## Nez Perce embedded indexicals

Amy Rose Deal • UC Santa Cruz

An initial inspection of Nez Perce speech/attitude reports seems to reveal a language with a straightforward dichotomy between direct reporting (quotation) and indirect reporting (embedding). Direct report (1a) uses the 1st person as an English quotation would; the indirect version (1b) switches to the 3rd person, just like in a non-quoted complement in English.

- (1) a. *pro* hi-neki-se-Ø [*pro* ]-wees sayaq'ic cepeeletpit-pe ] *pro* 3SUBJ-think-IMPERF-PRES [*pro* 1SUBJ-be.PRES pretty picture-LOC ] She thinks, "I am pretty in the picture."
  - b. *pro* hi-neki-se-0 [*pro* hii]-wes sayaq'ic cepeeletpit-pe ] *pro* 3SUBJ-think-IMPERF-PRES [*pro* 3SUBJ-be.PRES pretty picture-LOC ] She<sub>i</sub> thinks she<sub>i</sub> is pretty in the picture.

The parallels with English break down, however, in two special cases. First is extraction. Ordinary embedded complements in both languages may be extracted from. In Nez Perce alone are attitude complements still readily susceptible to extraction when they contain quotation-like indexicals:

(2) Isii-ne Angel hi-i-caaqa [cew'cew'inis-ki pro 'e-muu-ce t] who-OBJ Angel 3SUBJ-say-TAM [phone-with pro ISUBJ/3OBJ-call-TAM t] Who did Angel say she was calling? (lit. Who did Angel<sub>i</sub> say I<sub>i</sub> am calling t?) cf. English: \*Who did Angel say, "I am calling t"?

Second is the distribution of descriptions *de re*. In Nez Perce but not in English, *de re* descriptions are acceptable in clauses like (1a) where the behavior of indexicals suggests quotation. On both counts the Nez Perce facts are similar to those found in otherwise more or less quote-like constructions with indexicals in a variety of unrelated languages, e.g. Amharic (Schlenker 1999), Matses (Munro et al. 2012), Navajo (Speas 2000), Slave (Rice 1986) and Zazaki (Anand and Nevins 2004). This paper is addressed to the Nez Perce instantiation of this phenomenon with the hope of shedding light on the range of possibilities for embedded indexicals cross-linguistically.

Four possible analyses are considered for sentences like (2). A first possibility is that such sentences simply do not contain indexical expressions. Apparent indexicals must instead be analyzed using ordinary descriptive content (cf. Sudo 2010 on 2nd persons in Uyghur). If this is so, we expect that the relevant expressions will be susceptible to modal quantification, just like English descriptions like 'the speaker'. This is not so. Rather, the Nez Perce data replicate perfectly the observations used by Kaplan (1989) to distinguish indexicals from ordinary definite descriptions:

- (3) 1st person  $\neq$  *the speaker* 
  - a. # ke mawa Tatlo hi-ciiq-ce-0, **'iin** 0-wees haama whenever Tatlo 3SUBJ-speak-IMPERF-PRES I 1SUBJ-be.PRES man Consultant (female): "Whenever Tatlo is speaking, I am a man...?!"
  - b. ke mawa Tatlo hi-ciiq-tetu-Ø, **cix̂new'eet** hii-wes haama whenever Tatlo 3SUBJ-speak-HAB.SG-PRES speaker 3SUBJ-be.PRES man Whenever Tatlo speaks, the speaker is a man.

Parallel observations support an indexical analysis of the second person pronoun as well as the locative expression *kine* 'here'. In contrast, temporal expressions *watiisx* and *taqc*, the translation equivalents of 'yesterday/tomorrow' and 'today', are shown not to be indexical by this test.

A second possibility is that sentences like (2) are instances of partial quotation. It is not that the entire attitude report is quoted; only the subject pronoun within it (and perhaps its associated verbal agreement) is within the scope of the quotation operator. This is indeed a grammatical possibility in English, albeit one with heavy pragmatic requirements: *Who did Angel say that "I" was calling?* This analysis predicts a certain grammatical independence on the part of quotation-like indexicals; quotation of one indexical should have no effect on any other indexical. This prediction, too, is false. Rather, like in the Zazaki paradigm discussed by Anand and Nevins (2004), either all person/locative indexicals in a given complement must behave as quoted, or none may.

(4) Katie hi-hi-ce [*pro*  $\emptyset$ -neki-se ['iin-k'u  $\emptyset$ -wees kíne]] Katie 3SUBJ-say-TAM [*pro*  $\boxed{1$ SUBJ}-think-TAM [ $\boxed{I}$ -too  $\boxed{1$ SUBJ}-be.PRES here]] a. Katie<sub>i</sub> says she<sub>i</sub> thinks she<sub>i</sub> is also here.  $\approx$  Katie<sub>i</sub> says "I"<sub>i</sub> think "I"<sub>i</sub> am also here.  $\approx$  Katie<sub>i</sub> says "I"<sub>i</sub> think "I"<sub>i</sub> am also here.

Parallel facts obtain when the quotation-like indexical is syntactically lower than its non-quotation-like counterpart, and when the two do not stand in a syntactic c-command relationship.

A third possibility is that sentences like (2) involve not quotation but binding of a 1st person pronoun by a higher expression (von Stechow 2003). Facts like (4) should then be derivable from general constraints on binding. Temporal adverbials *watiisx* 'yesterday/tomorrow/one day away' and *taqc* 'today/same day', which are bindable but not indexical, provide a test case. It turns out that these expressions are not subject to any constraint similar to that requiring person/locative indexicals within a clause to behave alike in quotation-like behavior. The relationships among embedded indexicals are not reducible to independently motivated constraints on binding.

A fourth and final possibility is that sentences like (2) are instances of context shift, a clauselevel phenomenon involving overwriting of contextual parameters (Anand and Nevins 2004). I propose a modification of Anand and Nevin's overwriting mechanism which replaces original contextual coordinates with coordinates (so to speak) of the attitude event. Thus the embedded clause of (2) is interpreted against a context where the agent of the matrix attitude event (namely Angel) serves as the value of the Speaker coordinate. Patterns like (4) follow straightforwardly; all embedded 1st persons depend on a Speaker parameter which is overwritten with the same value.

I conclude with a discussion of the connection between context shifting and attitudes *de se*. In contrast to prior work positing context shifting as a dedicated route to *de se* (e.g. Anand 2006), I show that *de se* requirements on context shifting in Nez Perce are dependent on the type of indexical being shifted. Shifting of first and second person indexicals strongly requires *de se* or *de te* attitudes. Shifting of locative indexicals, on the other hand, imposes no such requirement. Thus (5) is acceptable in a context where a man, visiting a city building, sees a photograph of Bill Clinton, not knowing that the photo was taken right in the very city building where he is standing.

(5) haama hi-neki-se- $\emptyset$  [ Clinton hi-weeke kíne ] man 3SUBJ-think-IMPERF-PRES [ Clinton 3SUBJ-be.PAST here ] The man thinks *i* Clinton was here *i*.

Shifty locative indexicals are expected to occur whenever the location of the matrix attitude event serves as the value of the Location coordinate of the context against which we interpret the embedded clause. No *de se* condition appears in this formulation, and indeed no *de se* condition is supported by the facts. The contrast between locative and person indexicals in this respect suggests that the *de se* requirement on person indexical shifting may be due to independent, person-specific constraints, rather than to mechanisms of context shift in a more general sense.