1. Introduction

Evidentials signal that the speaker’s assertion is based on direct, indirect, reportative, etc. evidence. But much of the literature has not analyzed this notion and left it as a primitive. Some recent studies (Speas (2010) and Koev (2017), a.o.) analyze what indirect evidence is, but they focus only on what it means to be indirect. The issue of this paper is what evidence is, i.e., what condition must be met for a piece of information to be evidence. This paper conducts a case study of the Japanese indirect evidential yooda, and argues that yooda requires the proposition serving as evidence (the Evidence Proposition, EP) to be true no earlier than the prejacent (PR), and that this temporal condition is posed by the semantics of evidence.

2. Previous work

Davis and Hara (2014) (D&H) claim, based on the contrast in (1), that the evidentiality of yooda requires the PR to be the cause of the EP. In (1a), the EP there are puddles is caused by the PR it rained, while in (1b), the PR there are puddles is not the cause of the EP it is raining. Thus D&H’s causal requirement explains this contrast.

But they wrongly predict (2) to be unacceptable. In (2), the PR I cannot play baseball here is not the cause of the EP others are playing soccer here (Takubo (2009), who argues that the PR of yooda must be the explanation for the EP, also predicts (2) to be out, since the PR does not explain why the EP is true). Furthermore, D&H cannot capture the contrast in (3). In both (3a) and (3b), the event in the PR, John goes to party, causes the event in the EP, John wears a formal suit, to occur, so both are predicted to be acceptable, but (3b) is deviant.

Note that, particularly in (3), what causes the contrast is not the speaker’s manner of evidence acquisition; the way of acquiring the EP is exactly the same between (3a) and (3b). Therefore, the contrast cannot be captured by analyzing the manner of acquisition as in Speas (2010) and Koev (2017), and we can say that the requirement of evidence causes the contrast.

3. Temporal requirement

I argue that the EP must become true no earlier than the PR. Adopting the standard treatment of tenses in (4), I propose that the temporal requirement is the definedness condition for yooda, as in (5a), which says that p-yooda is defined if a salient proposition q is acquired by the speaker in a lexically designated manner (the indirectness of yooda encodes this component, as in D&H), and becomes true no earlier than p. I do not commit to what p-yooda asserts. It may encode some kind of inference from q to p.

Let me illustrate the contrast in (1). Part of our world knowledge says that puddles appear after it rains, so Earliest(rain) < Earliest(puddles). Yooda requires Earliest(rain) ≤ Earliest(puddles) in (1a) and Earliest(puddles) ≤ Earliest(rain) in (1b); the latter goes against our knowledge. In (2), the modalized statement I cannot play baseball holds at the same time as the fact that others start to play soccer holds. Therefore my proposal, which allows the two propositions to start to be true simultaneously, is compatible with the acceptability of (2).

(5a) might appear to be incompatible with the case like (3a), where the PR refers to a future event, since they cannot precede the truth of the EP. I adopt Dowty’s (1979) analysis of present-tensed future propositions as in (6). Given that when the PR of yooda refers to future, it accompanies no modals and is always present-tensed, (6) is applicable whenever the PR of yooda refers to future. The temporal denotation of the PR in (3a) is (7) and ranges from the time John’s attendance is planned to the time John goes to the party, so the truth of (5) can precede that of the EP John wears a formal suit (Koev (2011) adopts almost the same strategy for a Bulgarian evidential). But the PR in (3b) is past-tesned. Its denotation looks like (8) and it can never be true before Earliest(EP), the time John puts on a suit. Thus we can say that the semantics of evidence in yooda contains Earliest(PR) ≤ Earliest(EP).

4. Implication

This paper argues that the temporal requirement in (5a) is required by the semantics of evidence, not by that of indirectness. So it is potentially possible that the same condition applies to evidentials of other evidence-types such as reportatives. This is true of a Japanese reportative evidential soooda, which shows a pattern similar to (3), as in (9), where the difference is the temporal denotation of the prejacent. This suggests that several evidentials that have different manners of evidence acquisition share the same notion of evidence, and that it is possible to give a unified semantics to evidence of evidentials with different manners of acquisition, which is the possibility no previous work pursues as far as I know.
(1) a. (Seeing the puddles on the ground) b. ( Seeing falling raindrops from the window) 
   Ame-ga futta-yooda. #Mizutamari-ga aru-yooda.
   rain-Nom fell-yooda. puddle-Nom exist-yooda.
   ‘It seems that it rained.’ ‘It seems that there are puddles.’

(2) (You go to a vacant lot to play baseball, but you find other people playing soccer there) 
   Koko-de Yakyuu-wa dekinai yooda.
   here-in baseball-Top cannot yooda.
   ‘I cannot play baseball here.’

(3) (John comes to university in a formal suit only if he goes to a party that night.) 
   a. (You see John wearing a formal suit at university. Mary asks you why he wears the suit.) 
      You: John-wa kyoo paati-ni iku-yooda.
      John-Top today party-to go-yooda.
      ‘It seems that John will go to a party today.’
   b. (You saw John wearing a formal suit at university yesterday. Today, Mary asks you why he wore the suit) 
      # You: John-wa kinoo paarii-ni itta-yooda.
      John-Top yesterday party-to went-yooda.
      ‘It seems that John went to a party yesterday.’

(4) a. $[[\text{PRESENT}]] = \lambda t. p(t) = 1$.
    b. $[[\text{PAST}]] = \lambda t. \exists t' [t' < t \land p(t') = 1]$.

(5) a. $[[\text{p-yooda}]]$ is defined only if 
   $\text{ACQUIRE}(c, q) \land \text{EARLIEST}(p) \leq \text{EARLIEST}(q)$, where $q$ is a contextually salient proposition.
   b. $\text{ACQUIRE}(c, q) = cS$ acquires $q$ in a manner compatible with the lexical restriction of yooda.
   c. $\text{EARLIEST}(p) =$ the initial subinterval of $[p]$.
   d. $I$ is the initial subinterval of $J$ iff $I \subseteq J \land \exists t (t \in (J - I) \land \exists t' [t' \in I \land t' < t])$, where $I$ and $J$ are time intervals, and $t$ and $t'$ are moments of time (Dowty (1979: 140)).

(6) $[[\text{PRESENT-FUTURE}]] = \lambda t. \exists t', t'' [t' \leq t \leq t'' \land p(t'') \land p \text{ is planned or pre-determined at } t']$
   (Dowty (1979: 140))

(7) $[[\text{John goes to a party today}]] = \lambda t. \exists t', t'' [t' \leq t \leq t'' \land \text{John goes to a party at } t'' \land \text{John’s attendance is planned or pre-determined at } t']$

(8) $[[\text{John went to a party}]] = \lambda t. \exists t' [t' < t \land \text{John goes to a party at } t']$

(9) a. (You watch a weather forecast in NY and it says that it will rain in Alaska this afternoon.)
    Kyoo-no gogo arasuka-de ame-ga furu-sooda.
    today-Gen afternoon Alaska-in rain-Nom fall-sooda.
    ‘I hear that it will rain in Alaska this afternoon.’
   b. (Yesterday you watched a weather forecast in NY and it said that it would rain in Alaska that afternoon. Today, you say)
      ?? Kinoo-no gogo arasuka-de ame-ga futta-sooda.
      yesterday-Gen afternoon Alaska-in rain-Nom fall-sooda.
      ‘I hear that it rained in Alaska yesterday afternoon.’