Conjectural questions in Navajo: The case of *daats'í*
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This paper explores the semantics of the modifier *daats'í* in Navajo (Athabaskan). Both written sources (Young and Morgan 1987) and consultants translate sentences like (1) as shown below:

(1) Deigo   **daats'í** si'ą́
   upright **daats'í** it-sits
   'Is it upright?' *or*   (Young and Morgan (YM) 1987: 753; fieldwork (FW))
   'I wonder if it's upright.' *or* 'Maybe it's upright, or maybe not.'   (FW)

Utterances of the form *daats'í p* have similarities to both modal statements and questions. On the basis of primary fieldwork, I demonstrate that neither approach alone adequately captures the semantics of *daats'í*. I argue for a account that will handle all of the translations of *daats'í p* in (1), proposing that *daats'í* introduces Conjectural Questions (CQs). CQs are a class of construction attested in unrelated languages of the Americas. I take as a starting point Littell et al.'s (2009) theory that CQs have the semantic shape, but not pragmatic force, of questions. I ask whether CQs as found in Navajo and other languages are a single phenomenon or are best treated as semantically disparate constructions.

   ***Daats'í* vs. Questions:** A first approach is to analyze *daats'í* as a question morpheme. I assume that questions denote sets of propositions that count as possible answers: $[[is\ it\ raining?]]^w$ = {it is raining, it is not raining} (Hamblin 1973). In addition, questions carry two additional pragmatic requirements: (i) the Speaker thinks that the Addressee may know the answer and (ii) an answer from the Addressee is necessary (Caponigro and Sprouse 2007). I compare *daats'í* to the question morpheme *–ísh* and show that they pattern distinctly. First, *daats'í* is felicitous in contexts of mutual ignorance while *–ísh* is not (2).

(2) *Context:* You don't know if it is raining or not. Your coworker has been inside your windowless office
   with you all morning so you know she doesn't know if it is raining.
      a. Nahałtin   **daats'í**   b. # Nahałtin-**ísh**
         it.is.raining **daats'í**   it.is.raining-**Q**
         'I wonder if it's raining.'   'Is it raining?'   (FW)

   Second, *daats'í p* utterances do not require the Addressee to answer before conversation continues. If *–ísh* instead of *daats'í* appeared in (3), the Speaker's utterance would be infelicitous.

(3) Yiską́ą́go nahodoołtį́į́ł **daats'í**. Bee chaha'ohí dííyitííł.
   tomorrow it.will.rain   **daats'í** umbrella   you.bring.it
   'It might (or might not) rain tomorrow. You should bring an umbrella.'   (FW)

   ***Daats'í* vs. Modals:** Given that *daats'í* patterns distinctly from *-ísh* in several key ways, we could follow Willie (1996) and analyze *daats'í* as a modal. I compare *daats'í* to *shı̨́ı̨́*, another adverb which I analyze as an epistemic modal. *Shı̨́ı̨́ p* is true where the Speaker has inferential evidence that *p* holds in all worlds most consistent with the Speaker's beliefs about the actual world.

   On one hand, both *daats'í* and *shı̨́ı̨́* can be syntactically embedded beneath an attitude verb (4), suggesting a syntactic position consistent with both being modal expressions (Matthewson et al. 2007). However, *daats'í* exhibits semantic behavior distinct from *shı̨́ı̨́*. First, sentences with *shı̨́ı̨́* are not translated as questions, either in matrix or embedded contexts:

(4) a. [Łééchą̨ą́ yázhí na'ałkǫ́ǫ́' **daats'í** yééhósin]   nisingo,   taah   yiłt'e'
      puppy   it.swims   **daats'í** it.knows.how I.thinking water.into I.threw.it
      'Wondering if the puppy knew how to swim, I threw it in the water.'   (YM 1987: 775)
   b. [Łééchą̨ą́ yázhí na'ałkǫ́ǫ́' **shı̨́ı̨́** yééhósin] nisingo, taah yiłt'e'
      'Thinking the puppy must know how to swim, I threw it in the water.'   (FW)

Second, *shı̨́ı̨́* presupposes that the Speaker has inferential evidence favoring *p* (e.g., 'the beans') while *daats'í* can only be used if the Speaker lacks such evidence:

(5) *Context:* You feel queasy. You ate a lot of different things yesterday (beans, ice cream, mutton…).
   You say: Naa'ołí **daats'í** shi'iisool
          beans   **daats'í** they.bloated.me.up
          'Maybe it was the beans that made me bloat up.'   (YM 1987: 243)

Comment: "*Daats'í* is better because you're not sure. With *shį́į́* you're blaming it on the beans."
Daats'í can also be used if the context biases ~*p* as the most likely outcome. *Shį́į́* cannot be:

(6) *Context:* You left for school before your sister Mary. Mary had a stomachache when you left. *You say:*
   a. Mary bibid   diniih. 'Ólta'góó **daats'í**   doogááł.
       Mary her.stomach it.hurts school-to **daats'í**   she.will.go
       'Mary has a stomachache. I wonder if she'll go to school / Maybe she'll go to school, or not.'   (FW)
   b. # Mary bibid diniih. 'Ólta'góó **shį́į́** doogááł.

  Conjectural Questions: The Navajo data bear a strong resemblance to a family of constructions referred to as Conjectural Questions (CQs). CQs (also called Deliberative Questions by Truckenbrodt 2006) are characterized by being felicitously uttered (i) in contexts where there does not exist sufficient evidence for the Speaker to express possibility using an inferential modal, and (ii) express a notion of interrogativity on the part of the Speaker while still being felicitous in contexts of mutual ignorance. CQ-like constructions are reported for a substantial number of languages of the Americas, including Tseltal (Shklovsky 2011), Cheyenne (Murray 2010), and Quechua (Fasola 2007). German verb-final questions are also licensed under similar discourse conditions (Truckenbrodt 2006). I add Navajo to the set of languages with a construction exhibiting CQ-like properties. CQs have not previously been described for an Athabaskan language.

  Littell et al. (2009) posit an analysis of CQs in Salish and Tsimshianic languages. In these languages, the combination of question morphemes with inferential morphemes results in translations similar to Navajo *daats'í p* utterances. Utterances like (8) are felicitous in contexts of mutual ignorance.

(8) **Nee=ima**=hl   sdin=hl   x̱biist=a   *Gitksan*
    YNQ=INFER   be.heavy box=INTERROG
    'I wonder if the box is heavy.'   (Littell et al. 2009: 91)

Littell et al.'s analysis of CQs hinges on the presence of both interrogative and modal morphology. The extension of (8) is the set of possible answers to the question *is the box heavy*?, while the inferential modal contributes presuppositions conjoined to each possible answer that there is inferential evidence for the answer. Since there is potentially conflicting inferential evidence for each possible answer, the Addressee is believed not to be capable of resolving the question.

  While CQs in a number of languages make use of a combination of interrogative and modal/evidential morphology (Salish and Tsimshianic languages; Cheyenne (Murray 2010)), other languages utilize a single morpheme. For instance, German verb-final questions are licensed under discourse conditions very similar to CQs in other languages (Truckenbrodt 2006). In this construction, the *wh*-complementizer *ob* 'whether' seems to be the critical element. No overt modal element is present.

(7) *Context:* Neither the Speaker nor the Addressee has seen Peter for years.
     Mary: **Ob**   Peter immer noch kubanische Zigarren mag?
          whether Peter always still Cuban   cigars   likes
           'I wonder whether he still likes Cuban cigars?'   (Truckenbrodt 2006)

  In other languages, including Quechua (Fasola 2007) and Navajo, the single morpheme appears to pattern more closely with modals in the language (syntactically, if not semantically). The disparity in the shape of CQs raises the broader question of whether CQs constitute a single class of constructions that make use of the same grammatical resources.

References: [1] Caponigro and Sprouse, 2007. Rhetorical questions as questions. *SuB 11*. **[2]** Fasola, 2007. A unified semantics for the Quechua question and negation marker *–chu*. *SULA 4*. **[3]** Hamblin, 1973. Questions in Montague English. *Foundations of Language* 10(1). **[4]** Littell, Matthewson, & Peterson, 2010. On the semantics of conjectural questions. *Evidence from Evidentials*. UBCWPL. **[5]** Matthewson, Davis, and Rullmann, 2007. Evidentials as epistemic modals. *Ling. Var. Yearbook 7*. **[6]** Murray, 2010. *Evidentiality and the Structure of Speech Acts.* PhD Diss., Rutgers. **[7]** Shklovsky, 2011. When Negation Isn't…Ms., MIT. **[8]** Truckenbrodt, 2006. On the semantic motivation of syntactic verb movement to C in German. *Theoretical Linguistics* 32. **[9]** Willie, 1996. On the Expression of Modality in Navajo. *Athabaskan Language Studies*. **[10]** Young and Morgan, 1987. *The Navajo Language*. UNM.