

### A Parallel Account of Epistemic Modals and Predicates of Personal Taste

**Observation:** Items such as *fun* and *tasty*, termed “predicates of personal taste” by Lasersohn (2005), share a similar analytical difficulty with the epistemic modals *might* and *must*. For epistemic modals as in (1a–b), the difficulty is in determining whose knowledge is relevant (see, e.g., MacFarlane 2003, Egan et al. 2004); for predicates of personal taste as in (2a–b), the difficulty is in determining whose taste or internal experience is relevant.

- (1) (a) It might be raining. (b) It must be raining.  
(2) (a) This game is fun. (b) This cake is tasty.

The two classes show empirical parallels as well. First, both give rise to a curious kind of disagreement. In (3), A and B appear to be disagreeing based on the fact that the cake tastes good to A but not to B. Similarly, in (4), A and B appear to be disagreeing based on the fact that A’s knowledge does not preclude Bill being in his office but B’s knowledge does. On the face of it, this suggests that it is the speaker’s knowledge or taste that is relevant, but this cannot be a case of indexicality because first-person indexicals such as *I* behave differently, as shown in (5). A second parallel involves attitude reports as in (6)–(7), in which the relevant knowledge or taste is naturally understood as that of the subject of the attitude predicate; that is, (6a) says that Sue’s knowledge is compatible with rain, and (7a) says that the game is fun for Sue.

- (3) A: This cake is tasty. B: No it isn’t, it’s not tasty at all!  
(4) A: Bill might be in his office. B: No, he can’t be in his office!  
(5) A: I’m eating ice cream. B: # No, I’m not eating ice cream!  
(6) (a) Sue thinks it might be raining. (b) Sue thinks it must be raining.  
(7) (a) Sue thinks this game is fun. (b) Sue thinks this cake is tasty.

**Relativist Approaches:** MacFarlane (2003) and Egan et al. (2004) relativize the meaning of epistemic modals to the context in which they are assessed; for example, with respect to any world and time, *might* denotes the set of propositions that are consistent with the knowledge of the person assessing the sentence at the time of assessment. This approach can explain puzzling data such as (4), but also leads us to expect indexical-like items that are not attested in natural languages, such as an item that refers to the time of assessment (MacFarlane’s *noy*).

**Lasersohn (2005):** To analyze predicates of personal taste, Lasersohn posits a new parameter of evaluation, the “judge.” On this view, the Kaplanian content of a sentence is a function from tuples  $\langle w, t, j \rangle$  to truth values, where  $j$  is an individual (the judge). The judge is the person whose taste is relevant; for example, with respect to a world  $w$ , time  $t$ , and judge  $j$ , *tasty* denotes the set of things that are tasty to  $j$  in  $w$  at  $t$ . Lasersohn argues that this explains disagreement as in (3) since A utters a sentence with the same content that B negates. On the other hand, it correctly rules out examples like (5) since the reference of indexicals is included in the content. It also accounts for the intuition that it is the speaker’s own taste that is relevant, under the assumption that speakers generally take an “autocentric” perspective (take themselves to be the judge). Lasersohn argues, however, that an “exocentric” perspective is possible in contexts where a particular judge is salient. He proposes that in general the value of the judge is set pragmatically, and suggests that in attitude reports such as (7a–b), it is especially natural to take the subject as the judge.

**Proposal (Part 1):** I propose that the judge in Lasersohn’s sense is also the person whose knowledge is relevant for an epistemic modal. As a first pass, with respect to a world  $w$ , time  $t$ , and judge  $j$ , *might* denotes, roughly, the set of propositions that are compatible with  $j$ ’s knowledge in  $w$  at  $t$ . This captures the parallels with predicates of personal taste and has the advantage over relativist approaches of not predicting unattested indexical-like items. A problem arises, however, with simply extending Lasersohn’s system, because epistemic modals

and predicates of personal taste actually behave differently in attitude reports. For example, *tasty* can be understood with the cat as the judge in (8), despite being embedded under *think*. In contrast, *might* can be understood with Ann as the judge in (9a) but not (9b).

(8) A: How's that new brand of cat food you bought?

B: I think it's tasty, because the cat has eaten a lot of it. [Kai von Fintel, p.c.]

(9) [Context: Ann is setting up a surprise party for Bill, but Bill and his friend Chris know about it and are spying on her. As she walks down the street carrying party supplies, Ann sees a bus that Bill often rides home on, and runs to hide. Chris asks Bill why Ann is hiding.]

(a) Bill: I might be on that bus. [Egan et al. (2004)]

(b) # Bill: I think I might be on that bus. [Kai von Fintel, p.c.]

**Proposal (Part 2):** I depart from Lasersohn in treating epistemic modals and predicates of personal taste simply as two-place predicates, where the first argument is the person whose taste or knowledge is relevant. Judge dependency comes from a null pronoun  $PRO_j$  that denotes the judge, and which I suggest bears a family resemblance to logophoric and generic pronouns and  $PRO_{arb}$ . While predicates of personal taste may take either null referential pronouns or  $PRO_j$ , epistemic modals may only take  $PRO_j$ . Attitude predicates such as *think* obligatorily set the judge of the embedded clause to be the subject of the attitude predicate (an option proposed and later rejected by Lasersohn). Meanings for  $PRO_j$ , *tasty*, *might*, and *think* are given in (10). The requirement that *might* take  $PRO_j$  is formulated as a presupposition, but this could alternatively be a syntactic selection requirement. Unlike Lasersohn, I assume that speakers always make, accept, and reject assertions using themselves as judge.

(10)  $\llbracket PRO_j \rrbracket^{w,t,j} = j$

$\llbracket \text{tasty} \rrbracket^{w,t,j} = [\lambda x . [\lambda y . y \text{ is tasty to } x \text{ in } w \text{ at } t] ]$

$\llbracket \text{might} \rrbracket^{w,t,j} = [\lambda p . [\lambda x : x=j . \text{there is some world } w' \text{ compatible with } x's \text{ knowledge in } w \text{ at } t \text{ such that } p(w')(t)(x) = 1] ]$

$\llbracket \text{think} \rrbracket^{w,t,j} = [\lambda p . [\lambda x . \text{for all worlds } w' \text{ compatible with } x's \text{ beliefs in } w \text{ at } t, p(w')(t)(x) = 1] ]$

**Consequences:** Like a simple extension of Lasersohn's analysis, this account correctly rules out the impossible indexical-like items predicted by relativist approaches, accounts for the disagreements in (3)–(4) (while ruling out (5)), and accounts for examples like (6)–(7) where the subject of an attitude predicate is taken to be the judge of the embedded clause. The account also has a number of advantages over a Lasersohn-type account. First, it explains the contrast in (8)–(9), since *tasty* can take a null argument referring to the cat, but *might* cannot take a null argument referring to Ann. Second, it leads us to expect some predicates of personal taste to take overt arguments as in *fun for Sue*. Third, it predicts that disagreements like (3) are possible only if both speakers use  $PRO_j$ . In contrast, Lasersohn assumes that speakers freely choose between an auto- and exocentric perspective, predicting such disagreements even when one speaker takes an exocentric perspective. (11) shows that my prediction is correct, since C's response is only appropriate if the judge is the cat (not C himself). An apparent problem is posed by (9a), since I claim that epistemic modals cannot take referential arguments, but I argue that here an elided *because* operates on the judge parameter.

(11) B: I think the cat food is tasty, because the cat has eaten a lot of it.

C: No, it's isn't! It's not tasty at all! [# if *tasty* = 'tasty to C']

**References:** — Egan, Hawthorne, & Weatherson (2004), Epistemic Modals in Context. In Preyer & Peter (eds.), *Contextualism in Philosophy*, Oxford. — Kaplan (1989), Demonstratives. In Almog et al. (eds.), *Themes from Kaplan*, Oxford. — Lasersohn (2005), Context Dependence, Disagreement, and Predicates of Personal Taste. *Linguistics and Philosophy* 28. — MacFarlane (2003), Epistemic Modalities and Relative Truth. Ms., UC Berkeley.