

# Figuring out what we *ought* to do

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The theoretical place of weak necessity modals (e.g., *ought* and *should* in English) within modal systems of natural languages is a matter of ongoing debate in linguistics and in philosophy (von Fintel and Iatridou 2008, Charlow 2011, a.o.). On the one hand, these modals seem to express necessities. On the other hand, these necessities are weaker than those expressed by strong necessity modals like *have to* or *must* (Horn 1972). This weakness has proven difficult to formally pin down. The goal of this paper is to present new data on the use of necessity modals in discourse, which ties weak necessity to departure from mutual assumptions in the discourse (specifically, mutual assumptions about binding preferences/norms). I further show that sensitivity to the discourse status of contextual information solves a conceptual problem facing von Fintel and Iatridou's account of weak necessity in terms of domain restriction. More generally, any successful theory of weak necessity would be expected to explain these empirical facts.

**Background.** Necessity modals are standardly analyzed as universal quantifiers over contextually determined “favored worlds”. The favored worlds are calculated in two steps based on contextually relevant facts (a modal base) and preferences (an ordering source, Kratzer 1981). *Have to*  $q$  is true in a world  $w$  with respect to a modal base  $f$  and an ordering source  $g$  iff all the  $g(w)$ -best worlds in  $\bigcap f(w)$  are  $q$ -worlds.

**The question.** How do speakers figure out which preferences are included in an ordering source? I present three pieces of evidence that *have to* is sensitive exclusively to preferences that are mutually assumed to be binding preferences in the context, and *ought* is not.

**Necessity modals and directives.** *Have to* and *ought to* exhibit different sensitivity to contextually salient preferences, as the contrast between the two in (1a) shows. Previous mention of a preference is not enough to make it relevant for a *have to*-claim, but it is enough to license an *ought*-claim. For a strong necessity to be licensed, the preference must be accepted by all the conversational participants. (1b) shows that when a speaker unequivocally commits to a preference, their addressee is able to use it for issuing a relevant strong necessity claim. Similarly, using an imperative to voice a preference prepares the ground for a strong necessity claim based on that preference, as seen in (2). Assuming that imperatives update a contextual repository of mutually-assumed preferences (Portner, 2007), the interaction between necessity modals, imperatives, and other committing directives, suggests that *have to* can only reference preferences that are mutually assumed to be binding in the context, while *ought* is sensitive also to preferences that do not enjoy this status.

**Necessity modals and rising declaratives.** Necessity modals split with respect to licensing rising intonation on declaratives that state the preferences they are sensitive to. Weak necessity modals sometimes license such rising declaratives (3a), but strong necessity modals do not (3b). Gunlogson (2008) argues that rising intonation on a declarative  $\varphi$  signals a request for confirmation or endorsement of the content of  $\varphi$ . The felicity of uttering  $\varphi$  after an *ought* claim is therefore evidence that  $\varphi$  is not assumed by the speaker who uttered  $\varphi$ , hence not mutually assumed in the discourse. The infelicity of (3c) together with the felicity of (3a) suggests that weak necessity modals are evaluated with respect to a mix of mutually-assumed and not-mutually-assumed preferences.

**Necessity modals and *what if*-questions.** The discourse dynamic of *conversational backoff* (Rawlins, 2011) also suggests that weak necessity claims are based on assumptions that are not shared among interlocutors. A natural way of challenging *He ought to take the back road*, for example, is to ask a conditional question *What if  $\psi$ ?*, where  $\psi$  is a preference that would undermine the necessity claim (e.g., *What if he doesn't care about scenery?*). Following Rawlins, this means that such preferences  $\psi$  (e.g., his care for no scenery) are “publicly omitted assumptions”, i.e., implicit and not mutually assumed.

**Solving a conceptual problem.** von Fintel and Iatridou (2005, 2008) propose that *ought* is weaker than *have to* because it has a smaller domain of quantification – the result of letting secondary ordering sources pick out

a subset of the favored worlds for *ought* to quantify over. No criterion is given, however, to determine which propositions belong in the “primary ordering source”  $g(w)$ , and which belong only in secondary ordering sources. The observations in this paper suggest a basis for defining such a criterion: propositions in secondary ordering sources are not collectively accepted as binding preferences/norms in the discourse. Interlocutors’ information states, in conclusion, are crucial for understanding certain aspects of modal force.

## Examples

(1) [There are multiple ways to reach your destination.]

a. You: Avoiding toll roads and big cities would be nice.

Me: OK then, you ought to (*/*<sup>?</sup>have to) take the back road.

b. You: No toll roads and big cities please!

Me: OK then, you have to (*/*<sup>?</sup>ought to) take the back road.

(2) [A friend and I are deciding what to do together after work – a yoga class, or a play.]

Me: I ought to (*/*<sup>?</sup>have to) go to yoga, but the play would be fun too.

[I get a physical.]

Doctor (to me; friend is in the room listening): You are not in good shape. Don’t skip those yoga classes!

Me (to friend): Change of plans... I have to (*/*<sup>?</sup>ought to) go to yoga.

(3) [We want to take a roadtrip, but our car is in the shop. We cannot borrow the neighbors’ car because the two families are not on speaking terms. There are multiple ways to reach our destination.]

(*Underlining indicates rising intonation*)

a. A: We should take the back road.

B: You’d like to see pretty scenery?

b. A: We have to reserve a rental car.

B: <sup>?</sup>You’d like to avoid asking the neighbors?

c. A: We should find a good map of the area.

B: <sup>?</sup>You’d like not to get lost on the way?

## Selected References

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