REPORTED SPEECH IN MATSES: PERSPECTIVE PERSISTENCE AND EVIDENTIAL NARRATIVES

Robert Munro, Rainer Ludwig, Uli Sauerland, and David W. Fleck

In Matses reported speech, the personal, spatial, and temporal indexicals of the reported speech act must be maintained from the point of view of the original speaker, thus resembling a strict form of direct speech. However, substantial paraphrasing, extraction, reconfiguration, and *de re* construals are permitted, which are features more typically associated with indirect speech. We give a detailed account of this unique reported speech system, its relationship to the evidential system, and the broader implications for theories of reported discourse. In relation to the evidential system, all past events learned through inference or speech must encode the point of view of an event's detection, and in turn the context of the reporting of that event, the only exception being that community elders may make direct indexical reference to unobserved past events within a "Narrative Past" construction used exclusively for recounting oral history.

[Keywords: Matses (Panoan), reported speech, evidentiality, indexical shift]

1. Introduction. Reported speech is one of the broadest areas of linguistic inquiry because it is here at the intersection of syntax, semantics, and discourse that one speech act encodes another. Reported speech in Matses (Panoan) is particularly interesting. While most languages distinguish direct and indirect speech (also known as *oratio recta* and *oratio obliqua*), for some languages it has been claimed that only direct speech reports are possible, namely, Kobon (Davies 1981), Matses (Fleck 2003), and Nanti (Michael 2008). However, it is not known whether direct speech in such languages is subject to the same restrictions as in languages that possess a direct/indirect distinction. For Matses, we find that while the personal, spatial, and temporal indexicals of the reported speech act must be maintained from the point of view of the original speaker, thus resembling a strict form of direct speech, the language allows substantial paraphrasing, extraction, reconfiguration, and *de re* construal, which are features more typically associated with indirect speech.

For example, the sentence in (1) cannot be reported as (2), where the first-person *-mbi* has been alternated with the third-person *-şh*:

(1) *inchishchued daëd bëdichued   abentsëk-bëta anseme-o-mbi*
    brycon   two   anostomidae one-COM:O   hook-PST-1A

    'I caught two brycon (fish type) and one anostomidae (fish type)'

(2) #[*inchishchued   daëd   bëdichued   abentsëk-bëta   anseme-o-ş**h**]
     brycon   two   anostomidae   one-COM:O   hook-PST-**3**

    ke-o-şh
    say-PST-3

'"they caught two brycon and one anostomidae," they said' [1]

In many languages, a sentence like (2) would be an acceptable report of (1),
as it is in the English translation, and characteristic of indirect speech. How-
ever, while (2) is not an acceptable report in Matses, a sentence like (1) may
be substantially summarized or reconfigured in the report provided that the
indexicals remain from the point of view of the original speaker:

(3) [**nuëkkid   trested**   *anseme-o-mbi*]   *ke-o- şh*
     fish   **three**   hook-PST-1A   say-PST-3

    'they said, "I caught three fish"'

Example (3) is one such sentence, where the majority of the original utterance
has been summarized minimally as 'three fish' but is nonetheless an acceptable
report of (1). This summarization is beyond what we would expect to find in
the direct speech of many languages. While many languages do allow some
paraphrasing in direct speech (Tannen 1989), they contain a preference for
verbatim quotation that would typically make (3) unacceptable.

The constraint on maintaining the point of view of the original speech act is
defined as PERSPECTIVE PERSISTENCE, and we argue that perspective persistence
applies to ALL secondhand information in Matses, be it reported speech or
some inferred past event, offering the first explanation for the source of the
Matses "double tense" system for past tense inferential evidentials (Fleck
2007). This is encoded even when translating from Spanish indirect speech.
Speakers will adopt the (assumed) point of view of the original speaker when
translating and recreate the sequence of temporal, locative, and interpersonal
relationships, demonstrating their knowledge of indirect speech in Spanish
while simultaneously rejecting the same treatment of indexicals in Matses.

We find one clear exception to the use of unalternated indexicals in Matses
within a highly specialized (mythical/historical) narrative past construction
used exclusively for recounting oral history. This cannot be used to directly
encode observed speech events; instead it functions as hearsay evidentiality
in sentences that lack syntactic embedding, used for myths and to encode
non-observed events greater than 50 years prior.

This paper reports the first focused study on reported discourse in any
Panoan language, drawing on new fieldwork data. Prior to the research re-

---

[1] "#" indicates a sentence that is grammatical but unacceptable as a report of the correspond-
ing speech act. The gloss 'they' is used for the third-person null pronoun, which has neither
gender nor number.

ported here it was believed that Matses speakers expected all reported speech to be ideally verbatim quotation, based on the observation that the indexicals must not alternate from the original speech act (Fleck 2003; 2007), and so the fact that speakers do not require or consistently prefer verbatim speech is, in itself, a novel finding.

1.1. Definitions. Definitions for terms such as SPEAKER and SHIFT vary across the literature. We adopt the terminology used in theoretical work in the philosophy of language (Kaplan 1989 and Braun 2007) with some additions. They are defined here with reference to the following example:

(4*a*) Pacha to Dashe: *I will be hungry when I go there.*
(4*b*) Dashe to Dan: *Pacha said he would be hungry when he came here.*
(4*c*) Dashe to Dan: *Pacha said, "I will be hungry when I go there."*

(ORIGINAL) SPEAKER: the speaker of the original speech act—Pacha in (4*a*).
REPORTER: the person reporting the speech act—Dashe in (4*b*) and (4*c*).
LISTENER: the person that the speech act is being reported to—Dan in (4*b*) and (4*c*). [2]

INDEXICAL: the linguistic expressions that encode the interpersonal, temporal, and spatial relationships of a discourse. In (4), there are personal indexicals ('I'/'he'), temporal indexicals (tense: 'will be'/'would be'; 'go'/'came'), and spatial indexicals ('there'/'here'; 'go'/'came'). The term INDEXICAL is often used interchangeably with DEICTIC (see Nunberg 1993 and Levinson 2006), but INDEXICAL is preferred in formal semantics. In linguistic anthropology, sociolinguistics, and pragmatics, INDEXICAL is more often used to indicate a social index (Silverstein 1976 and Ochs 1990), and both uses have the same roots in the philosophy of language, but we do not intend the latter meaning.

INDEXICAL SHIFT: where a given sentence has indexicals from more than one point of view. Typically, the shift occurs between a matrix clause and a subordinate clause that do not share the same point of view, such as when direct speech is employed and the reported indexicals are from the point of view of the original speaker, as in (4*c*). The term "shifted" has the potential to generate confusion, as the speech report in (4*b*) is defined as UNSHIFTED, even though there has been an alternation from the original speech act. [3] We follow Massamba (1986) and others by using the more general term ALTERNATE to indicate any change from the original speech act, including indexicals.

---

[2] These are a subset of the potential participants in a reported speech act (see Goffman 1974, Levinson 1998, and Goodwin 2007). Consider four explicit participants plus the reporter and listener in *Pacha told Aida that Dan likes Maria*. Nonetheless, "speaker," "reporter," and "listener" are sufficient for the arguments of this paper.

[3] Some authors use the term "shifted" to mean exactly this: a "shift" (alternation) from the original speech act to the report, with the opposing definitions even found in the same volume (see Boerder 2002 and van der Wurff 2002).

PERSPECTIVE PERSISTENCE: maintaining the personal, temporal, and spatial point of view of the source of some information. By default, verbatim quotation will ALWAYS maintain perspective persistence, as the point of view of the original speaker is maintained by whatever indexicals happen to be in the original speech act. Example (4b) does not display perspective persistence, as the first person and future tense are not maintained in the report. When there is multiple embedding of points of view (through clausal embedding, suffix stacking, or otherwise), perspective persistence would require that the innermost point of view is maintained.

2. Types of reported speech.   Generally, three types of reported speech are distinguished in most languages: DIRECT, INDIRECT, and QUASI-DIRECT (FREE INDIRECT). Direct speech, the only form claimed to be present in all languages, is generally considered to have the following features (Banfield 1973, Noonan 1985, and Coulmas 1986):

(5)   INDEXICAL SHIFT (to the original speech act). The reported speech must be from the point of view of the original speaker with respect to temporal, personal, and spatial indexicals.

(6)   *DE RE* CONSTRUALS are not possible. No part of the reported speech can make reference to a world other than that perceived by the original speaker.

(7)   FAITHFULNESS TO THE ORIGINAL SPEECH ACT. The word order, lexical items, and syntactic structures are maintained in the report. This can be broken down into stronger and weaker definitions.

(7a)   VERBATIM QUOTATION. An exact reproduction, although such a strict system of reported speech is often not achievable in intonation or prosody, errors might be subconsciously made/corrected, and it may be employed for translation between languages.

(7b)   CONFIGURATIONAL FAITHFULNESS. The word order and syntactic configuration, such as active/passive voice, must remain unchanged, but lexical substitutions are possible.

(8)   EXTRACTION. The quoted speech cannot undergo extraction. This arises from the further constraint that direct speech is less likely to be a complement clause than indirect speech (Dixon 2006), and so it is less likely to be a candidate for extraction.

There is considerable variation in the direct/indirect division across languages. Generally, if there are two forms of reported speech in a language, the form of reported speech that violates more of (5)–(7) is identified as indirect speech. The following English example embodies all these properties of indirect speech:

(9) Pacha: *The tapir is being hunted by his wife, Maria.*
     Dashe: *Which tapir did Pacha say that* [*my wife, Aida, hunted _*]?

In (9), there is an alternation from the original speech act to the report, with the third-person genitive 'his' becoming the first-person genitive 'my', and the present tense 'being hunted' becoming the past tense 'hunted'. There is also *de re* construal. Presumably, Pacha thought that Dashe's wife was named Maria, but in actual fact she is named Aida. Dashe is allowed to change this in the reported speech, and thus introduce a world not in the original speech act, namely, a world where Dashe is married to a woman called Aida not Maria. For some researchers, this is the defining characteristic of indirect speech, with Coulmas (1986) introducing a volume on indirect and direct speech by arguing that *de re* construal is only available in indirect speech. This particular division, where direct speech ALWAYS has a *de dicto* interpretation, will be challenged by the data presented here, as Matses allows *de re* interpretations in reported speech that is strictly from the point of view of the original speaker in terms of the indexicals. This is more consistent with the results of Perridon (1996), who finds that *de re* construal IS possible in the direct speech of some languages, and Percus (2000), who argues that while direct speech might be more restricted, there is not one lone feature that isolates the two forms of speech report. There are also configurational changes in the report in (9). The report is not verbatim quotation, as the passive voice has become active voice in the report, and part of the report, *tapir*, has been extracted to the matrix clause. Cross-linguistically, the ability to make such changes has been seen as consistent with indirect speech.

In the speech report in (9) there is also the complementizer *that*. Cross-linguistically, complementizers are more common for indirect speech than direct speech, but as Matses does not employ any complementizers for reported speech, this is not explored further. There have been many more proposals for the features differentiating direct and indirect speech cross-linguistically, most notably prosodic cues such as a greater overall pitch range and intonational phrase boundaries for direct speech (Kvavik 1986 and Wouter, Gregory, and Brenier 2001). The prosodic features, especially pitch range and pitch shifting, are qualitatively present in much reported speech in Matses, especially when there is multiple embedding of quotatives. However, in the data presented here, the prosodic features could as easily be the result of the need to differentiate a sentence-initial matrix subject from the quotation (as some of our consultants argued; see **4.2** below); the disambiguation of multiple embeddings (as reported by Fleck 2003); or the artifact of careful speech employed by the consultants in an elicitation context. The prosody of Matses reported speech is therefore left as potentially interesting future work.

In addition to DIRECT and INDIRECT SPEECH, a third kind of speech is often proposed, known as QUASI-DIRECT SPEECH or FREE INDIRECT SPEECH (Lerch 1919, Banfield 1973, Coulmas 1986, and Sharvit 2008), to account for constructions in narrative registers, often with no syntactic embedding and unshifted indexicals:

(10) *Pacha gobbled the first fish whole. Wow, he'd like some more!*

While the first sentence in (10) is clearly from the point of view of the narrator (reporter), the exclamative *wow* in the second sentence is presumably spoken by the original speaker, Pacha, despite the absence of embedding under a quotative and the use of the third-person 'he' when in the actual speech act Pacha would have used the first-person 'I'. This third kind of speech has been the subject of debate for more than a century, with authors variously defining it as a mix of direct and indirect discourse (Tobler 1894, Yi 2002, and Vandelanotte 2004), a derivation of indirect speech (Bally 1912, Jespersen 1924, Massamba 1986, Short 1996, Suzuki 2002, and van der Wurff 2002), a derivation of direct speech (Lerch 1919), or an independent third type of discourse (Kalepky 1899, Lorck 1921, and Coulmas 1986).[4]

3. The Matses language.   Matses (the name of the ethnic group and the language, literally meaning 'people'; formerly called Mayoruna) has a population of almost 3,000 living along the Javari River and its tributaries in Amazonian Peru and Brazil. About 70% of the speakers are essentially monolingual, with mostly young men speaking Spanish or Portuguese at varying levels of fluency. The Matses language has only recently been studied because prior to establishing peaceful contact with the national societies in 1969, the Matses were hostile to outsiders and avoided navigable rivers. The first grammar, beyond a few early sketches (Fields and Wise 1976 and Kneeland 1979), was completed in 2003 (Fleck 2003).

Matses is a synthetic free word order language, with ergative/absolutive marking. Ergative case is marked by the enclitic *-n*, which is also used to encode the genitive, instrumental, and locative/temporal. Absolutive case is marked by the absence of case marking, and the third-person anaphoric pronoun is zero. Outside of the quotatives, there is only one complement-taking verb, *bun* 'want', which takes an infinitive-like complement (Fleck 2006*b*). Many complement-taking concepts are instead encoded through nominalizations, verbal derivational suffixes, or clause chaining.

There are several aspects of the language that are particularly important to this paper:

TENSE. There are six morphologically marked tenses: future (coded by several different suffixes), non-past (future or present), recent past (up to about

---

[4] See Coulmas (1986) for an extended discussion of this debate.

one month ago), distant past (about one month to about 50 years ago), and remote past (more than about 50 years ago). The (mythical/historical) narrative past is coded by a special construction combining the remote past inflection and a quasi-direct speech construction (see **9** below).

EVIDENTIALITY. Evidentiality is obligatorily marked for past events by an experiential, inferential, or conjecture suffix. There is no hearsay or reportative evidential suffix, but this paper supports the argument made by Fleck (2007) that quotatives function as periphrastic reportative evidentials and extends this to argue that the (mythical/historical) narrative past functions as hearsay evidentiality.

DOUBLE TENSE. Inferential evidentiality encodes both the point in time that the event was estimated to have happened and the point in time that the evidence upon which the inference was made was detected. This is achieved through suffix stacking. For example, if an event that happened a long time ago was only recently inferred, the verb representing that event would receive the distant past inferential marker, followed by the recent past experiential marker. (See 58 and 59 below for examples and extended discussion.)

Matses does not obligatorily mark for NUMBER or GENDER.

3.1. Definitions.   Matses has three quotatives, all verbs:

(11) *ke* 'say' (INTR)
(12) *ka* 'say/tell' (TR)
(13) *dan* 'suppose mistakenly' (TR)

The subject of the quotative is the speaker of the original speech act. For the transitive *ka*, the object is understood as the addressee. For the intransitive *ke*, the person reporting the speech act is understood as the person being addressed, or the addressee of the original speech act is non-existent, unknown, irrelevant, or generic. The primary quotatives, and by far the most frequent, are *ke* and *ka*. Unlike *ke* and *ka*, *dan* is most commonly used for non-quotative clauses. As a quotative, *dan* is only used to encode mental conjectures, not actual speech events (see Fleck 2003).

There are several other speech verbs in Matses, including *kuëd* 'yell, argue', *tantia* 'think', *çhuşhka* 'reprimand', *bëis* 'insult', *mua* 'lie', *onke* 'talk', *chui* 'tell, ask, advise, say about', and *onka* 'tease/flirt'. However, they only take simple object complements in non-quotative clauses and cannot be used for reported speech except in conjunction with *ke* or *ka*, typically in clause-chaining constructions (see 22 and 47 below for examples).

The quotative must follow the reported speech, but the subject is free to be realized initially, between the quotation and quotative, or after the quotative:

(14) ***Dashe*** [*kachina*   *pe-o-mbi*]   *ke-o-şh*
      Dashe [chicken   eat-PST-1A]   say-PST-3

      '"I ate chicken," said Dashe'

(15) [*kachina   pe-o-mbi*]   ***Dashe***   *ke-o-şh*
     [chicken   eat-PST-1A]   **Dashe**   say-PST-3

     '"I ate chicken," said Dashe'

(16) [*kachina   pe-o-mbi*]   *ke-o-şh*   ***Dashe***
     [chicken   eat-PST-1A]   say-PST-3   **Dashe**

     '"I ate chicken," said Dashe'

There is inter-speaker variation in the preferred placement of the subject, with most preferring it initially, as in (14), and a few finally, as in (16), citing ambiguity about whether the subject could be interpreted as part of the quote. No speakers seem to prefer the form in (15) with the subject between the quotation and the quote, but all accept it. In addition, some speakers prefer the non-past tense for reporting very recent speech acts, which would be realized as *ke-e-k* 'is saying' instead of *ke-o-şh* 'said'. For our elicitation sessions, we established the preferred word order and tense of the consultant and used that for the session unless the specific linguistic variable we were testing required otherwise.

Embedding one quotative in another is very productive. We observed up to three levels of embedding in everyday speech. In order to avoid confusion, speakers typically use intonational and prosodic cues like pitch shifting and short pauses to distinguish the layers of embedding.

We confirmed that the quotatives *ke*, *ka*, and *dan* performed under the same constraints in reported speech in terms of the interpretation of indexical and permitted alternations. For simplicity in reporting, this paper uses *ke-o-şh*, which is the intransitive quotative *ke*, the recent past tense + experiential evidential *-o*, the indicative mode + third-person subject agreement marker *-şh*, and a clause-final or null (third-person) subject, unless otherwise indicated. The names used in this paper—Dashe, Pacha, Dan, Maria, and Aida—are used here in place of any community member's actual name for consistency and to mask the identity of our consultants.

4. Matses reported speech.   Figure 1 gives the summary of results for the acceptability tasks (see the Appendix [an electronic appendix attached to the online version of this paper] for elicitation methodology). The overarching constraint that can be seen is perspective persistence: indexicals must remain from the point of view of the original speaker. The majority of accepted alternations among the spatial and temporal indexicals resulted from ambiguity in the terms used, not from an alternation in point of view. The remainder of this section defines the system of reported speech in Matses, with reference to the 16 examples in figure 1, the 26 further examples tested with three to seven consultants, and the extended elicitation sessions.

4.1. Personal indexicals.   No consultants accepted a change in personal indexicals in a speech report. For example, the first person in (17) cannot

Speaker	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PERSONAL INDEXICALS																			
(17)–(18)	N	N	–	N	N	N	N	N	N	N	N	N	N	–	N	N	N	N	N
(A2)–(A3)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
(A4)–(A5)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
(A6)–(A7)	N	N	–	N	N	N	N	N	N	N	N	N	N	N	N	–	N	–	N
TEMPORAL INDEXICALS																			
(25)–(26)	?	?	N	Y	N	Y	Y	N	Y	Y	N	–	N	Y	N	N	N		N
(A8)–(A11)	N	N		N	N	Y	N	N	Y	Y	N	N	N	–	N	N	Y	N	
SPATIAL INDEXICALS																			
(27)–(28)	N	N	N	N	Y	N	N	–	N	Y	Y	N	N	N	N	N	N	N	N
(29)–(30)	N	N	N	N	N	N	N	N	N	N	N			N	N	N	N	N	N
CONFIGURATION																			
(31)–(32)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	Y	N	N
(33)–(34)	N	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	Y
ENTAILMENT																			
(37)–(38)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
(39)–(40)	Y	N	Y	N	N	N	Y	?	N	Y	N	Y	N	N	N	Y	N	N	N
n/r	Y	N	Y	Y	?	Y	Y	N	?	Y	N	–	N	N	N	Y	Y	Y	N
n/r	Y	N			?	?	Y	?	N	Y	N	Y	N	N	N	Y	N	N	Y
NARRATIVE PAST																			
(60)	N	N	N	N	N	N	N	N	N	N	Y	–	N	N	N	N	N	N	N
(60)	U	U	U	U	U	U	U	?	U	U	U	U	U	U	U	U	U	U	U

FIG. 1.—Summary of acceptability tasks. N indicates that the consultant rejected the given alternation, meaning that he/she rejected the change in the speech act upon its report, while Y indicates that the consultant accepted the alternation. For the narrative past, U indicates that the consultant viewed the personal indexical as unambiguous in its referent. A blank cell indicates that the particular task was not completed with the given consultant. – indicates an inconclusive result due to experimental error. ? indicates an inconclusive result due to a consultant's uncertainty. Shading is according to similarity with direct speech, with inconclusive cells shaded according to the majority of the row. The numbers refer to examples in the paper and n/r means not reported, indicating that this example is omitted from this paper due to space constraints.

be reported using the third person (18). All our consultants stated that while (18) is a well-formed sentence, it cannot refer to the speech act in (17) and must refer to some other speech event:

(17) *uşh-te   bun-e-bi*
     sleep-INF   want-N.PST-1

     'I want to sleep'

(18) *#[uşh-te   bun-e-**k**]   ke-o-şh*
     sleep-INF   want-N.PST-**3**   say-PST-3

     '"they want to sleep," they said'
     Rejected as a report of (17) by 100% of consultants

(17) and (18) alternate the subject of an intransitive sentence. There is evidence that some languages allow greater variation in different grammatical positions. For example, Late Egyptian allowed unshifted personal indexicals in just one grammatical position (Peust 1996 and Kammerzell and Peust 2002), and more recent evidence from Uyghur suggests that the ability to alternate indexicals also patterns with grammatical position (Shklovsky and Sudo 2009). We therefore tested the potential to alternate personal indexicals realizing transitive and intransitive subjects, objects, genitives, and comitatives. In the electronic Appendix (available online), where sentences are presented due to space constraints, (A3) alternates the subject of a transitive sentence (A2). As with (17) and (18), (A3) was unequivocally rejected by all consultants as a report of (A2) in any imaginable context. The same pattern is found when alternating personal indexicals in the object of a transitive sentence (A4 and A5), genitives (A6 and A7), and in non-core roles including comitatives (A8 and A9).

The prior examples alternated first and third person, as these were the easiest to create scenarios for, but we also confirmed that all other combinations of first, second, and third person exhibited the same behavior:

(19) *Dashe   bëda-mbo   ik-e-k*
     Dashe   good-AUG   be-N.PST-IND

     'Dashe is a good person'

(20) *#[**mibi**   bëda-mbo   ik-e-k]   ke-o-şh*
     2   good-AUG   be-N.PST-IND   say-PST-3

     '"you are a good person," they said (to Dashe as listener)'
     Rejected as a report of (19) by 5/5 consultants

The use of a non-quotative speech verb following the quotative construction was the most common strategy we observed for resolving the ambiguity that can arise when the listener is not aware of the full context of the original speech act. For example, if the reporter is also the referent of a second-person pronoun in the reported speech act, that pronoun cannot be alternated to a first-person pronoun, and so it might be ambiguous as to whom that pronoun really referred in the report. Therefore, this would need to be qualified:

(21) *mibi   bëda-mbo   ik-e-k*
    2   good-AUG   be-N.PST-IND

    'you are a good person'

(22) [*mibi   bëda-mbo   ik-e-k*]   *ke-o-şh,*   *ubi*
    2   good-AUG   be-N.PST say-PST-3   1

     chui-ek
     speak.about-S/A>S:while

    '"you are a good person," they said, speaking about me'

The elements of the reported speech act are transparent for anaphora, with the second person in (22) unambiguously understood as the antecedent of the first-person pronoun, because the clause-chaining *-ek* 'S/A>S:while' makes it clear that the subject of the second clause was also the subject of the first clause (and therefore the original speaker).[5] As stated in the introduction, though, *chui* 'tell, ask, advise, speak about' cannot be used as a quotative.

The report in (20) is a departure from other languages thought to lack indirect speech. For example, Nez Perce, whose speech report system otherwise appears direct (Aoki 1970), allows the second/third-person alternations in sentences equivalent to (20) that Matses speakers reject (Deal 2009). In languages that allow only second/third-person alternations, it is not always clear whether the alternations represent indirect speech, or if they are permitted because both second and third person are non-first person from the point of view of the original speaker. If the latter, this is an alternation in grammatical person, and certainly non-verbatim, but it is not necessarily a change in the indexical person. The original speaker would refer to the listener with second person if they were both present, so alternations like (19)–(22), if permitted, are ambiguous between an alternation in indexicals (indirect speech) or the reporter assuming the original speaker's perspective with respect to the listener (direct speech). Indeed, in languages that possess only a first-person/non-first-person distinction, this situation does not even arise (Curnow 2002 and Dickinson 2000). Alternations between first and second/third person are, therefore, a more accurate gauge of the potential for indexical shift.

We found the same pattern of perspective persistence when alternating absolute and relative references to people. In (23), *Maria* is understood to be the wife of the person speaking:

(23) *Maria   nid-o-şh*
    Maria   go-PST-3

    'Maria left'

---

[5] The notation "S/A>S:while" indicates that the transitive or intransitive subject of the subordinate clause is coreferential with the intransitive subject of the directly superordinate clause and that two clauses describe the same event or concurrent events. See Fleck (2003; 2008) for a full account of clause-chaining in Matses.

(24) **kun   chido**   *nid-o-şh   ke-o-şh*
     GEN.**1   wife**   go-PST-3   say-PST-3

     '"my wife left," he said'
     Accepted as a report of (23) by 5/5 consultants

While the reporter in (24) may substitute the absolute personal referent *Maria* with the relative referent *chido* 'wife', he/she must adopt the point of view of the original speaker to do so and therefore use the first-person genitive *kun*. The use of the third-person *aton chido* 'his wife' was uniformly rejected as a report of (23).

It is clear from the rejection of all the alternations in (17)–(24) and (A2)–(A9) that personal indexicals must be from the point of view of the original speaker. Even where the reporter may alternate between absolute and relative reference to a person, he/she can only do so if the report is maintaining perspective persistence.

4.2. Temporal indexicals.   Temporals were the only indexicals that showed the possibility of behaving like indirect speech. We elicited responses to questions by using one quotative in the original sentence and embedding the latter within a further quotative in the report. Embedding one quotative within another had the potential to create confusion among the participants, although greater efforts were made to establish an appropriate context first. Nonetheless, embedded quotatives are more frequent in Matses than in many other languages (Fleck 2003), and so they are not as awkward sounding as their English translations. More importantly, this was the ONLY way to compare whether tense was interpreted relative to the report or original speech act in an immediate report as there are no other constructions in Matses that allow one full clause to be embedded within another.

As a general observation, those speakers who rejected an alternation in the tense from the original speech act did so quickly and unequivocally, but those who accepted it took some time to consider the matter. The only consultants who accepted tenses relative to the report in all cases were the most fluent Spanish speakers, indicating that this might be an artifact of recent language changes (full discussion below).

(25) [*nëishamë   kues-o-mbi*]   *ke-onda-şh   Pacha*
     tapir   kill-PST-1A   say-DIST.PST-3   Pacha

     '"I killed a tapir recently," Pacha said some time ago'

(26) #[[*nëishamë   kues-**onda**-mbi*]   *ke-onda-şh   Pacha*]   *ke-o-şh*
     tapir   kill-**DIST.PST**-1A   say-DIST.PST-3   Pacha   say-PST-3

     '""I killed a tapir some time ago," Pacha said some time ago," they
        said'
     Rejected as a report of (25) by 50% of consultants (33% accepted)

At least two of the consultants who accepted (26) as a report of (25) stated that the killing may have taken place at some time on the border of the recent past and distant past, and that this was why they allowed the alternation. While this is evidence against reported speech needing to be strictly verbatim, it is not evidence that otherwise impacts the direct/indirect division, as it is not a change in the indexical point of view but rather the intersection of two overlapping tenses from the same point of view. We found a similar interpretation with the past/non-past alternation (A10 and A11). As with (25) and (26), some speakers claimed that the time may have been on the border.

In order to control for this overlap of time, we completed some additional experiments with a smaller number of speakers where we used non-adjacent tenses, the recent past and remote past. Although these were more soundly rejected by the consultants, they also created their own (experimental) problems. We observed two consultants treating the remote past tense and the distant past tense as (temporally) indistinguishable. This potential simplification of the tenses system has previously been noted in Fleck (2007), as there are two inferential remote past suffixes that look like a collapse of a possible four-way distinction to a three-way distinction. In our case, we cannot be certain if we are observing a further simplification by younger speakers and/ or confusion due to the complexity of the elicited examples.

There were only three consultants (6, 9, and 10) who seemed to always accept a reported speech act with tense relative to the report. One was a teacher of Spanish and the two others were our youngest participants, who had grown up speaking Spanish as one of two first languages, and so their acceptance could be seen as a result of language contact. We would predict that the tense system would be one of the first parts of the language to simplify, given what has been observed in similar situations cross-linguistically (Thomason and Kaufman 1991 and Harrison 2007). This is not to say that their idiolects are any less "Matses" than other speakers but rather that their acceptance of tense alternations is a more recent innovation. Such language innovations underline the need to document languages before simplifications resulting from contact forever mask the systems that people have developed for encoding their unique worldviews.

4.3. Spatial indexicals. As with the personal indexicals, the spatial indexicals are always interpreted from the point of view of the original speaker. The only exceptions we found in our experiments were three consultants who accepted a here/there locative alternation, giving the reason that either term could be used interchangeably for the particular location:

(27) *Dan   në-mbo   tsad-o-ṣh*
     Dan   here-AUG   sit-PST-3

     'Dan sat here'

(28) #[*Dan* **a-mbo**   *tsad-o-ṣh*] *ke-o-ṣh*
      Dan   **there**-AUG sit-PST-3   say-PST-3

      '"Dan sat there," they said'
      Rejected as a report of (27) by 79% of consultants

Strictly speaking, *në* means 'close to speaker' and *a* means 'close to the listener'. In order to confirm that the three speakers who accepted (28) as a report of (27) did not allow for the spatial indexical to be expressed from the point of view of the reporter, we also alternated (27) with the unambiguous *u* 'there', meaning distal to both speaker and listener, and *ëquëbi/ëquë* 'this side/other side' alternations, which were rejected by all consultants in follow-up tests.

For the directional indexicals, there was no potential overlap in meanings and so the alternations were immediately and uniformly rejected:

(29) *cho*
      come.IMP

      'come!'

(30) #[*nid*]   *ke-o-ṣh*
      go.IMP   say-PST-3

      '"go!" they said'
      Rejected as a report of (29) by 100% of consultants

From the rejections of the locative and directional alternations, it can be concluded that the reporter may not alternate the speech report in order to anchor it in the spatial context of the report.

4.4. Configurational alternations.
4.4.1. Word order.   In stark contrast to constraints on the personal, temporal, and spatial indexicals, the sentence can be radically reconfigured and still be accepted as a speech report. One of the most broadly accepted reconfigurations was a word order alternation:

(31) *Pacha-n*   *Dashe* *çhuṣhka-o-ṣh*
      Pacha-ERG   Dashe   reprimand-PST-3

      'Pacha reprimanded Dashe'

(32) [*Pacha-n* **çhuṣhka-o-ṣh**   **Dashe**] *ke-o-ṣh*
      Pacha-ERG **reprimand-PST-3** **Dashe**   say-PST-3

      '"Pacha reprimanded Dashe," he said'
      Accepted as a report of (31) by 84% of consultants

Almost all consultants accepted an alternation in word order from SOV to SVO, as in (32), giving the strongest evidence that reported speech need not follow the configuration of the original speech act. We predicted that all speakers would accept word order alternation under the right pragmatic conditions. In one case, a consultant suggested that a third configuration with the object

Dashe as the sentence-initial word was the most appropriate, as *Dashe* but not *Pacha* happened to be present at the time of elicitation. This gave a clear motivation for exactly why a person might choose to alternate word order, namely, to ground the report in the current context by topicalizing the referent to a person present during the report. Such a strategy is interesting alongside the constraints that prevent the same grounding of indexicals in the current context, and this contrast is found through all configurational variations.

4.4.2. Voice alternation and nominalizations.   Matses has two passive constructions: a reflexive one and an impersonal one having no arguments present. While the limited semantic range prevents easy comparisons to active sentences, we were able to test the acceptability of voice alternation by comparing active and antipassive sentences, as the antipassive takes the first person as the implicit patient when not encoding generic statements (Fleck 2006*a*):

(33) *biuşh-n*   *ubi*   *che-e-k*
      mosquito-ERG   1.ABS   sting-N.PST-IND

      'mosquito(es) are stinging me'

(34) [*biuşh-∅*   *che-**an**-e-k*]   *ke-o-şh*
      mosquito-**ABS**   sting-**ANTIPASS**-N.PST-IND   say-PST-3

      '"mosquito(es) are stinging (me)," they said'
      Accepted as a report of (33) by 68% of consultants

For (34), we also obtained interesting responses for why a given speaker might accept or reject an alternation. One consultant suggested that they might use (34) to warn someone. For example, if Dashe said "a mosquito stings me," they might later report to someone else "be careful here, Dashe said *the mosquitoes sting.*"" This clearly expresses that the reporter is able to take advantage of the different possible interpretations of the antipassive and choose the meaning best suited for the context of the report. Many who rejected the alternation stated that the active voice in (33) implies one mosquito while the antipassive in (34) implies many mosquitoes. This suggests that some rejected the alternation based on number mismatch and that they would perhaps accept a voice alternation under other conditions.

In further sessions we also confirmed the acceptance of an alternation in active voice with a nominalization:

(35) *onina-n*   *nuëkkid*   *pe-e-k*
      otter-ERG   fish   eat-N.PST-IND

      'the otter is eating fish/the otter eats fish'

(36) *onina*   *nuëkkid*   *pe-**kid***   ***ne**-e-k*   *ke-o-şh*
      otter   fish   eat.NOM   **be**-N.PST-IND   say-PST-3

      '"the otter is a fish-eater," they said'
      Accepted as a report of (35) by 5/6 consultants

This is also true for the formally related habitual (A12 and A13). We can therefore conclude that morphosyntactic structures of the speech act may alternate in the report. While alternations were generally rejected that strayed too far in meaning from the original speech act, our responses included examples of how subtle changes in the meanings can be used by the reporters in order to anchor the speech act in the context of the report.

4.5. Logical entailment and *de re* construal.   The one non-verbatim report accepted by 100% of the consultants was the substitution of synonyms, as in (37) and (38):

(37) *chuna*   *kues-o-mbi*
     woolly.monkey   kill-PST-1A

     'I killed a woolly monkey'

(38) [***poshto***   *kues-o-mbi*]   *ke-o-şh*
     woolly.monkey   kill-PST-1A   say-PST-3

     '"I killed a woolly monkey," they said'
     Accepted as a report of (37) by 100% of consultants

Game animals form particularly tight synonym sets, with as many as four or five different names that unambiguously refer to the same animal. These synonyms are semantically equivalent, with one typically being in more frequent use and the other synonyms considered archaic and forming part of a specialized hunters' vocabulary (Fleck and Voss 2006). The fact that they are such tight synonym sets made them particularly suitable for the experiments testing the constraints on verbatim reports.

In addition, we tested the alternation of the report such that it was logically entailed by the original speech act. The simplest set of tests substituted an animal with its hypernym (super-type) in the natural taxonomy:

(39) *teduşhku*   *is-o-mbi*
     nun.bird   see-PST-1A

     'I saw a nun bird'

(40) [***wikçhun***   *is-o-mbi*]   *ke-o-şh*
     bird   see-PST-1A   say-PST-3

     '"I saw a (small non-game) bird," they said'
     Accepted as a report of (39) by 32% of consultants

We tested two other hypernym alternations, which were accepted by up to 47% of the speakers with 39% intra-speaker variation (see figure 1 for the complete breakdown). Generally, these numbers are fairly conservative, as we would expect greater variation in contexts other than an experimental setting where the report immediately follows the original speech act. It is worth noting, however, that about a quarter of the speakers (across all age/gender/

education/location demographics) were adamant that no hypernym alternation should be allowed, and so the interspeaker variation may be non-trivial.

For those who accepted the alternation in (40), many offered the contexts in which it might be acceptable. For example, one consultant said that he might alternate *inchishchued* 'brycon' (a trout-like fish) with *nuëkkid* 'fish' when reporting to his son who was too young to know what *inchishchued* meant. As with the configurational tests, this is clearly a case of someone repositioning the reported speech act for the context of the report.

In extended sessions, we found that wholesale paraphrasing was also accepted, as in examples (1) –(3) above. Most interesting of all, our three primary consultants accepted the substitution of a HYPONYM, that is, the taxonomic subtype:

(41) *wikçhun   is-o-mbi*
     bird   see-PST-1A

     'I saw a bird'

(42) [**teduşhku**   *is-o-mbi*]   *ke-o-şh*
     nun.bird   see-PST-1A   say-PST-3

     '"I saw a nun-bird," they said'

They stated that they would assume that the reporter knew the name of the bird and also saw the event, but that the original speaker did not know the name. This is, therefore, a case of *de re* construal, as the reporter is able to add information that he/she knows is not possessed by the original speaker.

We were able to elicit more widely accepted *de re* construals with other sentences by alternating locative referents:

(43) *Dashe   taëmi   nid-o-şh*
     Dashe   downriver   go-PST-3

     'Dashe went downriver'

(44) [*Dashe*   **aton**   **şhubu-no**   *nid-o-şh*]   *ke-o-şh*
     Dashe   GEN.3   **village/house-**LOC   go-PST-3   say-PST-3

     '"Dashe went to his house," he said'
     Accepted as a report of (43) by 4/5 consultants

Further to accepting 'his house' as an alternation for 'downriver', it was confirmed that (44) was acceptable even if the original speaker did not know where Dashe lived, or believed that he lived upstream. There is, therefore, the possibility of *de re* construal, in that the reporter can alternate the report such that it contains a worldview not expressed in the original speech act, namely, one in which Dashe lives downstream, not upstream. For our primary consultant, the beliefs of the original speaker did not even seem to be an important factor. As long as alternating 'downriver' with 'his house' was interpretable

from the point of view of the original speech act, it was irrelevant where the original speaker actually believed 'his house' to be situated.

Overall, the acceptability of *de re* construal in Matses reported speech deserves further investigation. Since the experiments reported here, we have observed *de re* construal in everyday speech, with people's names alternated as in (9) above, but we have not yet re-investigated this more formally. While it is certainly possible to introduce a worldview not possessed by the original speaker, the limitations are not yet clear. For example, while nouns can alternate, we did not investigate *de re* construal on verbs. One interesting discovery was that it does not seem possible to alternate the evidential marking on a reported speech act. Our primary consultant firmly rejected any alternation between inferential, conjecture, and experiential evidentials in the report, indicating that evidentiality may be restricted to a *de dicto* interpretation, and that perhaps INFORMATION SOURCE should be treated as an additional indexical alongside the interpersonal and spatio–temporal indexicals.

5. Translation tasks.   For the translation tasks, we asked those speakers who were at least semi-fluent in Spanish to translate Spanish INDIRECT speech into Matses. This created an interesting scenario, as the Spanish indirect speech allows personal, spatial, and temporal indexicals consistent with the reporter (and the matrix clause):

(45) *Dashe   dijo   ayer   que   vendrá   hoy*
     Dashe   say.PST   yesterday   that   come.FUT.3   today

     'Dashe said yesterday that he will come today'

(45) is one such example. We tested four sentences similar to (45) with each of the nine Spanish speakers we worked with, and three more sentences with extracted elements (see **6** below). Of these, 100% were translated into Matses reported speech with indexicals consistent with the original speaker. A typical example is:

(46) [**badiadaşh   nid-e-bi**]   *ke-o-şh*   Dashe   UŞHË   *utsi-n*
     tomorrow   go-N.PST-**1s**   say-PST-3   Dashe   other   day-TMP

     '"I will go tomorrow," said Dashe yesterday'

This particular translation, offered by several consultants independently, actually exceeded our hypothesis. While we predicted that the speakers would reconstruct the third person as the first person, and 'today' as 'tomorrow', we also found that several speakers reconstructed 'come' as 'go', putting themselves in the position of the original speaker and concluding that it was more likely that they used 'go' to speak about a future event in which they were traveling to another place.

This task gives some of the strongest evidence that there is not some device in Matses for indirect speech that simply had not been observed. If such a

strategy existed, it would have emerged here. In some cases, we observed the consultants making verbatim translations and then shifting the indexicals when they realized that the meaning had changed. Two of our consultants spent a considerable amount of time trying to include 'today' in the translation, enjoying the task as a word puzzle. They concluded it was not possible, unless they added it as a qualifying statement with a non-quotative speech verb:

(47) [**badiadaşh nid**-*e-bi*]   *ke-o-ş̧h*   *Dashe*   UŞHË   *utsi-n,*
     tomorrow go-N.PST-**1** say-PST-3 Dashe   other day- TMP,

   nëbe   *chui-ek*
   today   speak.about-S/A>S:while

'"I will go tomorrow," said Dashe yesterday, speaking of today'

The results from the translation tasks clearly show that many speakers have knowledge of indirect speech and it is not that they had never encountered it or considered it as a strategy for speech reports. However, at the same time that they are exercising their knowledge of indirect speech in Spanish, they are rejecting the same treatment of indexicals in Matses. Even one non-Spanish speaker showed awareness of indirect-speech-like indexicals, characterizing a personal indexical alternation that they rejected as "trying to speak like a non-Amazonian."[6] Clearly, the Matses speakers are aware that it is possible, cross-linguistically, to use indexicals consistent with the speech report, but they do not permit them in their own language.

6. Extraction.   Perhaps most interesting in terms of non-verbatim quotation, extraction is possible from the quoted speech, as in (48) and (49). We tested extraction as a combination of translation and acceptability, asking Spanish-speaking consultants to translate Spanish sentences with extracted elements and then requesting acceptability judgments about possible extraction configurations.

Extraction was accepted by all speakers, and was offered as the preferred form by two:

(48) [*mida* *padkid* *senad*]$_i$ *Dashe* [__$_i$ *kues-o-mbi*] *ke-o-ş̧h*
     which type   deer   Dashe   kill-PST-1A   say-PST-3

   '[which deer-type]$_i$ did Dashe say "I killed __$_i$"?'
   Accepted as grammatical by 8/8 consultants

Note that we cannot analyze the *mida padkid senad* as part of the matrix clause with a null object in the quotation because the quotative verb *ke* is intransitive and Dashe fills the only available argument slot. Further evidence

---

[6] In fact, at least one neighboring language, Shipibo, is reported to have indirect speech (Valenzuela 2003*b*). While Shipibo is also in the Panoan family, it is from a different branch and bears little resemblance to Matses, in reported speech or otherwise.

for this is that some speakers accept partial extraction of the noun phrase, meaning there cannot be a null object in the quotation either:

(49) ?[*mida   padkid*]ᵢ *Dashe* [__ᵢ   *senad   kues-o-mbi*] *ke-o-şh*
      which   type   Dashe   deer   kill-PST-1A   say-PST-3

'[which type]ᵢ did Dashe say "I killed __ᵢ deer"?'
Accepted as grammatical by 2/6 consultants

The language allows *in situ* wh-realization, and the most preferred form seems to be *in situ* but fronted, as in (50). Note that in a free word order language, fronting within the local clause cannot necessarily be interpreted as extraction:

(50) [*mida padkid senad*   *kues-o-mbi*] *ke-o-şh*   *Dashe*
      [*mida padkid senad*]ᵢ [__ᵢ   *kues-o-mbi*] *ke-o-şh*   *Dashe*
      which type   deer   kill-PST-1A   say-PST-3 Dashe

'"I killed which deer-type," said Dashe?'
'[which deer-type]ᵢ "I killed __ᵢ," said Dashe?'

There is no such ambiguity in (48) and (49). By using an explicit sentence-initial subject and extracting beyond it, we are able to demonstrate that this is extraction to the matrix clause, not the local fronting permitted by free word order.

An unresolved mystery is why extraction is not possible with the only clausal complement-taking verb, *bun* 'want':[7]

(51) *[*mida   padkid*] *Dashe* [__   *senad   kues-te*] *bun-o-şh*
      which   type   Dashe   deer   kill-INF   want-PST-3

'which type of deer did Dashe want to kill?'

Perhaps it is simply because *bun* is not a full complement-taking verb, as it is restricted to taking infinitive-like complements where the subject of the complement MUST be the subject of the matrix clause.

Finally, extraction ONLY applies to wh-questions. It is not possible to extract other constituents:

(52) *[*senad*] *Dashe* [*kues-o-mbi*] *ke-o-şh*
      deer   Dashe   kill-PST-1A   say-PST-3

'a deer, Dashe said "I killed"'

This is not a complete surprise. Unlike in (50), extraction is not required to resolve any ambiguity, and realizing the matrix subject sentence-finally allows

---

[7] With *bun* 'want', the 'wanting' and the action are always concurrent, from the point of view of the subject, and so it is not a candidate for looking at alternating indexicals. For a person to express his/her desire for someone else to perform an action, he/she needs to use a desiderative inflection on the verb. For a person to express that one third party desires another third party to perform an action, he/she needs to use clause-chaining or express the 'wanting' with a quotative, as if it were a speech act of the first party.

any element in the reported sentence to be realized in the initial position, which seems to function as a topic role in Matses, as in many other languages. Therefore, there is little to be gained from permitting more widespread extraction.

The results here support recent findings in languages that do possess an indirect/direct division. For example, extraction is accepted from direct speech by children who are English speakers, who do not yet possess a "point-of-view operator" that distinguishes the direct/indirect division (Hollebrandse 2007). Extraction is also possible from Navajo "direct discourse" (Platero 1974 and Speas 2000). Navajo reported speech is unlike Matses with respect to morphosyntax and indexicality, as personal, temporal, and spatial indexicals in Navajo may alternate to the point of view of the reporter[8] and extraction is permitted for non-wh-phrases from reported speech (Platero 1974:215). However, like Matses, Navajo also permits *de re* construal and extraction from sentences with indexicals interpreted from the point of view of the original speaker.

Results like these, to which we add those from Matses, cast doubts on the cross-linguistic reliability of extraction as a diagnostic for the indirect/direct speech division, especially when only one speech type is present. The results suggest that restrictions on the potential for extraction might be secondary to the existence of a direct/indirect division.

7. Formal semantic analysis. The semantic description of speech reports was initiated by logicians and philosophers of language such as Tarski (1936) and Quine (1940). While a number of accounts have been offered, all are based primarily on properties of English direct speech. The most prominent work related to this paper is that of Kaplan (1977; 1978; 1989), whose primary goal is to account for the meaning of indexicals. He observes that the semantic character of the first sentence in (53) differs from the second, even if it is also spoken by David Kaplan in Los Angeles on April 21, 1973. While both sentences would be true, only the first is necessarily so in a sense to be specified:

(53) *I am here now.*
      David Kaplan is in Los Angeles on April 21, 1973.

---

[8] While all personal indexicals in Navajo may alternate in the report, an embedded third-person pronoun cannot refer to the matrix subject (e.g., 'He$_i$ said that he$_i$...'). This blocks a shifted "indirect" interpretation of such sentences, but it is still possible to construct a 'He$_i$ said that he$_i$...' sentence with an embedded fourth-person indexical, and a speaker can freely alternate to/from an embedded third-person pronoun in other contexts. As Speas (2000) suggests, this seems to be a constraint on the coreference relationships of the particular third-person pronoun, and not a direct constraint on how indexicality may alternate. It is also worth noting that unlike Matses, Navajo is a highly configurational language that possesses full relative clauses; some researchers have interpreted complementizing verbs like 'believe' in Navajo as indirect speech (Kaufman 1974).

Kaplan introduces a distinction between the CONTEXT OF UTTERANCE (or CONTEXT OF USE) and CONTEXT OF EVALUATION of a sentence. Indexicals are expressions that depend on the context of utterance, while non-indexical expressions depend only on the context of evaluation. Generally, Kaplan treats sentence meanings as CHARACTERS that map two context arguments to a truth value.

Kaplan observes that the two contexts he proposes behave differently in indirect speech and other propositional attitude reports. This difference in behavior is illustrated by the difference between non-indexical and indexical expressions illustrated in (54). The context of evaluation can change when a sentence is embedded: the non-indexical *two days ago* in (54) is interpreted relative to a context of evaluation where yesterday is the time of evaluation and consequently refers to the day three days before the time of utterance. The context of utterance, however, remains unchanged and therefore *the day before yesterda*y in (54) refers to the day two days before the time of utterance.

(54) *John said yesterday that it had rained two days ago.*
      John said yesterday that it had rained the day before yesterday.

To describe this behavior of English indexicals within his theoretical analysis, Kaplan proposes a constraint on sentence embedding predicates in English, which he calls the "Monster-Prohibition." The constraint bans predicates that change both the context of evaluation and the context of utterance for the evaluation of the embedded sentence.

Since Kaplan's work, a number of researchers, including a large number of semanticists, have pointed out that indexicals in Aghem (Hyman 1979), Amharic (Leslau 1995 and Schlenker 2003), American Sign Language (Lillo-Martin 1995), Goemai (Hellwig 2006), Kobon (Davies 1981), Nanti (Michael 2008), Navajo (Schauber 1979 and Speas 2000), Nez Perce (Deal 2009), Slave (Rice 1986), and Zazaki (Anand 2006) behave differently from indexicals in English. To account for this in such languages, several different theories have been proposed. Schlenker (2003) proposes essentially to maintain Kaplan's account but to abandon the assumption that the Monster-Prohibition should be a linguistic universal. This account is quite natural since the Monster-Prohibition is not a consequence of Kaplan's theory but rather a further constraint he adds to his theory to account for the properties of English. The Matses facts provide an argument for an account of reported speech along Schlenker's lines, as we show below.

Kaplan views contexts as complex, consisting of four components: an individual, a time, a place, and a world component. In the case of the utterance context, the four components provide the values for *I*, *now*, *here*, and *actually* respectively. We suggest the addition of one more component to Kaplan's context, namely, INFORMATION SOURCE (i), as this seems to be a further indexical that must be from the point of view of the original speaker in Matses. That is, the reporter cannot change the evidential marker on a reported verb to indicate his/her own information source. If the reporter knows reported

information from direct experience, but the original speaker knows it only from inference, the reporter must still use an inferential marker in the report. The omission of information source in Kaplan (and indeed in the western philosophy of language more generally) most likely results from the fact that marking information source is not obligatory in English. However, this is no reason to exclude it from a more general account of linguistic context.

Two different versions for the semantics of 'say' are predicted from Kaplan's theory that do not subscribe to the Monster-Prohibition. We call these the pure-indirect version in (55) and the pure-direct version in (56):

(55) 'x say'$_{indirect}$: applied to a sentence character C in context of utterance U and context of evaluation E, if in any context E′ where anything x said in E is true, then C applied to (U,E′) is true.

(56) 'x say'$_{pure\ direct}$: applied to a sentence character C in context of utterance U and context of evaluation E, if in any context E′ where anything x said in E is true, then C applied to (E′,E′) is true.

With Kaplan's model, then, 30 further semantic versions of *say* arise as possibilities; for each subset of the five components, a version of 'say' that just shifts the components in this subset is a logical possibility.

We propose that Matses 'say' is captured by the version that maintains all components of the context of the utterance, except (optionally) the world component:

(57) 'x say'$_{Matses}$: applied to a sentence character C in context of utterance U = $<x_U, t_U, p_U, i_U, w_U>$ and context of evaluation E = $<x_E, t_E, p_E, i_E, w_E>$, if in any context E′ = $<x_{E'}, t_{E'}, p_{E'}, i_{E'}, w_{E'}>$ where anything x said in E is true, then C applied to ($<x_{E'}, t_{E'}, p_{E'}, i_{E'}, w_{E'}\ |\ w_U>$, E′) is true.

This predicts the behavior of Matses speech reports:

Non-verbatim speech reports. While it is obligatory that the reporter adopt the perspective of the original speaker, and thus shift all the components of context other than the world component, (57) makes no requirement that the indexicals be expressed with the same forms as the original speech act. Additionally, because the world component of context may be grounded in the context of the utterance, the reporter is free to blend in information about worlds not present in the original speech act (within pragmatic limits, of course), and thus alternate the words and/or configuration to produce a non-verbatim report.

De re construal. This naturally falls out from the ability to ground the world component in the context of the utterance (Percus and Sauerland 2003). In any speech report where $w_E \neq w_U$, that is, where the world component of the utterance is not commensurate with the world component of the evaluation, we have, by definition, *de re* construal.

While abandoning the Monster-Prohibition is a modification of Kaplan's theory, it does not allow an arbitrary use of indexicals. In any language, they must still be understood as either relative to the context of utterance or the context of evaluation—that is, relative to the original speaker or relative to the reporter. In Matses, they must be relative to the original speaker. For example, recall that when accepting the alternation in (40), one consultant said that he might alternate *inchishchued* 'brycon' (a trout-like fish) with *nuëkkid* 'fish' when reporting to his son who was too young to know what *inchishchued* meant. While he cannot anchor the indexicals in the context of the report (as would be typical of indirect speech), he can anchor the choice of lexical items in the report. Furthermore, he might choose to anchor the choice of lexical items from the point of view of the listener. Suppose, in the same example, that the listener (the son) had his own word for fish, as any child might. The reporter is free in Matses, and probably in any language with indirect speech, to consciously choose the lexical item that he knows to be part of the listener's vocabulary, but not that of the original speaker.

Within pragmatic limits, therefore, the reporter is free to alternate non-indexical lexical items in the report from the vocabulary of any person he/she likes. This is simply not the case with indexicals. While we abandon Kaplan's Monster-Prohibition, we are still maintaining the constraint that the indexicals in the reported speech of any language are interpretable from the point of view of the reporter or the original speaker.

8. Perspective persistence.   Having demonstrated that Matses reported speech requires strict perspective persistence and discussed its formal semantic properties, we now turn to the language as a whole and propose that perspective persistence extends to all secondhand knowledge, adding past tense inferential evidentiality to reported speech.

Past tense inferential evidentials encode both the period of time since the inference was made and the period of time between the inferred event and the inference. For example, suppose that a person discovers a recently built hut, and by the style of the building infers that it is an Amazonian hut, but not a Matses one. To encode that this hut was recently built at the time he/she discovered it, he/she would use the recent past inferential marker, *-ak*. If he/she is telling someone about discovering this hut a few years later, he/she would also use the distant past experiential marker, *-onda*, to encode the time between when he/she made the inference and the recounting of the discovery:

(58) *mayu-n*   *bëste-wa-**ak-onda**-şh*
      non.Matses-ERG[9]   hut-make-**REC.PST.INF-DIST.PST.EXP**-3

   'non-Matses hut-made' (a recently made hut was discovered by the
      person a long time ago)

---

[9] Strictly, *mayu* refers to someone who is not Matses but it still considered a native to Amazonia. The gloss is simplified here to save space.

Given the complementary scenario, where the same hut was recently discovered and it was obvious that the hut was built many years previously, then the reporter would use the distant past inferential marker *-nëdak*, and the recent past experiential marker *-o*, when recounting the discovery:

(59) *mayu-n*   *bëste-wa-**nëdak-o**-ṣh*
     non.Matses-ERG   hut-make-**DIST.PST.INF-REC.PST.EXP**-3

    'non-Matses hut-made' (an old hut was discovered by the person a
      short time ago)

Evans (2009:75–76) devotes considerable attention to the uniqueness of double tense: "The astounding thing about Matses is that it can locate both the reported event and the weighing up of the evidence separately in time . . . if Matses did not exist, some philosopher of language would have had to invent it . . . but the point is that, to my knowledge, no linguist or philosopher HAD actually postulated such a system." This is essentially correct. While philosophers of language have discussed constructions that encode both an event and the weighing up of evidence, the two have always corresponded with syntactic embedding, as with reported speech in Matses and Kaplan's examples in **7** above. The double-tense system that achieves this through suffix-stacking seems to be unique to Matses.[10] Our proposal is that both the double-tense system and the reported speech system are, in fact, two morphosyntactic manifestations of the one underlying semantic constraint. This constraint requires that events and their detection are both explicitly encoded for any event where the detection is not coincident with the event itself.

Sentences (58) and (59), reproduced from Fleck (2007), bear a striking similarity to reported speech in that both tenses must be evaluated to determine the exact point in time that the reported event occurred. Information that is gained through inference encodes the time of the inference relative to the time of the report, and in turn the time of the inferred event. Similarly, information that is gained through reported discourse encodes the time of the speech act, and in turn the time of the reported event. In short, they both maintain perspective persistence.

Unlike reported speech, which can contain any indexical, the evidential system only encodes tense. The second inferential marker may only be dropped if reporting the event at the time of the inference (Fleck 2007). In (58), when the person immediately discovered the hut he/she could have stated *bëste-wa-ak-∅* ('I infer that someone recently made hut'), which is then interpreted as a current inference. This is not a violation of perspective persistence, as the inference is concurrent with the report and so there are not multiple points of view to encode. The double-tense system does not apply

---

[10] The closest known phenomena to double-tense in Matses might be the Korean marker *-te*, where, as an evidential, it is interpreted as past tense in addition to the actual tense marker, encoding the time of the evidential evaluation (Lee 2009).

to experiential and conjecture evidentials for the same reason. The point of detection is always concurrent with the event for experiential evidentiality, as the event is observed directly, and so there is no requirement to encode the two separately. Similarly, there is no point of detection for conjecture evidentiality (nothing has been detected or an inferential evidential would be used) and so the conjecture remains current until evidence is found, at which time a different evidential strategy will be used.

Perspective persistence is a property of (verbatim) direct speech in any language, as any indexicals that occur in the original speech act will be maintained in the report. Some researchers have proposed that evidentiality is an areal feature in Amazonia (Aikhenvald and Dixon 1998) and in particular in the Panoan family (Valenzuela 2003*a*), and so perhaps perspective persistence already existed in the language as the result of sociolinguistic constraints requiring the reporter to encode the original speaker's point of view in a speech report. If so, then we propose that the perspective persistence in the reported speech system provided a template for the double-tense system for inferential evidentiality marking at the time that the Matses language acquired an evidential system. Just as the reported speech system respected perspective persistence for past reported events, the evidential system came to obey perspective persistence for past inferred events.

9. The (mythical/historical) narrative past.   There is one construction in Matses that, at first glance, resembles indirect reported speech. The narrative past is a very specialized construction with *pa-ak-ka-denne-k* following the reported verb. It consists of the comment suffix *-pa*, [11] the narrative past tense marker *-ak*, the transitive quotative/reportative (-)*ka*, the remote past experiential marker *-denne*, and the third-person indicative *-k*. Only *-pa* is optional. There are two linguistic interpretations for this construction in the literature, although both with the same meaning:

(60) *Matses-n   kunta   bed-pa-ak   ka-denne-k*
     Matses-ERG   GEN.1.mother grab-NAR-PST   tell-REM.PST-3

     'the Matses kidnapped my mother, it has been told'

---

[11] Here, the suffix *-pa* is simply labeled "NAR," while it is more generally labeled "COMMENT" by Fleck (2003), where it is described as "a cue to the speaker that there is something more to the utterance, and [he/she] should look for an implication, a sarcastic meaning, an attitude, an opinion, an emotional reaction, etc., that may or may not be explained overtly as it functions here to alert the reader." In earlier work, Kneeland (1996) devotes an entire article to the functions of the *-pa* suffix, labeling it an "AUGMENTATIVE." In the mythical/narrative past, *-pa* seems to act as a grammatical cue, as it is telling the listener to interpret the following *-ak-ka-denne-k* as the narrative past construction.

(61) *Matses-n   kunta   bed-pa-ak-ka-denne-k*
     Matses-ERG GEN.1.mother grab-NAR-PST-REP-REM.PST-3

'the Matses kidnapped my mother, (it has been told/say the ancestors)'

Example (60), reproduced from Fleck (2003; 2007) and included in our experiments (see figure 1), is interpreted with the first-person genitive referring to the reporter's mother. In earlier work, Kneeland (1996) treats the verb as inflected with *-ak-ka-denne-k*. Example (61) is the interpretation of (60) following Kneeland's analysis. Like Kneeland, Fleck does not analyze this construction as containing syntactic embedding but analyzes *ka-denne-k* as obligatorily following the verb. The distinction comes down to whether or not we interpret *ka* as a lone verb, the second part of a compound, or as part of a hearsay marker in the narrative past. We lean toward one of the latter two interpretations, but unlike Kneeland we make no claims about whether *ka* is an inflection, an incorporated verb, or the second part of a compound. We use REP as a gloss here simply to indicate that *ka* functions as part of a hearsay construction, without making any claims about its precise grammatical role in *ak-ka-denne-k*.

While no past researchers have analyzed the "reported" information in the narrative past as a clausal complement of *ka-denne-k*, the similarity to indirect speech had also gone unnoticed until the research reported herein, so we investigated it thoroughly to ensure that it was not a (very specialized) case of indirect speech. Ultimately, the narrative past has no direct impact on our analysis of the reported speech constructions presented prior to this section. However, within a narrative register it is used as a form of free indirect speech that can act with a reportative function, so it fits into our broader analysis of the relationship between the reported speech and evidential systems.

The key evidence that this is a specialized construction and not a separate speech report strategy is that no element of *ak-ka-denne-k* may be substituted with another morpheme in the paradigm and no overt subject is permitted:

(62) **Matses-n   kunta   bed-pa-şh-ke-onda-şh   Dashe*
     Matses-ERG GEN.1.mother grab-NAR-**PST-say-DIST.PST-3** **Dashe**

'the Matses kidnapped my mother, Dashe told'

The narrative past permits only ONE of more than 100 possible tense/evidential/quotative combinations. To change any one renders the sentence ungrammatical. It is not, therefore, an alternate means available for reporting any speech act but a restricted and possibly fossilized form used only in a narrative register.

It is also unusual that the transitive *ka* does not take any overt arguments. To explicitly name the source of the information, a further quotative is required:

(63) [*Matses-n   kunta   bed-pa-ak-ka-denne-k*]
　　[Matses-ERG   GEN.1.mother   grab-NAR-PST-REP-REM.PST-3]

　　　ke-o-şh   Dashe
　　　say-PST-3   Dashe

　　　'"the Matses kidnapped my mother, it has been told," said Dashe'

The sentence will also obey perspective persistence in these cases, with 'my mother' understood as the mother of the original speaker (Dashe), not the reporter. The same is true when a particular character in a myth or a historical narrative is quoted within a sentence qualified by *-pa-ak-ka-denne-k*:

(64) [*mibi-şhë   matses-wa-şhun*]   *ke-pa-ak-ka-denne-k*
　　 2-AUG   person-VZ-DES   say-NAR-PST-REP-REM.PST.3

　　　'"I wish someone would turn you into a person," they said, it has
　　　been told'

In (64), reproduced from Fleck (2003), *mibi* is understood, unambiguously, as the second person relative to the innermost speaker—the person within the narrative. Although it is within the narrative past, the fact that it is further embedded within a standard quotative, *ke*, ensures that it maintains perspective persistence. Sentences like (64) are common for encoding actual speech acts within narratives. Clearly, then, the presence of the narrative past does not override the perspective persistence maintained by any quotatives.
　　We also confirmed the non-embedded analysis of Fleck and Kneeland:

(65) *Matses-n   bed-pa-ak-ka-denne-k   **kunta***
　　 Matses-ERG   grab-NAR-PST-REP-REM.PST-3   **GEN.1.mother**

　　 'the Matses kidnapped my mother, it has been told'

(65) is a variant of (60)/(61), with the same linguistic meaning that was produced spontaneously and independently by two different consultants. While it is not uncommon for part of the reported speech to be realized after the quotative, this is the only instance we observed where a core argument of the verb was realized after what was potentially a quotative. All other instances tend to split the quotation at clausal boundaries or between core arguments and adjuncts:

(66) [*tsutsi   ne-e,   chui mimbi-ba*] *ke-onda-şh,*   [*tsutsi*
　　 who   be-N.PST   tell 2.ERG-first say-DIST.PST-3   who

　　　ne-e]
　　　be-N.PST

　　　'"who are you? you tell first!" they said, "who are you?"'

We would therefore need to analyze (65) as right-extraction of the object *kunta* beyond the matrix verb. However, as shown in **6** above, Matses grammar permits only wh-extraction, and only when fronting. (65) should, therefore, be ungrammatical, and not a spontaneously produced variant of (60)/(61). By

the non-embedded analysis, the sentence is simply the SVO variant permitted by free word order—a grammatical and common construction.

This analysis would then explain the absence of explicit arguments for *ka*. They are missing because *ka* is not functioning as verb but purely as an evidential, and the only arguments that need to be present are those required by the lone verb. Cross-linguistically, it is common for a quotative and hearsay evidential to take the same form, and this is attested in at least one other language of the Peruvian Amazon (Michael 2008). This could well be the case in Matses too, although our analysis also holds if we interpret *ka* as a compounded verb rather than an evidential marker.

Rather than treat the narrative past as an exception to the use of quotatives, null arguments, evidentiality, tense, word order, extraction, and indexical shift, the simplest solution seems to be to treat narrative past as a matrix clause, with no embedding. In the absence of a hearsay evidentiality marker, the combination of the inferential marker, reportative/quotative, and experiential marker in the narrative past functions as a complex approximation for expressing non-observed events that have been passed on through speech.

9.1. Unshifted indexicals? Not until you are an elder.   The narrative past retains one exception to the rest of the Matses language: it allows direct indexical reference to events for which speakers do not possess direct knowledge.

In addition to the grammatical constraints, there are also social constraints on who may use the narrative past, with only the oldest speakers employing it. While all speakers understand the form, those not yet old enough to be grandparents (approximate age) stated that they could not use the narrative past for encoding specific events and referred us to older speakers. This indicates that the form carries a certain prestige, and those not old enough would be required to follow *-pa-ak-ka-denne-k* with a further quotative to indicate that they are quoting another person (as in 63). This is, in fact, very common. The complete sentence from Fleck (2003) that was reproduced in (64) is also one such case:

(67) [*mibi-şhë*   *matses-wa-şhun*]   *ke-pa-ak-ka-denne-k*
        2-AUG   person-VZ-DES   say-NAR-PST-REP-REM.PST.3

        ke-onda-şh
        say-DIST.PST-3

   '"I wish someone would turn you into a person," they said, it has been told, they said'

Yi (2002) argues that the evidential function of free indirect speech will often override the speech report function, and this appears to be what we are observing here. The narrative past is employing a hearsay evidentiality function on the information without actually making the claim that it is reporting the instance of a single observed speech act. The "reporter,"

therefore, is not reporting speech but passing on knowledge that he/she acquired through speech.

This has a very direct social consequence, with an entire speech strategy available only to the community elders. Stylistically, the narrative past is free indirect speech; functionally, it serves as hearsay evidentiality; while grammatically, it contains the only such case of direct indexical reference to non-observed events. All three of these are otherwise unavailable in the language. By employing this form, the community elders are acting as the custodians of information about events beyond living memory and thus asserting their status as the custodians of oral history. Their status permits them to transcend the evidential system and use an experiential evidential to encode what is otherwise secondhand information, and in doing so to make direct indexical reference to past, non-observed events.

In employing the narrative past, the social claim might be that the information contained in these narratives is NOT secondhand but part of their collective knowledge. This is consistent with both Fleck's and Kneeland's gloss of the narrative past: 'it has been told'/'say the ancestors'. In particular, Kneeland analyzes the narrative past as the present tense, indicating that the "point of detection" is continuous. While the construction itself is fairly unique, this is a common stylistic property of free indirect speech in narrative registers, most widely researched in English's "historical present" (Leech 1971 and Brinton 1992). Such narratives are somewhat outside the temporal interpretation that is applied by listeners to the rest of the language. If this is the case for Matses, then it is not the only such example with the remote past -*denne*. This marker can be used by all speakers to talk about people who are recently deceased, most likely to distance the speakers from saying the name of a recently deceased person, which is otherwise taboo (Fleck 2007), demonstrating that the social functions can override the more commonly observed indexical functions for the remote past in other contexts too.

The violation of perspective persistence in the narrative past can therefore be seen as driven by purely stylistic purposes or as not a violation at all, depending on how the evidential status of shared cultural knowledge is analyzed. It would be fascinating to look into the social and cultural functions of the narrative past in more depth, but this simply was not a component of the research reported here.

10. Conclusions.   This paper has presented a considerable update to the prior belief that Matses speakers expected all reported speech to be ideally verbatim. The language does, in fact, allow wholesale paraphrasing of speech events, but only under the constraint of perspective persistence, as the indexicals in the report must be from the point of view of the original speaker.

The analysis here also confirms the suggestion that quotatives function as periphrastic evidentials (Fleck 2007). The same constraint of perspective

persistence holds over both the reported speech and evidential systems, and the narrative past functions to encode hearsay evidentiality when the original speech act is no longer accessible. Aikhenvald (2004) gives a detailed account of all known configurations of evidential systems; only the language isolate, Washo, contains experiential, inferential, and conjecture evidentials but no reportative evidentials (but unlike Matses, without obligatory evidential marking). The analysis in this paper therefore saves Matses from being a typological outlier in this regard.

The narrative past uses the remote past experiential suffix *-denne*, which we observed some speakers conflating with the distant past experiential suffix *-onda*. If this represents a simplification of the tense system, then it makes the need to document the Matses language even more important. If this distinction is lost, we lose more than just a grammatical distinction between two tenses: we lose distinctions of information source, societal relations, and spiritual beliefs.

To return to the definitions of direct and indirect speech, the easiest case to make is that Matses contains ONE form of speech, and the direct/indirect speech division does not apply. We see that under perspective persistence, Matses reported speech is strictly direct speech in terms of its indexicals, and strictly indirect speech in terms of all other features. Either classification could be used, depending on the features that were considered crucial to the division. Perhaps all languages with a single reported speech strategy have a similar blend of features, and it is only when a language begins to permit two separate forms of reported speech that certain features become associated with a direct or indirect report. It makes sense that configurational changes would then become associated with indirect speech, as the alternated indexicals already violate the verbatim constraint. This would predict, therefore, that *de re* construal IS possible in direct speech cross-linguistically, and that it is simply the verbatim requirement of direct speech that masks the possibility of *de re* construal being observed in the direct speech reports of more languages, as *de re* construal necessarily entails a non-verbatim quotation.

So why, then, does Matses lack a direct/indirect division? This is something that we can only speculate about. There seem to be both syntactic and semantic constraints preventing it. Most languages allow full clausal complements for some verbs, and therefore permit sentences like *Pacha* **saw** *that Dashe was moving toward him*, with the unshifted *him* interpreted as referring to *Pacha*. When such a language first develops indirect speech, the only innovation required is that a speech verb takes this same type of complement. Matses, however, does not possess any verbs that allow a full clausal complement. Therefore, for 'say' verbs in Matses to take unshifted clausal complements, it would require the innovation of a whole new syntactic system within the language. In addition, perspective persistence would be a constraint against such innovation, as the unshifted indexicals in indirect speech would violate perspective persistence by directly encoding the event being reported. Therefore,

any novel means for reporting secondhand information that used unshifted indexicals would be unlikely to gain acceptance in the language, as it fails to encode the point of view of a past event relative to its detection. Neither of these are hard constraints, of course. Alongside the innumerable arbitrary diachronic changes that any language undergoes, they would have made the development of a direct/indirect speech division less likely but not impossible.

To date, no other language has been documented that requires perspective persistence of all reported information. For those languages thought to possess only direct speech, like Kobon (Davies 1981) and Nanti (Michael 2008), speakers may report information learned through speech without a quotative, which is not permitted in Matses due to the obligatory evidential system. The existence of such languages predicts that some language might exist with obligatory adoption of the spatial, temporal, and personal point of view of the original speaker, and it seems that Matses fulfills this prediction. Such a configuration is not, as Kaplan predicted, a "monster" but simply one manifestation of the many means we possess for encoding one speech act within another.

REFERENCES

AIKHENVALD, ALEXANDRA. 2004. Evidentiality. Oxford: Oxford University Press.

AIKHENVALD, ALEXANDRA, AND ROBERT DIXON. 1998. Evidentials and areal typology: A case study from Amazonia. Language Sciences 20:241–57.

ANAND, PRANAV. 2006. De de se. Ph.D. dissertation, Massachusetts Institute of Technology.

AOKI, HARUO. 1970. Nez Perce Grammar. UCPL 62. Berkeley: University of California Press.

BALLY, CHARLES. 1912. Le langage et la vie. Geneva: Édition Atar.

BANFIELD, ANN. 1973. Narrative style and the grammar of direct and indirect speech. Foundations of Language 10:1–39.

BOERDER, WINFRIED. 2002. Speech and thought representation in the Kartvelian (South Caucasian) languages. Reported Discourse: A Meeting Ground for Different Linguistic Domains, ed. Tom Güldemann and Manfred von Roncador, pp. 253–88. Amsterdam: John Benjamins.

BRAUN, DAVID. 2007. Indexicals. Stanford Encyclopedia of Philosophy, ed. Edward N Zalta. Stanford, Calif.: Metaphysics Research Lab, CSLI, Stanford University.

BRINTON, L. J. 1992. The historical present in Charlotte Bronte's novels: Some discourse functions. Style 26:221–44.

COULMAS, FLORIAN. 1986. Reported speech: Some general issues. Direct and Indirect Speech, ed. Florian Coulmas, pp. 1–28. Berlin: Mouton de Gruyter.

CURNOW, TIMOTHY JOWAN. 2002. Conjunct/disjunct systems in Barbacoan languages. Proceedings from the Fourth Workshop on American Indigenous Languages, ed. Jeanie Castillo, pp. 3–12. Santa Barbara: Department of Linguistics, University of California, Santa Barbara.

DAVIES, JOHN. 1981. Kobon. Lingua Descriptive Studies 3. Amsterdam: North-Holland.

DEAL, AMY ROSE. 2009. Nez Perce verbs of speech and mental attitude. Paper presented at the Annual Meeting of the Society for the Study of the Indigenous Languages of the Americas (SSILA), San Francisco.

DICKINSON, CONNIE. 2000. Mirativity in Tsafiki. Studies in Language 24:379–421.

DIXON, R. M. W. 2006. Complement clauses and complementation strategies in typological perspective. Complementation: A Cross-Linguistic Typology, ed. R. M. W. Dixon and Alexandra Aikhenvald, pp. 1–48. Oxford: Oxford University Press.

Evans, Nicholas. 2009. Dying Words: Endangered Languages and What They Have to Tell Us. Malden, Mass.: Wiley-Blackwell.

Fields, Harriet L., and Mary Ruth Wise. 1976. Bosquejo de la fonología matsés (mayoruna). Datos Etno-lingüísticos 31. Lima: Instituto Lingüístico de Verano.

Fleck, David. 2003. A grammar of Matses. Ph.D. dissertation, Rice University.

———. 2006a. Antipassive in Matses. Studies in Language 30:541–73.

———. 2006b. Complement clause type and complementation strategies in Matses. Complementation: A Cross-Linguistic Typology, ed. R. M. W. Dixon and Alexandra Aikhenvald, pp. 224–44. Oxford: Oxford University Press.

———. 2007. Evidentiality and double tense in Matses. Language 83:589–614.

———. 2008. Coreferential fourth-person pronouns in Matses. IJAL 74:279–312.

Fleck, David W., and Robert S. Voss. 2006. On the origin and cultural significance of unusually large synonym sets in some Panoan languages of western Amazonia. Anthropological Linguistics 48:335–68.

Goffman, Erving. 1974. Frame Analysis: An Essay on the Organization of Experience. Cambridge, Mass.: Harvard University Pres.

Goodwin, Charles. 2007. Interactive footing. Reporting Talk: Reported Speech in Interaction, ed. Elizabeth Holt and Rebecca Clift, pp. 16–46. Cambridge: Cambridge University Press.

Harrison, David. 2007. When Languages Die. Oxford: Oxford University Press.

Hellwig, Birgit. 2006. Complement clause type and complementation strategies in Goemai. Complementation: A Cross-Linguistic Typology, ed. R. M. W. Dixon and Alexandra Aikhenvald, pp. 204–23. Oxford: Oxford University Press.

Hollebrandse, Bart. 2007 A special case of wh-extraction in child language. Lingua 117:1897–1906.

Hyman, Larry M. 1979. Phonology and noun structure. Aghem Grammatical Structure, ed. L. M. Hyman, Southern California Occasional Papers in Linguistics 7, pp. 1–72. Los Angeles: Department of Linguistics, University of Southern California.

Jansen, Wouter; Michelle L. Gregory; and Jason M. Brenier. 2001. Prosodic correlates of directly reported speech: Evidence from conversational speech. ITRW Workshop on Prosody and Speech Recognition, Red Bank, N.J.

Jespersen, Otto. 1924. The Philosophy of Grammar. London: Allen and Unwin.

Kalepky, T. 1899. Zur französischen Syntax. Zeitshift für Romanische Philologie 13.

Kammerzell, Frank, and Carsten Peust. 2002. Reported speech in Egyptian: Forms, types and history. Reported Discourse: A Meeting Ground for Different Linguistic Domains, ed. Tom Güldemann and Manfred von Roncador, pp. 289–322. Amsterdam: John Benjamins.

Kaplan, David. 1977. Demonstratives: An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals. Ms., University of California, Los Angeles.

———. 1978. On the logic of demonstratives. Journal of Philosophical Logic 8:81–98.

———. 1989. Themes from Kaplan. Oxford: Oxford University Press.

Kaufman, Ellen. 1974 Navajo spatial enclitics: A case for unbounded rightward movement. Linguistic Inquiry 5:507–33.

Kneeland, Harriet. 1979. Lecciones Para el Aprendizaje del Idioma Mayoruna. Lima: Instituto Lingüístico de Verano.

———. 1996. El aumentativo -pa: Su efecto sobre el narrador y el tema en matsés. Estudios Lingüísticos de Textos de la Amazonía Peruana, ed. Ågot Bergli, Serie Lingüística Peruana 37, pp. 129–55. Lima: Instituto Lingüístico de Verano.

Kvavik, Karen. 1986. Characteristics of direct and reported speech prosody: Evidence from Spanish. Direct and Indirect Speech, ed. Florian Coulmas, pp. 333–60. Berlin: Mouton de Gruyter.

Lee, Jungmee. 2009. Evidentiality and temporality: A case study of -te in Korean. Proceedings of the Eighth Syntax and Semantics Conference, CSSP, Paris.

Leech, Geoffrey. 1971. Meaning and the English Verb. London: Longman.

Lerch, Gertraud. 1919. Uneigentliche direkte Rede. Munich.

Leslau, Wolf. 1995. A Reference Grammar of Amharic. Wiesbaden: Harrassowitz.

Levinson, Stephen. 1998. Putting linguistics on a proper footing: Explorations in Goffman's concepts of participation. Erving Goffman: Exploring the Interaction Order, ed. P. Drew and A. Wootton, pp. 161–277. Berlin: Mouton de Gruyer.

———. 2006. Deixis. The Handbook of Pragmatics, ed. Laurence R. Horn and Gregory L. Ward, pp. 97–120. Malden, Mass: Blackwell.

Lillo-Martin, Diane. 1995. The point-of-view predicate in American Sign Language. Language, Gesture, and Space, ed. K. Emmorey and J. Reilly, pp. 155–70. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Lorck, Etienne. 1921. Die erlebte Rede: Eine sprachliche Untersuchung. Heidelberg: Carl Winter.

Massamba, David. 1986. Reported speech in Swahili. Direct and Indirect Speech, ed. Florian Coulmas, pp. 99–120. Berlin: Mouton de Gruyter.

Michael, Lev. 2008. Nanti evidential practice: Language, knowledge, and social action in an Amazonian society. Ph.D. dissertation, University of Texas, Austin.

Noonan, Michael. 1985. Complementation. Language Typology and Syntactic Description, vol. 2, Complex Constructions, ed. Timothy Shopen, pp. 42–140. Cambridge: Cambridge University Press.

Nunberg, Geoffrey. 1993. Indexicality and deixis. Linguistics and Philosophy 16:1–43.

Ochs, Elinor. 1990. Indexicality and socialization. Cultural Psychology: Essays on Comparative Human Development, ed. J. Stigler, R. Shweder, and G. Herdt, pp. 287–308. Cambridge: Cambridge University Press.

Percus, Orin. 2000. Constraints on some other variables in syntax. Natural Language Semantics 8:173–229.

Percus, Orin, and Uli Sauerland. 2003. On the LFs of attitude reports. Proceedings of Sinn und Bedeutung 2002, ed. Matthias Weisgerber. Konstanz: Universität Konstanz.

Perridon, Harry. 1996. Reported speech in Swedish. Reported Speech: Forms and Functions of the Verb, ed. Theo Janssen and Wim van der Wurff, pp. 165–88. Philadelphia: John Benjamins.

Peust, Carsten. 1996. Indirekte Rede im Neuägyptischen. Göttinger Orientforschungen Series, no. 33. Wiesbaden: Otto Harrassowitz.

Platero, Paul. 1974. The Navajo relative clause. IJAL 40:202–46.

Quine, W. V. O. 1940. Mathematical Logic. Cambridge, Mass.: Harvard University Press.

Rice, Keren. 1986. Some remarks on direct and indirect speech in Slave (Northern Athapaskan). Direct and Indirect Speech, ed. Florian Coulmas, pp. 47–76. Berlin: Mouton de Gruyter.

Schauber, Ellen. 1979. The Syntax and Semantics of Questions in Navajo. New York: Garland.

Schlenker, Philippe. 2003. A plea for monsters. Linguistics and Philosophy 26:29–120.

Sharvit, Yael. 2008. The puzzle of free indirect discourse. Linguistics and Philosophy 31:353–95.

Shklovsky, Kirill, and Yasutada Sudo. 2009. Shifted indexicals in Uyghur. Proceedings of the Fortieth Meeting of the North East Linguistic Society. Cambridge: Massachusetts Institute of Technology.

Short, Mick. 1996. Exploring the Language of Poems, Plays and Prose. London: Longman.

Silverstein, Michael. 1976. Shifters, linguistic categories, and cultural description. Meaning in Anthropology, ed. K. Basso and H. Selby, pp. 11–56. Albuquerque: University of New Mexico Press.

Speas, Margaret. 2000. Person and point of view in Navajo. Papers in Honor of Ken Hale, ed. E. Jelinek, A. Carnie, and M. Willie, MIT Working Papers on Endangered and Less Familiar Languages, pp. 19–38. Cambridge: Massachusetts Institute of Technology.

Suzuki, Yasushi. 2002. The acceptance of "free indirect discourse": A change of the representation of thought in Japanese. Reported Discourse: A Meeting Ground for Different Linguistic Domains, ed. Tom Güldemann and Manfred von Roncador, pp. 109–20. Amsterdam: John Benjamins.

TANNEN, DEBORAH. 1989. Talking Voices: Repetition, Dialogue, and Imagery in Conversational Discourse. Studies in Interactional Sociolinguistics 6. Cambridge: Cambridge University Press.

TARSKI, ALFRED. 1936. Der Wahrheitsbegriff in den formalisierten Sprachen. Studia Philosophica 1:261–405.

THOMASON, SARAH GREY, AND TERRENCE KAUFMAN. 1991. Language Contact, Creolization, and Genetic Linguistics. Berkeley: University of California Press.

TOBLER, A. 1894. Vermischte Beiträge zurfranzösischen Grammatik II. Leipzig: S. Hirzel.

VALENZUELA, PILAR M. 2003a. Evidentiality in Shipibo-Konibo, with a comparative overview of the category in Panoan. Studies in Evidentiality, ed. Alexandra Aikhenvald and R. M. W. Dixon, pp. 33–61. Amsterdam: John Benjamins.

——— . 2003b. Transitivity in Shipibo-Konibo grammar. Ph.D. dissertation, University of Oregon.

VAN DER WURFF, WIM. 2002. Direct, indirect and other discourse in Bengali newspapers. Reported Discourse: A Meeting Ground for Different Linguistic Domains, ed. Tom Güldemann and Manfred von Roncador, pp. 121–39. Amsterdam: John Benjamins.

VANDELANOTTE, LIEVEN. 2004. Deixis and grounding in speech and thought representation. Journal of Pragmatics 36:489–520.

YI, CHARLES. 1986. Direct speech and indirect speech: A functional study. Direct and Indirect Speech, ed. Florian Coulmas, pp. 29–45. Berlin: Mouton de Gruyter.

APPENDIX

REPORTED SPEECH IN MATSES: PERSPECTIVE
PERSISTENCE AND EVIDENTIAL NARRATIVES

ROBERT MUNRO, RAINER LUDWIG, ULI SAUERLAND, AND DAVID W. FLECK

Additional Examples

(A1) *kun   papa* [*kun   chido* [*Dashe* [*nid-nu*]*ke-o-şh*]   *ke-o-şh*]   *ke-o-şh*
    GEN.1 father GEN.1 wife   Dashe go-1   say-PST-3   say-PST-3   say-PST-3
    'my father said, "my wife said, "Dashe said, "I am going"""'

(A2) *kachina   pe-o-mbi*
    chicken   eat-PST-1A
    'I ate chicken'

(A3) #[*kachina   pe-o-şh*]   *ke-o-şh*
    chicken   eat-PST-**3**   say-PST-3
    '"they ate chicken" they said'
    Rejected as a report of (A2) by 100% of consultants

(A4) *biuşh-n   che-o-şh-i*
    mosquito-ERG   sting-PST-3-**1O**
    'Mosquitoes stung me'

(A5) #[*biuşh-n   che-o-şh*]   *ke-o-şh*
    mosquito.ERG stung-PST-3   say-PST-3
    '"Mosquitoes stung them," they said'
    Rejected as a report of (A4) by 100% of consultants

(A6) *kun   dasiwidte piu-piu-mbo   ik-e-k*
    GEN.1   shirt   REDUP-red-AUG   be-N.PST-IND
    'My shirt is orange (reddish)'

(A7) #[**aton**   *dasiwidte piu-piu-mbo   ik-e-k*]   *ke-o-şh*
    GEN.**3** shirt   REDUP-red-AUG   be-N.PST-IND   say-PST-3
    '"Their shirt is orange (reddish)," they said'
    Rejected as a report of (A6) by 100% of consultants

(A8) *Pacha   u-bëd   nid-e-k*
      Pacha   1-COM:S   go-N.PST-IND
      'Pacha will go with me'

(A9) #[*Pacha   **a**-bëd   nid-e-k*]   *ke-o-şh*
       Pacha   3-COM:S   go-N.PST-IND   say-PST-3
      '"Pacha will go with them," they said'
      Rejected as a report of (A8) by 5/5 consultants

(A10) [*chumbo ik-e-k*]   *ke-o-şh   Pacha uşhë utsi-n*
       hot   be-N.PST-IND   say-PST-3   Pacha day other-TMP
       '"It is hot," said Pacha yesterday'

(A11) #[[*chumbo ik-**o-şh***]   *ke-o-şh   Pacha uşhë utsi-n*]   *ke-o-şh*
        hot   be-**PST-3**   say-PST-3   Pacha day other-TMP   say-PST-3
       '""It was hot," said Pacha yesterday," they said'
       Rejected as a report of (A8) by 71% of consultants

(A12) *onina-n   nuëkkid   pe-kid*
       otter-ERG   fish   eat-HAB
       'the otter eats fish'

(A13) *onina-n   nuëkkid   pe-**e-k***   *ke-o-şh*
       otter-ERG   fish   eat-**N.PST-IND**   say-PST-3
       '"the otter is eating fish/the otter eats fish," he said'
       Accepted as a report of (A12) by 2/3 consultants

(A14) [*to,   mos-moska-chito-emen-da   ik-tiad*]
        oh   REDUP-chew-UNCERT-NEG-UNCERT   be-ABIL
              ke-anek,   cho-ak-ka-denne-k
              say-after   come-PST-REP-REM.PST-3
       '"After saying "Oh, perhaps I must not eat it," he came," say the ancestors'

Example (A14) is from Kneeland (1996), while the rest are from our own work. We interpret/gloss (A14) differently from Kneeland in a few ways, the most important being the gloss of *emen* as an archaic form of negation. In Kneeland's gloss, the person is interpreted as saying 'perhaps I *must* eat it' but otherwise it retains the same meaning.

Experimental Method

We worked with 25 speakers from across the Matses region in 2008, conducting a series of controlled experiments measuring the acceptability of given

speech reports and eliciting translations of reported speech from Spanish. In the spirit of reciprocity in language documentation, we also recorded a number of long narratives that members of the community wished to preserve, and provided the means for the continuing transcription and translation after we completed the fieldwork. These recordings also provide a rich corpus of examples from which we can draw, both in reported speech and the Narrative Past. In addition to the experimental methods, we conducted extended elicitation sessions with three consultants to focus on specific phenomena in greater depth.

Acceptability Tasks

We created tasks where the consultants would hear a speech act from an investigator or primary consultant, followed by its report, and then they were asked to comment on the acceptability of the speech report and any possible scenarios in which the report might be used. We tested 16 instances of reported speech with 20 speakers, in one to four sessions per speaker (see table 1 in text for the complete breakdown). For one speaker, it was not certain that we made the task sufficiently clear, and so these responses, while consistent with the broader results, are omitted. In follow-up sessions, we tested a further 26 instances with between three and seven speakers. The variables tested included alternations in personal pronouns, configuration, word order, tense, space, logical entailment, argument position, and evidentiality. In addition, we used these sessions to obtain speaker judgments on the (Mythical/Historical) Narrative Past from as many people as possible. The sentences we used in the experiments were created during extended elicitation sessions with our primary consultants to ensure that they were grammatically correct in any potential alternation, so that we were not introducing additional potentially confounding variables, and that they were typical of the events that people might regularly discuss.

We intended to avoid the ordering effect of repeated non-acceptance by using more general elicitation questions as fillers, as we began the study expecting all alternations to be rejected as violations of a verbatim constraint. When it became clear that many of our alternations were being accepted (about half across the examples we created), we controlled for ordering effects by randomizing the order.

The attitude of the participants was very positive; they enjoyed the task of trying to consider when a given alternation might be employed in a speech report. Culturally, there were no evident constraints that would coerce a speaker into giving an answer based on what they assumed we wanted to hear, and so the experiments were very successful in this regard. Ultimately, our research drew a lot of interest in the community, especially among those who spoke some Spanish, who became interested themselves in the differences we were observing between the languages. In short, it was fun; and this strengthened our results as greater engagement in the task ensured richer consideration about the range of contexts in which a given alternation may/may not be acceptable. As a general trend, when an alternation in

logical entailment or voicing alternation was rejected, the consultant suggested that it was because it differed too much in meaning from the original utterance (the report described actions too different from those in the original speech act).

The results in table 1 (in text) are all significant with respect to a null hypothesis in which any element may alternate in the report, except for indexicals. Personal, spatial, and temporal indexicals cannot alternate, except where the spatial and temporal indexicals express overlapping spaces/times. The alternation is therefore non-significant from a null hypothesis where nothing can alternate ($\rho > 0.5$, $\chi 2$ with Yates's correction). Indexicals within the Narrative Past (but not also quotatives) are interpreted from the point of view of the reporter, and are significant with respect to how they compare to indexicals under quotatives ($\rho < 0.05$, $\chi 2$ with Yates's correction). Alternations in configuration were accepted significantly more often than a baseline calculated by the rate of experimental error ($\rho < 0.05$, $\chi 2$ with Yates's correction). Alternations where the reported speech act was logically entailed by the original speech act were accepted significantly more often than a baseline calculated by the rate of experimental error ($\rho < 0.05$, $\chi 2$ with Yates's correction).

The data presented in table 1 (in text) are not the whole story, of course. We tested 26 further instances with up to eight speakers and many more with our primary consultants only; we draw heavily on the linguistic intuitions of our primary consultants, who understood the research questions and the contrasts with Spanish.

From the results in table 1, it seems likely that the inter-speaker variation is non-trivial. There are strong correlations between speakers accepting different examples of logical entailment, so that while the interpretation of indexicals was consistent across all speakers, there is variation in how far in meaning a report is permitted to stray from the original utterance. However, despite the variation, the two ends of the spectrum remain clear: no speakers accept indexical alternations; and all speakers accept some form of non-verbatim quotation.

Translation tasks

The translation tasks were straightforward but effective tasks, asking consultants to translate examples of Spanish indirect speech into Matses. When it became clear that speakers did not necessarily prefer verbatim quotation, but that the language maintains perspective persistence for all indexicals, this became a particularly interesting source of data, as it gave us the potential to observe a form of reported speech that was hitherto undocumented. When this was not the case, it remained a key experiment in that the consultants had to reconstruct the speech act by adopting the point of view of the original speaker, alternating the Spanish unshifted indexicals with the Matses shifted indexicals.

Narrative Past

For examples about the Narrative Past, we drew on data from our

experiments, the extended elicitation sessions, a database of transcriptions of Matses narratives made available by David Fleck, and earlier examples reported by Kneeland (1996).