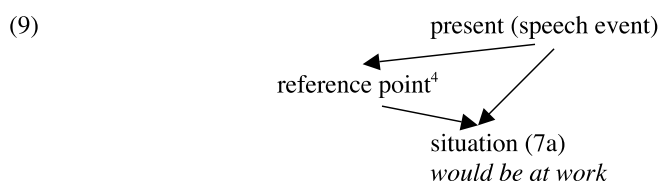
There are two approaches to analyzing such systems. The first, exemplified by Comrie (1985), locates the Reported Event with respect to the Reference Event, which is located with respect to the Speech Event; there is no direct relation of the Reported Event to the Speech Event (8). I shall term such situations *metaperspective* (more on this in §3.4): a secondary perspective is located with respect to a primary one.

² The second line gives the terminology employed by Comrie (1985:54ff).

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An alternative analysis of complex tense systems has been advocated by Reichenbach (1947) and Hornstein (1977): the Reported Event is simultaneously located with respect to the Reference Event AND the Speech Event (9). I shall term this *double perspective*: there is independent calculation of values from two independent perspectives or standpoints.



It is not my purpose to adjudicate between these analyses here; rather, they illustrate two ways that multiple perspective can be analyzed, using familiar linguistic material.

1.4. Multiple Perspective in Language Typology

There has been a general neglect of multiple perspective in linguistic typology. The two classic attempts to elaborate a calculus of semantic possibilities in inflectional systems, Jakobson (1957) and Mel'čuk (1991), basically restrict themselves to binary relations and do not explicitly raise the possibility of multiple perspective.⁵ Within the French tradition, Ducrot (1984) has developed a number of relevant ideas regarding "polyphony" of representations within single sentences, and within construction grammar there has been substantial recent interest in how different mental spaces may be "blended" (e.g. Fauconnier and Turner 1994, 1997, 2002) though this has yet to be developed into a comprehen-

³ Diagram adapted from Comrie (1985:70).

⁴ Diagram in the spirit of Reichenbach (1947:290) and Hornstein (1977:522, 526, 528-9), though both these authors use a different visualization with all three points (using the terms S for "point of speech," E for "point of the event," and R for "point of reference") placed on a single line. See also Jespersen (1924:256).

⁵ There is just one cell in Jakobson's table that includes a ternary relation: "EE/E" in the cell intersecting the axis "characterizing with reference to the speech event, with reference to the speech event itself" with "characterizing the narrated event itself, with reference to another narrated event." This cell is occupied by "evidential" [witnessed/ by hearsay] but, on my understanding of Jakobson's scheme, could also include complex tenses.

sive typology. The most serious attention to multiple viewpoint has undoubtedly come from the narratological literature, where there has been a sustained interest in multiple perspectives in a tradition running through Bakhtin (1981), Uspenskij (1973 [1970]), and Fludernik (1993); see Schmid (2003) for a good recent survey. Particularly important has been work on so-called “free indirect speech” (Banfield 1979), which blends the perspectives of the speaker and the represented subject within a single clause. By and large, though, this literature has concentrated on literary texts, rather than examining the way multiple perspective can be encoded within the grammars of ordinary spoken languages. The time is therefore ripe for us to begin to look more systematically at how far the simultaneous encoding of multiple perspectives is afforded by the grammatical structures of ordinary languages.

2. A Psychological Interlude: Beyond Egocentric Perspective

Before proceeding to our main topic, it is worth tracing a number of developments in psychology that have led to a growing recognition of the importance of perspective-taking skills, hand in hand with the growing realization that the ability to model other minds is the central ingredient of “Machiavellian skill” or “social intelligence” (Humphrey 1976). It has become clear, for example, that speakers substantially modify referential descriptions according to their assessment of other people’s knowledge (Kingsbury 1968, Krauss and Fussell 1991, Krauss and Chiu 1998). Psychological studies of how English speakers interpret quantifiers like “not many” vs. “a few” suggest they regularly model prior expectations of amount by both the speaker and the hearer (Moxey and Sanford 1993).

Within the “theory of mind” literature, “false belief” experiments reveal the inability to distinguish what we know ourselves from what others know to be typical of autistic syndromes (Baron-Cohen 1987, Wimmer and Perner 1983, Leslie and Frith 1988). Such experiments require mental representations like “I know that the key is no longer hidden in the box, and I know that X believes that it still is,” and normal children are adept at the multiple perspective taking this requires. Another line of research has examined the coexistence of “real” and “pretend” representations during imaginative play (Leslie 1987) and the way this requires what McCune-Nicolich (1981) called “double knowledge.”

The cognitive skills necessary for multiple perspective taking have been pushed back to increasingly early phases of the child’s development. On the traditional Piagetian view, it takes children many years to move out of an egocentric phase, dominated by a single perspective, namely their own: the young child was seen as unable to differentiate between her own view and that of others (Piaget 1959:267, fn. 1). More recent research has shown, however, that already before three years of age, children can understand differences in what people can and cannot see (Masangkay et al. 1974; Flavell et al. 1981). And research on the learning of multiple lexical items for the same referent is best accounted for in terms of early multiple perspective taking (Clark 1997), suggesting that children “make use of multiple perspectives from age one on” (Clark 1997:30).

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Taken together, these studies demonstrate the wide range of domains in which multiple perspective operates, and its early development in the child. A recent synthesis by Perner (1991) identifies “three steps in the child’s development of commonsense psychology,” with a progression from

- primary representation (single model) to
- secondary representation (multiple or complex models) to
- metarepresentation (modelling models)

With the ability to represent multiple perspectives being both many-faceted and developmentally early, we should not be surprised to see evidence of it being structured into the grammatical systems of various languages in a variety of ways.

3. Preliminaries to a Typology

3.1. Initial Definition

I define multiple-perspective constructions as *constructions that encode potentially distinct values, on a single semantic dimension, that reflect two or more⁶ distinct perspectives or points of reference*. (10)-(12) reprise the three phenomena we have considered so far, showing how they fit this definition.

- (10) Triangular kin terms: K1 (daughter) w.r.t. speaker, K2 (mother) w.r.t. hearer
Semantic dimension: interpersonal social relationship
Distinct perspectives: speaker; hearer
Distinct values: daughter; mother
Construction type: lexical (in tightly structured lexical set)
- (11) *molkkûn*: event is known [to have occurred] by speaker, at moment of speech, asserted to have been not known by some other (unspecified) knower (at moment of speech, or at other time)
Semantic dimension: epistemic modality
Distinct perspectives: speaker, unspecified other
Distinct values: known and asserted; unknown
Construction type: adverbial prefix on verb
- (12) Absolute/ relative tense, e.g. English “future in the past”
Semantic dimension: tense

⁶ I have formulated the definition to leave open the possibility of more than two perspectives being taken at once, though I have not found clear cases of this yet. One example, though, comes from the domain of complex tense. Comrie (1985:76), citing Imbs (1960:131-135), mentions the possibility of what we might call triple tense perspective, in connection with French *temps surcomposés*, such as the following quote from Stendhal: *quand il avait eu rassemblé les plus effrontés de chaque métier, il leur avait dit ‘régnons ensemble’* [‘when he had gathered together the most advanced of each trade, he had said to them “let us rule together”’]. As Comrie points out, the verb of the first clauses goes one step further back into the past than the pluperfect, i.e. it is a past in the past in the past.

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Distinct perspectives: speech event, secondary (report) frame
Distinct values: future, past
Construction type: periphrastic tense construction

Note that I will not make a terminological distinction here between *perspective* or *viewpoint*, as a psychological standpoint, and *point of reference* or *origo*, as an objective reference point not requiring the postulation of a representing mind. In the examples above, the kinship relations in *gun-dembui* and the complex tense relations are both external facts accessible to all, and not requiring any of the assumptions – or incurring any of the epistemic limitations – that go with modelling the inferential question of what others know or do not know, as in the *molkkûn* example. In fact there is a great deal of variability in the use of the terms *point of view*, *perspective*,⁷ and *reference point* across the various literatures, something I will not attempt to standardize here. It may ultimately, however, be desirable to make a systematic distinction between “psychological” and “external” perspectives, because of the different symmetries involved: with the psychological uses the speaker⁸ will always be epistemically privileged, introducing skewings with respect to the other perspective (some of which we will return to in §4.4), whereas in the “objective” uses there is no fundamental difference between what can be worked out from the two reference points.

3.2. Constructional Focus

Now let us turn to the term *construction*. By focusing on constructions as the unit, we can include many phenomena, such as periphrastic tense constructions, or combinations of particles with particular tense/mood inflections, which we would not be able to include if we only look at inflections. On the other hand, by requiring that there be a conventionalized construction, we leave out of account the many ways in which the infinite possibilities of natural language can be employed to construct multiple perspectives by chaining together clauses (13) or building up complex phrases (14); these are one-off products of creative discourse rather than constructional possibilities of the grammar. I will, however, include iterations of inflectional markers (such as the Korean double past, or the chaining of evidential suffixes to be discussed below) where there appear to be grammatical constraints on their iteration.

- (13) The latter and other passages by Tournefort and later French writers provide handles for Alain Grosrichard... to construct a book-length fantasy about what he believes eighteenth century French readers believed about what Tournefort and others believed about what their

⁷ And though “perspective” is often given a distinctly subjective cast, in narratology for example, its origins in the theory of perspectival painting are entirely objective.

⁸ At least in declaratives; in questions the epistemic authority shifts to the hearer – cf. Hargreaves (1991).

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sources believed about the enticingly forbidden world of the Sultan's harem. (In good post-modern style, Grosrichard adds an epilogue to ensure that his readers don't imagine that he believes the make-believe of what the others believed.)

(Miles 2000:15)

- (14) *Het was gebouwd als ruïne, dat moet een Duitse specialiteit zijn. Niet af kunnen wachten, een voorschot nemen op het verleden van de toekomst.* 'It was built as a ruin – that must be a German specialty. Not being able to wait, wanting to get a sneak preview on the future past.'
(Nooteboom 1998:210, 2001:172)

Constructions provide a relatively generous space within which multiple perspectives may be co-coded.

At the tightest level of integration, there may be true simultaneity of the two perspectives. This is commonest in non-linear modalities, such as sign language: Perniss (forthcoming), for example, discusses an example where space is simultaneously represented from narrator and character perspectives, and we shall say more on this below.⁹ But it may also happen, in spoken language, through the use of portmanteaux, where a single lexeme or morpheme simultaneously encodes two perspectives, such as the various particles or monomorphemic demonstrative roots and logophoric pronouns that we will discuss in §4. In theory we could also imagine different perspectives being represented on distinct but spliced coding tiers in spoken language (say, a consonantal skeleton and vocalic or infixed fillers), but I am not aware of any example of this.

At the next level of integration, we may have a flat constructional unit, with different slots coding information from different perspectives. We will discuss a clear case of this in §5, when we look at several Papuan languages where person deixis is calculated absolutely for the object slot and relatively for the subject slot. Another example, already discussed, is the use of one prefixal slot (the adverbial slot containing *molkkûn-* in Dalabon) to encode the ignorance of some person, and of another prefixal slot (the assertative prefix *-h-*) for the speaker to assert the proposition as true.

Recursion, as mentioned, may also be employed, though here it can be difficult to draw the line between creative recursion, where the speaker can employ productive recursive embedding (as in (13)), which does not qualify as a construction, and grammatically ratified recursion – typically constrained to certain value combinations, and degrees of embedding – sometimes attested inside affixal paradigms. An example is Eastern Pomo (as cited in Aikhenvald 2004:92), where the nested evidential suffixes represent different knowledge sources in a metarepresentation, i.e. the speaker attributes to oral tradition the report of an auditory perception by the old man of an act of walking out.

⁹ See also some interesting examples in Dudis (2004).

- (15) *bà= xa= khí*
 then= they.say= 3person.agent
xówaqa- nk'e- e.
 outwards.move- NON.VISUAL.SENSORY- HEARSAY
 ‘Then he started to walk out, it is said (the old man villain, who is blind,
 heard the hero start to walk out).’

A clear example of evidential nesting limited by the grammar to two degrees of recursion is Archi (Kibrik 1998:462), whose two-part periphrastic verb constructions allow the inflection of an inner “commentative” on the lexical verb (attributing the information to indirect speech) and an outer “inferential” on both the lexical verb and the periphrastic auxiliary that combines with it (16), to give embedded knowledge-source meanings like ‘[inferred that [someone said that [Y]]]’.

- (16) *warXar- er- ši ewdi- li.*
 lie.down:Affirmative:constative- COMM- INFER be- PERF
 ‘Someone must have said he lay down.’

A final type of technique for expressing double perspective should be mentioned: the use of Q-implicatures off lower-commitment modal categories. In many languages it is possible to use a grammatical category like the subjunctive to attribute the source of knowledge of X to someone other than the speaker. In German, for example, the independent subjunctive is frequently used in news reporting to attribute statements to other sources, such as political figures. By the maxim of quantity this then implicates that the speaker does not in fact believe X to be necessarily true, giving a double-perspective structure of the type “someone asserts that X; speaker does not necessarily believe X.” But there is an asymmetry in the semantic relation of the two knowledge sources to the proposition: while it is entailed that e.g. a political leader says or claims X, it is merely implicated that the speaker does not believe it. For this reason I will not include such constructions in my survey, since only one of the epistemic values is actually entailed – namely the source attribution entailed by the subjunctive – while the other value (speaker skepticism) is simply implicated. Nonetheless, it is possible that such constructions will prove a frequent source for grammaticalized double-perspective constructions, and in normal conversation, with its subtle mix of entailment and implicature, they are a common technique.

3.3. Delimiting the Notion of “Single Semantic Dimension”

The requirement that the different values be on a *single semantic dimension* requires some attention. I require that the semantic dimensions be exactly equivalent, so as to exclude cases where different values may be in more or less the same domain – say, the broad dimension of “possession” – but not calculated to

quite the same specifications. Consider the phenomenon sometimes termed “double possession,” nicely illustrated by Anejomĩ (Lynch 2000:60), as in (17). In this example “the breast is possessed directly by the mother... and then indirectly as a source of milk to be sucked by the baby”: direct possession is shown by the possessive suffix *-n*, and indirect possession by a more complex construction involving a postposed possessive classifier plus a noun denoting the indirect possessor (here *inhalav* ‘baby’).

- (17) nade- n lida- i inhalav
breast- her POSS.JUICE- Construct.Suffix baby
lit. ‘the baby’s her-breast,’ or ‘her-breast (which is) the baby’s juice’

Comparable types of double possession are in fact available in English through the simultaneous availability of both Saxon and Romance genitives in phrases like *his painting of me* or *my painting of him*, and the association of possession types with genitive types is shown by the unacceptability of **his painting of mine* or **my painting of his*.¹⁰

My reason for not including them, at least as prototypical cases, under the rubric of multiple perspective constructions, is that though the two types of relation are frequently lumped under the general label “possession,” they are actually logically independent semantic dimensions (part-whole relations; social ownership; use-type; depiction), so we are not dealing with *distinct values on a single semantic dimension*.

3.4. Types of Multiple Perspective

We need to distinguish three logical types of multiple perspective; these could of course be extended to higher orders (triple perspective etc.), but I will not do this here.

The simplest type is *double perspective*: X with respect to Perspective 1, Y with respect to Perspective 2, with no scoping of one perspective inside another. The *Gun-dembui* triangular kin terms are one example; another clear case is the type of demonstrative system that simultaneously locates a referent with respect to speaker and hearer, such as the Quileute system to be discussed below (§4.2). In both these cases the two perspectives – speaker, and hearer – are symmetric in the sense that kinship relation or distance from each reference point is calculated directly.¹¹ The Reichenbach analysis of complex tense systems (§1.3) is a further example. It seems likely that double perspective constructions of this type are restricted to transparent dimensions of experience – space, time, or externally

¹⁰ On the syntax of this type of construction in English and some other European languages, see Giorgio and Longobardi (1991), de Wit (1997), and Kayne (1994).

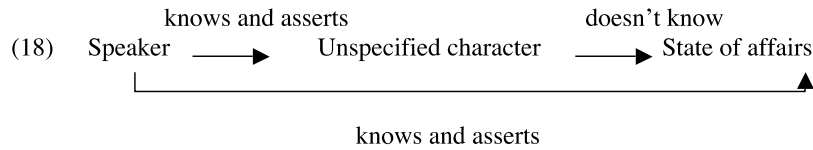
¹¹ A special type of double perspective is reciprocal double perspective, where each is calculated with respect to the other, as in the simultaneous double deictic centre in a sentence like *They came/went into each other’s rooms without knocking*.

determinable social relations like kinship – that do not require attribution of knowledge source or attention to another mind.

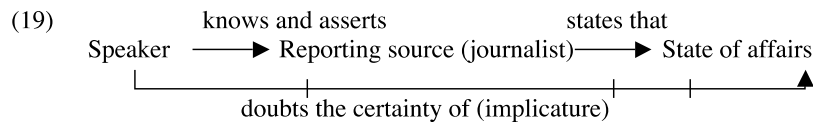
A special degenerate subtype of double perspective is *joint perspective*, where the two perspectives coincide: within *Gun-dembui*, for example, there are terms with meanings like ‘father to both of us’, and many demonstrative systems have individual terms with meanings like ‘this one close to both of us’ or ‘that one far from both us’. In such cases, of course, one may wish to speak of one perspective rather than two, unless there are systemic reasons, such as their appearance in a paradigm all of whose other members make reference to two perspectives.

A second type is *metaperspective*: X with respect to Perspective 2, which is considered from Perspective 1. This is Comrie’s analysis of complex tense (§1.3), and is an obvious analysis of many complex modal values such as quotatives or hearsay evidentials, where the speaker has information about a secondary source (e.g. a storyteller or journalist), who is then the origin of the quoted information.

A third type is *complex perspective*: X with respect to Perspective 2, which is considered from Perspective 1; Y considered directly from Perspective 1. This is the most plausible analysis of the Dalabon *molkkûn*- construction discussed in §1.2, and can be represented diagrammatically as in (18):



In some cases it can be difficult to decide between metaperspective and complex perspective, owing to the role of Q-implicatures discussed above. Any time a speaker chooses a modal value imputing the belief to someone else – as with an independent subjunctive or a hearsay evidential – they will, by Q-implicature, implicate that they do not hold the belief strongly themselves, so that the direct connection from speaker to state of affairs will contain an implicated doubt. However, it is usually the case that this implicature can be defeated in appropriate contexts, so that the direct connection is merely implicated, while the two steps of the mediated connection are entailed, as in (19), which represents the differential contributions of entailment (straight arrows) and implicature (crossed arrow) to the default interpretation of an independent subjunctive. If we consider just the entailments, this is a case of metaperspective; if we add the implicature, it becomes a case of complex perspective.



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In the case of *molkkûn-*, however, the speaker’s commitment to the truth of the reported state of affairs is entailed, so we have an unambiguous case of complex perspective.

4. Multiple Perspective: Dimensions of a Typology

We now examine some examples of multiple perspective constructions, showing that they are found in each of the classic dimensions of time, space, person, epistemic categories, and kinship, with a particularly rich development in the realm of modality.

4.1. Time

The phenomenon of complex tenses have been widely studied and I will not say more about them here – see §1.3 above.

4.2. Space

Many languages have demonstrative systems that simultaneously locate referents with respect to both the speaker and the hearer, so that choosing one of a four-way demonstrative contrast involves the simultaneous assessment of proximity or otherwise to both speaker and hearer. Quileute (Figure 1) is a good example of such a system (data from Andrade (1933:246); see also Diessel 1999:41).

Figure 1: The Quileute demonstrative system

	Near speaker	Far from speaker
Near hearer	<i>sa''a</i> (non.fem), <i>ksa'</i> (fem.)	<i>yi'tca</i>
Far from hearer	<i>yü'xo</i> (non.fem), <i>yü'ko</i> (fem.)	<i>ha</i>

Another interesting use of double perspective in the representation of space has recently been reported for German Sign Language by Perniss (forthcoming). In general, spatial representation in GSL can be depicted either from a “character perspective,” taking the outward gaze of the signer as reference point, or from an outside “observer perspective.” Perniss reports a signed depiction of a character tossing a pancake forward out of the frying pan, in which two simultaneous channels of spatial representation diverge: the signing with the hands representing the tossing (forward from the signer’s body, in character perspective), and the tracking of the pancake’s trajectory with the signer’s eyes (leftwards, in observer perspective):

Thus, at the apex of the pancake’s path, the eyes separate out as an independent articulator from the character perspective representation, completing the trajectory at a location determined by an observer perspective event space representation. (Perniss forthcoming:22)

4.3. Person

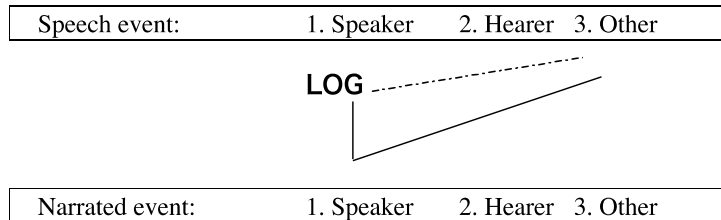
When speech or thought is embedded under main clauses of quotation or cognition, person can be calculated with respect to the primary speech event, as in indirect speech (*she_i said she_i would go*), or with respect to the secondary source, as in direct speech (*she_i said: I_i will go*). In each of these cases there is a single perspective from which person is calculated. But it can be also calculated from two perspectives at once: this is the phenomenon of logophoric pronouns, as in Aghem (Hyman 1979), which has special forms for reported clauses like ‘The woman said LOGOPH fell’ to disambiguate ‘she said: she fell’ and ‘she said: I fell’:

(20) wǐzín m̀ dzè ñí’á ò m̀ bv̀ ǹ
 woman PAST say that 3sg. PAST fall FOC
 ‘The woman said that he/she (≠the woman) fell.’

(21) wǐzín m̀ dzè ñí’á é m̂ bv̀ no
 woman PAST say that 3.LOG PAST fall FOC
 ‘The woman said that she (=the woman) fell.’

Diagrammatically, the use of the logophoric pronoun *é* can be represented as in Figure 2 as a case of double perspective, with person calculated simultaneously from the perspectives of the speech event (as non-speech act participant or “other,” i.e. third person) and of the narrated event (as first person).

Figure 2: Logophoric pronouns as double perspective in the person dimension



4.4. Epistemic Categories

I will use the term epistemic category here in a rather broad sense to cover all types of framing of states of affairs in terms of knowledge and ignorance, belief or disbelief, knowledge source, and attention. I will focus on belief and evaluation in §4.4.1, and attention in §4.4.2. In general all the phenomena here involve *metaperspective* rather than *double perspective* (§3.4), reflecting asymmetries in the speaker’s knowledge of their own mental states and that of others. As we shall see, multiple perspective constructions involving various epistemic categories are a particularly rich area, though at this stage severely underresearched.

4.4.1. Divergent and False Belief

Languages commonly have grammaticalized mechanisms for encoding divergences of belief or knowledge between the speaker and the hearer or some other, or between the speaker's current stance and one they previously held. The Dalabon prefix *molkkûn-* (§1.2) is a clear example of attributing lack of knowledge – possessed by the speaker – to some unspecified other.

The commonest type of encoding of divergent belief is with particles. A clear example is the Italian particle *mica*, as used with declaratives, which means roughly: 'X, which I presume you/someone believe(s) to be the case, but which I assert is not the case.'¹² In (22a) X = 'it is cold in here'; in (22b) X = 'Loren is tall.'

- (22) a. Non è mica freddo, qua dentro.
NEG is PART cold here inside
Roughly: 'Actually it's not at all cold in here.'
- b. Non è mica alta la Loren, però.
NEG is PART tall ART Loren but
Roughly: 'But Loren isn't actually tall at all.'

Many languages have particles with roughly comparable meanings, such as German *doch*, Spanish 'si of disbelief', or Mandarin *bingbù* 'not, contrary to what you have asserted/ appear to believe.'¹³

A somewhat different particle, though on the same broad lines, is the Kayardild "false belief" particle *maraka*.¹⁴ According to the syntactic context this has a broadly counterfactual range of meanings, but when placed directly before a NP or modifier, as in (23), it means that "Someone held a false belief about the identity or characteristic of the relevant entity, or acted as if they had such a belief" (Evans 1995:379); the speaker, at least at the moment of speech, holds a more realistic view of the relevant entity. The identity of the "false believer" is

¹² This is based on the characterization in Cinque (1991:314-5); italics are mine, and I have adjusted the example numbering to correspond with those in example (22): "[I] parlante nega il fatto che (a) sia freddo nel posto dove è e (b) che la Loren sia alta, facendo vedere che *sa che l'interlocutore o qualcun altro se aspettava che (a) o (b)*" ['the speaker denies the fact that (a) it is cold in the place where he is, and (b) that Loren is tall, making it clear that the interlocutor or someone else expected that (a) or (b)'].

¹³ On *doch* see Graefen (2000), Foolen (2003), König, Stark and Requardt (1990), Sekiguchi (1939/1977) and Van Valin (1975) among others; on Spanish *si* of disbelief see Schwenter (1996); and on Mandarin *bingbù* see Hoa (1986). Alan Rumsey (p.c.) points out an important potential difference between *doch* and *mica* that bears further investigation: *doch* can also be used where the conflict is between assertions or assumptions held by the same speaker at different times, as in *Ich glaubte, dass er nicht kommen wuerde, aber er ist doch gekommen* 'I thought he wouldn't come, but he came after all'.

¹⁴ Cf. also the Arrernte particle *kathene* (Wilkins 1986), which specifically marks (previous) false belief on the part of the speaker.

determined pragmatically and may be the clausal subject, another clausal participant, any reasonable person, etc.

- (23) [A fisherman has been seized by the monster Kajurku, who appropriates his bark torch, which the victim's companions see from the shore:]
 Kurri-ja manharr-iy, maraka
 see- ACTUAL torch- Actual.Object PART
 dangka- karran-ji, birra niwan- ji.
 man- GEN- Actual.Object too his- Actual.Object
 '(They) saw a bark torch, and wrongly thought it was the man's, that it too was his.'

Though particles are the commonest means for expressing such divergent or false beliefs, there are languages which have grammaticalized comparable distinctions within their systems of verbal inflection. An example is Sye (Crowley 1998:97-8), which has a special "counterassertive" series of pronominal prefixes that indicates "an ability to perform an action in the face of an assertion or an assumption that the speaker is not capable of performing the action," e.g.:¹⁵

- (24) yakin- aruvo.
 1sg:COUNTERASS- sing
 'I can so sing / I can indeed sing.' (Crowley 1998:97)

Sign Language, again, appears to offer special possibilities for splicing two viewpoints simultaneously. There is some indication that American Sign Language (Dudis 2004:14-15) can use the timing of gaze direction with respect to other sign channels to distinguish former evaluations by the signer (no longer adhered to) from those still adhered to: 'I thought it was beautiful' (and no longer have such bad taste!) vs. 'I thought it was beautiful (and still do).'

4.4.2. Multiple Perspectives on Knowledge and Attention

I will first discuss those constructions where the scope of multiple attention or knowledge is over a referent, and then turn to those where it is over a complete proposition or situation.

MULTIPLE ATTENTION/ KNOWLEDGE OF REFERENT. Probably the most familiar example of a system monitoring potentially divergent knowledge of speaker and hearer is the system of *definite articles* (cf. Epstein 1977), even though they are not normally located within a broader typology of multiple perspective. The following two quotes make the *metaperspectival* nature of definite article use quite clear.

¹⁵ See also Robert (1991) on Wolof and Koval and Nyalibuli (1997) on Fula.

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...the speaker when referring must constantly take into consideration knowledge of various kinds which he assumes his hearer to have... (Hawkins 1978:97)

...definite description is inherently about knowledge by one mind of the knowledge of another mind. (Givón 1989:206)

The Hawkins quote, according to which articles encode speaker assumptions about hearer knowledge, appears more accurate to me than the Givón quote, where they are said to encode speaker *knowledge* of hearer *knowledge*, though elsewhere in the same paper Givón offers the more accurate wording “definiteness involves the speaker’s assumptions about the hearer’s beliefs” (Givón 1989:206). Taking these characterizations into account, an approximate plain-language paraphrase of the semantics of definite article + X is thus ‘I know/can identify X; I assume that you too know/can identify X’.

It is also common for the semantics of demonstratives to include a component specifying the extent to which the hearer is assumed to share the speaker’s knowledge of or attention to the referent, such that:

...the intended referent is to be identified via specific, shared knowledge rather than through situational clues or reference to preceding segments of the ongoing discourse. A central feature of this use is that the speaker anticipates problems with respect to the information used in referring to a given referent. *That is, the speaker is uncertain whether or not the kind of information he or she is giving is shared by the hearer* or whether or not this information will be sufficient in allowing the hearer to identify the intended referent. (Himmelman 1996:230; italics mine)

Two Australian examples of this type of demonstrative are Gun-djeihmi (Evans 2003:292), which includes such demonstratives as *nabernu* ‘the one which you wanted to know about, which is over there’ and *nabehrnu* ‘the one which you wanted to know about, which is here’, and Mparntwe Arrernte, where the demonstrative *nhenge* indicates “that the entity to which the NP refers is something from before which I (the speaker) think that you (the addressee) should be able to remember” (Wilkins 1989:121).

- (25) Inspector nhenge mape- le school nhenhe-rike inspect- em.ile- ke.
inspector DEM PL- ERG school this- too inspect- CAUS- PC
‘Those inspectors (you remember the ones) inspected this school too.’

Apart from definite articles and demonstratives, ignoratives (indefinite pronouns) in some languages may also encode metaperspective, as in the explication Wierzbicka (1980:326) gives for Russian *nekto* in sentences like (26):

- (26) Prišel nekto Petrov.
 came:3sg.:PERF IGNORATIVE Petrov
 ‘Someone called Petrov has come; I assume you don’t know who he is.’
 [I.e. ‘I know who he is; I assume you don’t know who he is.’]

MULTIPLE ATTENTION / KNOWLEDGE OF PROPOSITION. Though the phenomenon is less well-known than is the case with articles or demonstratives, very similar metaperspectival phenomena are also found with scope over a proposition or state of affairs.

To begin with, many languages make use of particles to express meanings of this type. One example is Russian *že*, which Kalinina and Sumbatova (in press) insightfully characterize as denoting “forgotten common ground,” as in ‘Why are you drinking wine? You’ve got *že* an ulcer!’ The speaker, in other words, uses this “when he or she wants to remind the addressee of some facts the addressee is supposed to know.” A further example is Awetí (Drude 2005). Here the particle *me* is used when the speaker thinks the hearer has already considered the proposition being expressed (‘he went *me*,’ e.g. if the hearer already asked ‘did he go?’). Another particle, *a’yn*, is used when the speaker thinks the proposition being expressed is totally new to the hearer: ‘he went *a’yn*’ would be used to present the referent’s going as something completely new. The semantic resemblance to the English definite vs. indefinite article contrast is striking, but the scope is now over a proposition rather than a referring expression.

As a further example, where the relevant semantic distinctions are located within what is effectively an auxiliary base, consider what Landaburu (forthcoming) has called “engagement markers” in Andoke (Colombia), which appear as the base of a two-part predicate (combining with the verb) and are followed by indices of person, number and gender/ noun class (shown here by Roman numerals). For our purposes the most interesting members of the four-value paradigm of engagement markers are the following: *kẽ-*, which “directs the interlocutor to an experience that is hidden from them,” and *b-*, which directs them “to an experience that is in principle tangible.” To illustrate the use of these morphemes, Landaburu considers a situation where the speaker mentions the dawning day to his interlocutor. (27a), with *b-*, would be used if both speaker and hearer are awake and together watch the day dawning, whereas (27b), with *kẽ-*, would be used if the speaker’s interlocutor has been asleep during the event and the speaker wakes him up with his remark.

- (27) a. páa b- Λ Λ- pókə- i
 already ENGAG.INCL- 3.I 3.I-light- AGR
 ‘The day is dawning’ (as we can both see).
- b. páa kẽ- ∅ Λ- pókə- i
 already ENGAG.EXCL- 3.I 3.I-light- AGR
 ‘The day is dawning’ (as I witness, but you are not aware of).

This contrast lies on the dimension Landaburu calls “exclusion of interlocutor” vs. “inclusion of interlocutor” (*inclusion de tu*), i.e. “an intersubjective relation which the interlocutor can either confirm or bring his knowledge to bear upon.”¹⁶ He concludes that “as well as the knowledge of the speaker, we are dealing here with relations of epistemic authority between the speaker and the hearer. The speaker’s judgment of the truth of his proposition combines with the intersubjective dimension of the proposition, inside the grammatical system and not simply in its perlocutionary or pragmatic effects.”¹⁷

To close this section, let us briefly mention two other examples of metaperspectival constructions manifested through verb inflection. The first is a verbal suffix in the Aymara evidential series, namely the “reconfirmational suffix” *-pi*. On Hardman’s characterization (1986:121), “[t]his suffix is usually used when the addressee knows or ought to know, through personal knowledge, the matter referred to as well as the speaker.” In other words, the semantics appears to encode the speaker’s assumption of what the hearer knows. In the same article she notes a rather similar suffix *-ishi* in neighbouring Jaqaru, which “functions somewhat like the reconfirmational of Aymara. A fact is directly within the personal knowledge of both speaker and hearer” (Hardman 1986:122).

More recently Kalinina and Sumbatova (forthcoming) have given an interesting account of the use of participle and masdar forms in the North-east Caucasian languages Bagvalal and Icarl Dargwa. On their account, the use of participle and masdar forms – as opposed to finite forms – signals that the proposition depicted by the clause is already assumed common ground to both speaker and hearer.

4.5. Kinship Categories

We close our survey of the conceptual domains in which multiple perspective constructions are found with the realm of kinship. Like space, and unlike epistemic categories, this is a “public” domain where we therefore encounter double rather than metaperspective, since both perspectives are directly verifiable by all speech act participants.

We have already discussed the case of triangular kin terms, where kinship relations are simultaneously calculated from two perspectives. As mentioned in §1.1, such cases are widespread in Australian languages.

However, there is a second way in which two kinship relationships can be calculated, by varying the reference point across time rather than across speech act participants. We can exemplify this with Iwaidja, another Australian language, which in addition to its own variety of triangular kin-terms (known as *kundeybi*) has a series of terms for denoting the relations between two people who have

¹⁶ Translation mine; original is “on entend une relation intersubjective dans laquelle TU peut, soit confirmer, soit apporter le savoir.”

¹⁷ Original: “Autant que du savoir du locuteur, il s’agit donc de rapports d’autorité épistémique entre le locuteur et l’interlocuteur. Le jugement du locuteur sur la vérité de son propos se combine avec la dimension intersubjective du propos, dans le système grammatical et pas simplement dans les effets perlocutoires ou pragmatiques.”

undergone a reclassification following the death of a core relative. An example is the term *rangaldalk*, used for the following: someone who I (a male) used to call ‘sister’s child’ and who, following the death of his or her father, I now call ‘child’ (*ngawiny*). Its converse, *buluwarr*, is used for someone who used to call me *yaja* ‘mother’s brother’ and who, following the death of his/her father, now calls me *bunyi* ‘father.’ Note that these are not simply terms for adoptive relationships (like English *adopted child*), since there is also a specification of a particular kinship relationship that has to hold before the death of the linking relative.

These reclassification terms, then, encode the fact that two distinct kin relationships hold between a given pair of individuals at different points in time.

5. Why Double Perspective Matters to Syntax: A Papuan Example

The phenomena discussed above are not simply typological curiosities. Apart from being deeply relevant to our understanding of human social cognition, for the reasons outlined in §2, they must also be taken into account if we are to develop syntactic theories capable of modelling the full spectrum of constructions attested in the world’s languages. In this section we discuss one such phenomenon, found in a number of Papuan languages of the Trans New Guinea Phylum, where double perspective is played out, for the semantic dimension of person, at the level of a clausal construction. It is normally assumed that, within a clause, two arguments having the same (non-third) person specifications will be coreferential (and vice versa). But the construction to be discussed confounds this assumption.

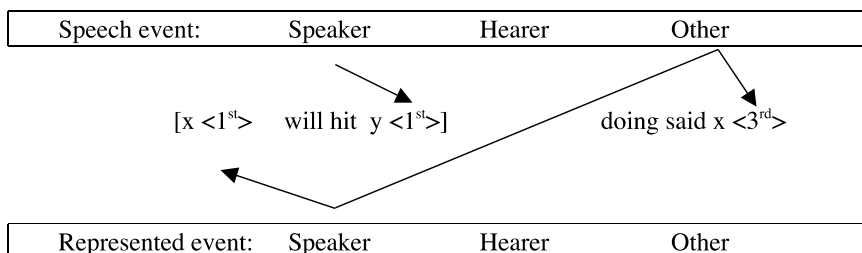
I will refer to this construction as the “double first person construction”; so far it has been reported for four languages from three distinct and geographically separated branches of the Trans New Guinea phylum: Dani (Bromley 1981), Usan (Reesink 1993), Golin (Loughnane 2005) and Dom (Syuntaroo Chida, p.c.). It has a number of complexities, and I will confine myself to the situation where the subject of the subordinate clause, were it to be represented as direct speech, would be first person.

In the double first person construction, the subject of the subordinate clause (of thought, intention etc.) takes first person, as appropriate to direct quoted speech, comparable to English “*I will come,*” *he said*. The object of the subordinate clause, on the other hand, takes the person appropriate to the primary speech act, as in indirect speech.¹⁸ This is shown diagrammatically in Figure 3:

¹⁸ Because of the way it combines features of direct and indirect speech within the one clause, Loughnane (2005) proposes the term “semi-indirect discourse” for this construction type.

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Figure 3: Person roles in speech and represented event in double-first-person constructions



In other words, where the object of the subordinate clause refers to the speaker in the main speech act, this will be registered as first person in the subordinate clause, though it is not coreferential with the subject of the subordinate clause, which is first person for the different reason that it refers to the speaker in the represented event. This results in sentences that can be represented in pseudo-English as “*I_x will hit me_y” doing, he_x said* for ‘he wanted to hit me,’ with *I_x* calculated with respect to the represented event, and *me_y* calculated with respect to the primary speech event.

Let us illustrate this with two real examples, the first from Usan (Reesink 1993:220 and p.c.), the second from Golin (Loughnane 2003:19, 2005:146). The languages differ in many respects, with the most important differences being that Usan has prefixal object agreement on the verb, and a switch-reference system with suffixes marking same- or different-subject with respect to the following main-clause verb, but no overt subject pronoun or subject agreement under same-subject conditions. Golin, in contrast, lacks a switch-reference system and has overt subject agreement even on dependent verbs. In glossing, I use subscript referential indices on free pronouns, bound prefixes, and switch-reference markers to make the workings of the system clearer.

In (28), from Usan, a quotation-like subordinate clause, embedded as a complement under ‘say,’ is used to encode intention:

- (28) Wo_x eng ba di
 he this take come.up
 [[ye_y ye_y- is- ib_x] qamb_x] ba di- arei_x
 1sg.:OBJ 1sg.:O- give- sg:FUT:SS say:SS take come.up- 3:FP
 ‘He_x brought this up in order to give to me_y.’ (Reesink 1993:220 and p.c.)
 [Lit: ‘he brought this up, “I_x will give it to me_y” saying_x he_x brought it up.’]

The subordinate clause arguments are as follows, calculated with respect to the main speech event and the reported speech event:

	Main speech event	Subordinate speech event	Referential index
Subject	3 rd	1 st	x
Object	1 st	3 rd	y

Within the intention clause both subject and object are treated as first person, but on the basis of different calculations: the subject with regard to the subordinate speech event (the quoted intention or thought) and the object with regard to the main speech event. Object first person marking appears overtly in two places, the free pronoun and the object prefix, while subject first person marking is inferred from the fact that same-subject quoted clauses are in general treated as first person in the language. However, a skeptic could object that without some overt marker of subject person, the existence of double first person marking is not definitively proven.

For this reason we now turn to Golin, where both subject and object person are made overt in the subordinate clause, the object by the free pronoun *na*, the subject by a zero suffix in the verb (contrasting with 2nd person *-n-*, 3rd person *-n..w-*¹⁹ and 1st person plural *bin-*).²⁰

- (29) I_x [na_y si- ø_x- w- a] di- n_x- g- e
 you 1sg.:O hit- 1sgS-REP- DISTAL say- 2S- ASSERT- PROX
 ‘You_x said you_x hit me_y.’ [Lit. ‘you_x “I_x hit me_y” you_x-said’]
 (Loughnane 2005:146)

To model the syntax of these constructions, we cannot assume that coreference matches up with person values within a given clause. Person has to be calculated for the subject as in direct speech (i.e. with respect to the represented speech or thought), but for the object or indirect object as in indirect speech (i.e. with respect to the framing speech act). Going back to the discussion in §3.2, we take the relevant constructional unit here to be the clause: within this level two perspectives on person evaluation are needed, a direct one for the subject, and an

¹⁹ This is a sort of “circumfixal suffix”: the *n* appears before, and the *w* after, any non-zero suffix occurring in the next slot, such as around the *g* in the sequence *dingwe* in the example in the next footnote. Should there be no non-zero suffix separating the *n* and the *w*, it is realized as *m*.

²⁰ For those who would be happier with a non-zero verb agreement prefix to fully nail the case, here is an example with a first plural subject, which has the non-zero suffix *-bin* on the verb:
 (i) yal kane_x [ininna_y si- ra- bin_x- w- a] di- n_x- g- w- e
 man many us hit- IRR- 1pl.:S- REP- DISTAL say- 3- ASSERT-3- PROX
 ‘They_x say they_x will hit us_y.’ [Lit. ‘they_x “we_x hit us_y” they_x-said’]
 (Loughnane 2005:146)

indirect one for the object.²¹ This allows us to see the relation of the double-first-person construction to logophorics more clearly: in the logophoric construction (see Fig. 2 in §4.3) the biperspectival mapping of person values is represented by a single morpheme, the logophoric pronoun, while in Papuan-type semi-indirect discourse it is registered at the level of an entire clause.

6. Conclusion

The purpose of this paper has been to show that grammars do encode multiple perspective, across all major semantic categories, and that developing a full and explicit typology of multiple perspective constructions will open up a rich new vein of typological research that engages directly with a major topic of growing interest to psychology and cognitive science, namely the way humans are able to model the differing perspectives of other minds than their own. Within both linguistic and psychological research there is a growing literature on mutual manifestness, joint attention and convergence. But it is also important to pay attention to divergence and how it is represented, both because realistically assessing divergence is often a precursor to achieving convergence, and because there are many situations where obstinate or incidental non-convergence is a fact of life.

For reasons of space it has not been possible to exhaustively treat all possible logical combinations of dimensions, let alone to examine asymmetries in the values in such combinations. For example, it is likely that we will never find multiple-perspective epistemic constructions where the value of certainty or attention for the speaker is lower than that of another person (at least in declaratives), such as particles meaning ‘you know that this is the case but I am not so sure’ or demonstratives with meanings like ‘this that you are attending to but that I am not’; these gaps follow from the greater epistemic certainty of the speaker vis-a-vis the hearer. Likewise it is not clear at this stage of research how principled is the structural difference between double-perspective and metaperspective constructions, as defined in §3.4, though we have already hinted that metaperspective tends (for rather obvious reasons) to be a feature of the epistemic categories while double perspective is associated with the “external” categories of space, time and stable social relationships. More definitive answers to these questions must await more comprehensive typological research than it was possible to discuss here.

Another obvious issue for future research has to do with the interaction between multiple representations and discourse moves. Many of the particles we discussed in §4.4, for example, have traditionally been analyzed within the framework of discourse or conversational moves, such as refutation or disagreement. I do not regard it as useful to see the object of study as belonging to just one approach or the other: we know which particles to use where in discourse pre-

²¹ The only possible way to escape this analysis is to try and fragment the clauses into a direct-speech and an indirect-speech part; for arguments against this see Loughnane (2003).

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cisely because we know what they mean, and we are able to reconstruct or project back to previous stretches of discourse, if we happen to tune in just at the moment of particle use, because the meaning of the particle gives us a clue to the stance of both participants. On the other hand there are many interesting questions about how such particles arise in conversation, and it is likely that participation in conversation by children acquiring language facilitates the ability to model dual perspectives. So studies that apply the methods of conversational analysis to the sorts of phenomena discussed here appear particularly promising.

I close with a quote from the eminent social psychologists Robert Krauss and Susan Fussell:

Despite the centrality of perspective-taking to communication, the mechanics by which people assess one another's perspective and the ways in which these assessments are realized in communication are poorly understood.
(Krauss and Fussell 1991:22)

What they had to say a decade and a half ago about psychological studies of perspective-taking is equally true today of the equivalent studies in linguistic typology. I hope the primitive first steps made in this paper will encourage others to investigate this crucial area for the study of how social intelligence is crystallized into grammatical structures.

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