**Discourse Relations, Ritualized Situations, and Modal Interpretation**

J.L. Dowell, Syracuse University

*Discourse and Coherence*, ed. Gerhard Preyer (forthcoming)

Final Draft at 2/29/24

**(See corrections below for proofs)**

Discourse coherence relations have been appealed to to explain how context-sensitive expressions get their values determined, for example, how anaphoric pronoun reference gets resolved over a discourse (Asher and Lascarides (2003), Stojnic (2021)) and how modal domains get determined (Stone (1997), Stojnic (2021)). An open, more foundational question, though, is how these relations themselves are determined. Here I’ll defend a novel proposal on which what I’ll call “Ritualized Situations” have a central role to play in determining discourse relations and thus in settling the values of context-sensitive expressions. Ritualized Situations, in the sense reserved here, are stereotypical situations organized or governed by rituals, rules, habits, practices, or laws. Filling out this proposal, I’ll argue that the joint recognition of a Ritualized Situation can play a central role in determining a context’s discourse goals when none have been explicitly mentioned. Roughly, the order of ideas is this: Interlocutors’ joint recognition of a Ritualized Situation brings certain Common Ground propositions to prominence and may add a discourse goal to the Conversational Scoreboard. These together may determine specific coherence relations between utterances and resolve the values of any context-sensitive expressions deployed. Thus, Ritualized Situations have an important role to play in resolving context-sensitivity and explaining successful communication.

An advantage of this account in contrast to Stojnic’s recent conventionalist account of how discourse coherence relations resolve semantic values is that it explains how contexts can include the elements needed to resolve those values prior to any linguistic exchange.[[1]](#footnote-1) To preview: While my account holds, like Stojnic’s, that discourse relations have a central role to play in resolving the semantic values of context-sensitive expressions, it departs from her’s in rejecting the claim that discourse coherence relations are near-universally settled as a matter of convention (Stojnic 2021:5-6). Instead, it holds that such relations are often determined to a large extent by the recognition of Ritualized Situations.   
 After describing and defending this account, I will illustrate and minimally test it by applying it to the case of modal domain restriction. One challenge for any semantics for modal expressions is to account for their flexibility. “Flexibility” here refers to the ability of a single modal sentence to take multiple readings. Consider, for example,

1. “Sobel must be in his office.”

(1) can take both epistemic and deontic readings. Imagine first that we are looking for Sobel and know that his office hours are now. Usually, he’s in his office during his office hours, but we haven’t checked today. We might conclude (1) as a way of saying, roughly, that given our information, he must be in his office. The modal here is evidential or epistemic. Now imagine instead that we are assessing Sobel’s teaching. We’re wondering whether he keeps his commitments to his students, so we’re wondering about what those commitments require. Here (1) may be used to express an active requirement, given his promises to his students. In this case, (1) has a deontic reading. A contextualist about modal expressions will hold that the different readings are made available by differences in the contexts of use. The primary goal of the second section is to develop a novel account of how contexts determine modal propositions by applying the hypotheses developed in the first, foundational section. In highlighting its novel features, I’ll contrast it with Una Stojinic’s recent account.

1. **Foundational Issues: Discourse Coherence Relations, Ritualized Situations, and Context-sensitivity**

In this section, I argue that the recognition of Ritualized Situations has an important role to play in determining discourse relations, which in turn have a role to play in resolving the semantic values of context-sensitive expressions. For ease of discussion, I’ll begin with a sketch of how contexts and conversational scoreboards are understood for our purposes. I’ll then briefly sketch a widely recognized account of the role discourse coherence relations play in structuring a discourse and resolving context-sensitivity. Then I’ll introduce the idea of a Ritualized Situation and the role their recognition plays in making *situations* coherent. I’ll then show how Ritualized Situations have an important role to play in determining discourse goals and in bringing certain Common Ground presuppositions to prominence. These together can determine discourse coherence relations. What emerges is an account on which Ritualized Situations play a role in resolving semantic values in a context indirectly, by determining discourse goals and discourse coherence relations, and directly, by bringing certain Common Ground propositions to prominence.

*Contexts and Conversational Scoreboards*

Here I take the elements represented on conversational scoreboards to be those features of a conversational situation ~~speakers~~ interlocutors jointly need to track for communication to occur. Together those features jointly make up the context of utterance. They play three roles in facilitating communication, one static and two dynamic. On the static side, they represent what is jointly accepted for the purposes of conversation. On the dynamic side, they first play a role in determining the content of an utterance. Second, they serve as that which is updated when an utterance is accepted by discourse participants.

For our purposes, scoreboards will need to register four elements. First, they will need a Common Ground, a set of propositions presupposed for the purposes of conversation. Following Stalnaker, call the set of worlds at which all of the Common Ground propositions are true “the context set” (Stalnaker 2002). Second, following Stojnic (2021), the propositions in the Common Ground will need to be ranked for prominence, where prominence reflects a degreed, joint attentional state. We may think of a conversation’s attentional state as differentiating between presuppositions that are directly relevant for what is currently under discussion and those that are backgrounded or not at-issue. For the discussion below, it will sometimes be handy to have a term for the set of worlds that make up all of the most prominent propositions. I’ll call this “the prominent context set”.

In addition, our contexts require Discourse and Domain Goals. A Discourse Goal is a goal that interlocutors jointly aim to satisfy in the course of the conversation. Questions Under Discussion (QUDs) are the type of Discourse Goal of central concern here. A Domain Goal is a goal, possibly extra-linguistic, that the satisfaction of a Discourse Goal is to serve (Roberts 2004).

*Discourse Coherence Relations, Discourse Goals, and Context-sensitivity*

Discourse relations are structures that organize a set of utterances into a coherent whole. As such, they obtain between utterances across a discourse. The relationship between questions under discussion and their answers is perhaps the most familiar sort of discourse structure (Roberts 2004). Sometimes this structure is linguistically marked, as when questions are explicitly posed and followed by their answers. Sometimes, however, those questions are added implicitly, as a form of presupposition that makes their answers intelligible and so eligible to update the Common Ground. We’ll see examples of this phenomenon below.

More fine-grained discourse relations have been shown to provide their own distinctive conversational structure. To see the role such relations can play in organizing a discourse, consider *Explanation* relations and the contrast between the following pair:

(2) John took a train from Paris to Istanbul. He has family there.

(3) John took a train from Paris to Istanbul. He likes spinach. (?) (Kehler 2002: 2.)

The discourse in (2) is felicitous because there is a coherent relation between the two sentences, namely, the second explains the first. (3), in contrast, is difficult to interpret because there seems to be no clear, coherent relation between the first and second sentences. One marker of an Explanation relation is the ability to felicitously connect sentences with “because”, as we find in (2), but not (3) (Kehler 2002: 21). In Kehler’s influential (2002) framework, Explanation relations are a type of Cause-Effect relations. He defines this broader set in terms of *normality* (Kehler 2002: 21). Because it is presupposed that visiting family is a ‘normal’ reason for travel, the second sentence is interpreted as providing an explanation for the first. Liking spinach is not a such a reason, so (3) would require additional background to elicit such a relation.

In addition, discourse relations have their own update effects. For example, the consecutive acceptance of both utterances in (2) adds that John’s having family in Istanbul explains his traveling there, not as part of what’s said, but as part of what’s presupposed.

To test this, I’ll borrow a version of von Fintel’s “hey, wait a minute” (HWAM) test for the presence of presuppositions. This test is designed to distinguish what’s said from what’s presupposed. Here’s his example.

(4) The mathematician who proved Goldbach’s Conjecture is a woman.

(4a) Hey, wait a minute. I had no idea that someone proved Goldbach’s Conjecture.

(4b) Hey, wait a minute. I had no idea that that was a woman. # (von Fintel 2004: 271).

“Hey, wait a minute” is awkward as a follow-up that challenges what’s been said by an utterance. But it isn’t as a follow-up to what’s been presupposed. Thus, its felicity as a follow-up is evidence that what it targets is presupposed.

More broadly, follow-ups, including affirmations and denials, may target what’s presupposed, rather than what’s said. We can then test for the presence of a presupposition with the felicity of a follow up that would target it without targeting what’s said.

Now, consider again (2).

(2) John took a train from Paris to Istanbul. He has family there.

Consider the follow up,

(2a) Sure. But that’s not why he traveled there.

“Sure” signals agreement with what’s been said. But the second sentence challenges what (2) presupposes, namely, that his having family in Istanbul explains why he traveled there. The felicity of this follow up is evidence that the consecutive utterances in (2) presuppose an explanatory relation between them and that their joint acceptance would add the information that the second explains the first.

Here I suggest that this same update process involves the implicit addition of a particular discourse goal to the scoreboard, namely, an associated Question Under Discussion (QUD).

As noted above, such questions can be posed explicitly. But they can also be added implicitly via presupposition.[[2]](#footnote-2) Here I suggest that the felicity of the second utterance in (2) presupposes that it is a candidate answer to the implicit QUD, “why did John take the train to Istanbul?” (See Roberts 2004: 212-13 on implicit questions). To see this, let’s back up a bit and consider more carefully how QUDs can be implicitly added to conversational scoreboards.

As we’ve just seen, challenges to an assertion can target presuppositions. More broadly, affirmations and challenges provide a way to test whether a Question Under Discussion is registered on the scoreboard. To see this, consider two friends talking about their friends’ recent conference travel. One says,

(5) Sefira went to the Central Division meeting.

Some possible replies are,

(5a) Sofya went there, too.

(5b) No, she didn’t! She missed her flight.

(5c) Wait, how do you know that? I heard she missed her flight.

(5d) Yes, Sofya told me that, too.

(5e) The Central Division has held meetings for more than fifty years. #

(5a-d) are all felicitous responses to (5). (5a) accepts (5) and offers additional information. (5b) rejects (5) and offers a justification for that rejection. (5c) is a challenge and (5d) accepts (5) while offering additional evidence in its support. (5e), in contrast, is not felicitous. An explanation of this pattern is that the assertion of “Sefira went to the Central Division meeting” puts the implicit question “who went to the Central Division meeting?” on the scoreboard and not “what is true of the Central Division?”[[3]](#footnote-3) Thus, which affirmations and challenges to an assertion are felicitous is evidence for which question is under discussion.[[4]](#footnote-4),[[5]](#footnote-5)

To apply this reasoning to the concerns here, consider again (2).

(2) John took a train from Paris to Istanbul. He has family there.

Again, here we have two assertions connected by an Explanation relation. Only if it is interpreted as an answer to the question “why did John take the train to Istanbul?” is an utterance of the second sentence a felicitous follow up to the first. To test this, consider an extended version of (2a),

(2a’) Sure. But that’s not why he traveled there. He traveled for a conference.

Now contrast (2a’) with (2b) as a follow up to (2).

(2b) He also has family in Baltimore. (#)

In contrast to (2a’), (2b) sounds awkward as a follow up. The explanation for this difference is that the consecutive utterance of the sentences in (2) in their context adds answering the question “why did John travel to Istanbul?” and not “where does John have family?” to the conversation’s discourse goals. Its status as a candidate answer to the former question makes the second utterance in (2) stand in an Explanation relation to the first.

Moreover, that felicitous follow-ups can target the Explanation relation with rival answers to our “why”-question, as in (2a’) also suggests that the felicity of (2) presupposes that implicit question. Thus, discourse goals such as QUDs have a role to play in determining which relation a string of discourse exemplifies. The sentences in (2) are related by an Explanation relation because the second answers an implicit why-question regarding the first.

Finally, to see the role discourse relations can play in resolving context-sensitivity, consider modal domain determination. Una Stojnic (2021) develops such a view, drawing in part on the work of Craige Roberts (1989) and Mathew Stone (1997). Modal subordination is a phenomenon whereby a set of possibilities introduced in discourse constrains the domain of a modal in subsequent discourse. Here’s an example from Roberts.

(6) Suppose a wolf walked in. It would eat you first. (Stojnic 2021:114 as drawn

from Roberts 1989).

Stojnic and Stone each argue that modal subordination involves a type of anaphoricity. To model modal subordination, Stojnic proposes that scoreboards register a ‘stack’ of possibilities ordered by conversational prominence (Stojnic 2021: 113-114). What suppositions like the first sentence in (6) do is add what’s supposed to the most prominent position in the stack. The domain of the modal in subsequent discourse is then constrained by the possibilities in that most prominent position. What underwrites this is a Narration relation between the first and second sentence. In such a relation, subsequent discourse continues to narrate a series of events begun in prior discourse. The result is that the second sentence expresses the proposition that a wolf would eat you first, not unconditionally, but in those possibilities in which one walks in.

*Ritualized Situations*

On the account here, Ritualized Situations not infrequently play an important role in determining discourse coherence relations. The idea of such situations is inspired by a discussion from Kehler 2002. Kehler introduces the notion of discourse coherence via an analogy with what I’ll call *situation coherence*. He writes,

We are so used to identifying the coherence of our surroundings that it generally escapes our notice. Constantly confronted with novel scenarios involving new and varied sets of events and objects, we typically remain oblivious to the many inferences we have to draw to see each as a coherent, interconnected situation.

For instance, consider yourself witnessing a complex scenario unfold, such as a team of firefighters preparing to fight a fire. You see people in uniforms running around frantically, yelling toward each other. Several are carrying one end of a hose, running to the back of a house. At the same time, another team is hooking the other end of the hose to a fire hydrant. This team opens the hydrant and also runs to the back of the house. These actions all make sense to you because of what you know about fire-fighting and you readily make assumptions to allow for the situation to be interpreted as a fire-fighting event. For instance, while you do not actually see the fire, you nonetheless assume that it is the house to which everyone is running that is burning. If someone mentioned to you that it was not that house but instead one down the street, you would scratch your head in confusion. Similarly, you assume that the firefighters opening the hydrant are trying to get water to flow into the house. If no water came out, and none of the firefighters seemed to mind that fact, you would be puzzled. You would likewise be baffled if they opened the hydrant without attaching the hose first, allowing water to gush into the street. While these are all possible sequences of events, each would be strange because they contradict the assumptions you need to make to view the situation as coherent.

*Understanding a discourse requires the same type of reasoning.* If someone described each event in the fire-fighting situation to you as I just did, you would have to make the same sorts of inferences to understand the situation. Thus, if I followed the initial description of events by telling you that the fire was down the street, that no water came out of the hose, or that the hose was attached after the hydrant was opened, you would have been puzzled and presumably have awaited or even requested an explanation. In this case, this information would contradict the inferences you made to view the *discourse* as coherent (Kehler 2002:11-12).

Several points here are significant for our purposes. First, there is the idea that situations of a certain type exhibit a kind of coherence in virtue of conforming to characteristic regularities. Call a “Normalizing Generalization” any generalization that obtains when things are as they normally are in some situation type.[[6]](#footnote-6) For example, *firefighters plug a hose into a fire hydrant* is a characteristic generalization about what happens in fire-fighting situations ‘around here’. Recall that Explanation relations are a type of Cause-Effect relation. The generalizations Kehler posits as underwriting Cause-Effect relations are Normalizing Generalizations in my sense.

Second, there is the idea that background knowledge of such generalizations is necessary to make a situation intelligible as one of a specific type. I’ll call “Ritualized Situations” those that are intelligible in this way. They are stereotypical situations organized or governed by rituals, rules, habits, practices, or laws. In Ritualized Situations, interlocutors share a number of background presuppositions about what the situation they are in is like, not just presuppositions about their particular circumstances, but presuppositions about what normally occurs in situations of the type they are in.

Ritualized Situations are governed by Normalizing Generalizations. For example, normally those that are dressed like fire fighters and act like fire fighters are fire fighters. Individuals who share a community will share a great deal of general world knowledge about how things are in their community. This knowledge will include the Normalizing Generalizations needed to recognize a Ritualized Situation as the type of situation it is. A great many of the situations that we find ourselves in on any given day are Ritualized Situations, even when we encounter unusual events, like house fires.

I suggest that such generalizations serve as pragmatic presuppositions that underwrite Cause-Effect relations. In order for a Cause-Effect relation to have its characteristic effect on the conversational scoreboard, that scoreboard must already register the Normalizing Generalizations that support that relation.[[7]](#footnote-7) In (2), for example, the generalization that visiting family is a reason for travel serves as a presupposition of the Explanation relation.

We can test this claim for (2) using von Fintel’s test. To do this, we see whether the Normalizing Generalization “people travel to visit their families” can be targeted with a “hey, wait a minute” follow up. And it can.

(2c) Wait a minute. You think people travel to visit their families? Not in my

experience. A lot of people are estranged from their families.

Finally, Kehler’s discussion suggests that the cognitive mechanisms in play when we recognize a Ritualized Situation are also in play when we communicate information about such situations to others. Here I take this idea a step further: If the cognitive mechanisms that trigger attention to the background assumptions needed to recognize a situation by its type are the same as those that trigger attention to those same assumptions when they are needed to make sense of a discourse about such a situation, then understanding those mechanisms will help us understand how discourses are made coherent to interlocutors. Given that discourse coherence has a significant role to play in explaining communication, a better understanding of such mechanisms will help us better understand successful communication.

*Ritualized Situations and Commonality Assessment*

Kehler himself describes these mechanisms as “inferences”, perhaps suggesting a Gricean picture of their nature. However, one needn’t adopt such a picture, particularly when recent empirical evidence supports a rival one on which such generalizations might be retrieved automatically, rather than strategically via inferential reasoning. On the account here, the joint recognition of Ritualized Situations brings the Normalizing Generalizations that make them intelligible to conversational prominence. Horton and Gerrig (2005), (2016) introduce a cognitive model that would explain such a process. Their focus is on how speakers recognize a piece of information as part of what is jointly presupposed for the purposes of audience-sensitive message design. They call this recognition “commonality assessment”.[[8]](#footnote-8) Such assessments may involve a strategic process. What is important for our purposes is that they may also be automatic.

Horton and Gerrig distinguish two notionally distinct types of Common Ground. First, *personal common ground* is made up of information that particular interlocutors share with each other due to their shared personal history. To see how such a shared history could be drawn on for the purposes of commonality assessment and message design, consider their example of Nadia, whose brother was present when her new neighbor, Bill, introduced himself. This shared experience helps make “Bill” eligible as a way for her to communicate new information about her neighbor to her brother. The mechanism they posit is this,

Once an episodic trace of this event is part of Nadia’s memory, her brother will be a salient cue for the automatic retrieval of the contents of that entire interaction as represented in memory,[[9]](#footnote-9) including the neighbor’s name. The emergence of this information will facilitate audience design *without Nadia having to engage in special considerations of common ground*. Conversely, this information would not reach the same threshold of accessibility in the context of someone (such as Nadia’s sister) who was not present for the original event (Horton and Gerrig 2016: 783). (My emphasis.)

In other words,

On this account, commonality assessment often emerges from a speaker’s automatic recognition that certain information can be treated as familiar or not within a particular context (2016: 783).

Following Ratcliff (1978), they call “resonance” the process by which a cue in working memory triggers a search in long-term memory for stored information that “shares overlapping features with or is in some ways similar to, the probe cue” (Horton and Gerrig 2016: 782). In their model, resonance is a “fast, passive, and effort-free mechanism” (Horton and Gerrig 2005: 10). The term draws on an analogy with a tuning fork.[[10]](#footnote-10) The idea is that a cue will not always lead to accurate commonality assessments, just as striking a tuning fork does not always make it produce its characteristic pitch. To be successful, cues must reach a threshold of *strength* within the *timeframe* of message design (Horton and Gerrig 2005: 10). This is important, as it allows to the model to predict both when cues will lead to accurate and to inaccurate assessments (Horton and Gerrig 2005: 10). Mere association in memory does not by itself suffice for accurate assessment (Horton and Gerrig 2005: 11). In addition, accurate assessments require that the information a speaker retrieves from memory is genuinely shared with their addressee. This aspect of the model allows it to explain not only successful message design, but also message comprehension.

Horton and Gerrig expand this basic model to cover cases of *communal* common ground, information shared between interlocutors due to their shared membership in a community (Horton and Gerrig **2005**: 20).[[11]](#footnote-11) Importantly for our purposes, such information will include knowledge of the Normalizing Generalizations that distinguish Ritualized Situations by type. To see this, consider again Kehler’s fire-fighting example. It is because an observer is a member of a community in which fires are uniformly fought in accordance with certain practices that they are able to automatically make sense of the situation they observe as a fire-fighting event. Interlocutors’ joint recognition of the cues that they are in a Ritualized Situation of a certain type (for example, the use of hydrants and hoses, ladders, and red trucks) will bring the associated Normalizing Generalizations to prominence. More carefully, Normalizing Generalizations are representable as the set of worlds in which things that are normally the case obtain. Call a “Normalizing Set of Worlds” the set at which all of what is normally the case in a Ritualized Situation obtains. Interlocutors’ recognition of the cues associated with a Ritualized Situation of a certain type will bring the associated set of Normalizing Worlds to prominence. In Horton and Gerrig’s model, the observed cues do this by automatically triggering the retrieval of the relevant Normalizing Generalizations stored in long-term memory. This, I suggest, is the mechanism by which the recognition of Ritualized Situations automatically bring those associated Normalizing Generalizations to prominence, resulting in a most prominent context set restricted to the set of worlds in which they are uniformly true.

Appeal to these cognitive mechanisms allows us to fill out a suggestion above. In discussing Kehler’s work, I suggested we take seriously the idea that the cognitive mechanisms which underwrite the recognition of situation coherence are the very same mechanisms by which interlocutors do so when that same situation has been described. This single mechanism, resonance, explains how Normalizing Generalizations are automatically made cognitively prominent both when they are needed to make sense of a situation, like the observation of a fire-fighting event, and when they are needed to make sense of the description of one.

As they note, Horton’s and Gerrig’s proposal enjoys empirical support (Horton and Gerrig 2005). This gives us good, independent reason for accepting its application to the recognition of Normalizing Generalizations as proposed here. This is good news since, as we’ll see in the next section, this hypothesis promises to expand our understanding of how context-sensitivity can be resolved discourse-initially.

1. **Application: Ritualized Situations and Modal Domains**

It is widely assumed among linguists that some contextualist semantics with the basic form of Kratzer’s ((1991), (2012)) canonical view is correct. Here I both illustrate and test the hypotheses introduced in the previous section by applying them to the case of modal domain determination for a semantics with Kratzer’s basic form. Before getting to the details, though, let’s consider an example of the type of case we’ll be seeking to explain.

*The Puzzle*

Recall that one way such domains are determined is via modal subordination, whereby a set of possibilities introduced in discourse constrains the domain of a modal expression introduced in subsequent discourse. A challenge for any contextualist account, however, is to explain how modals may be used discourse-initially, that is, in cases in which there is no prior discourse to guarantee that the needed contextual requirements have been met.[[12]](#footnote-12) To illustrate, consider Stone’s (1997) example drawn from Stojnic (2021:115). In this example, two friends are looking at a high-end stereo in an electronics store. While doing so, one says to the other,

(7) My neighbors would kill me.

According to Stojnic, the modal in (7) has its domain restricted by a set of possibilities made prominent “in the speech situation”.

“[(7)] doesn’t mean that the neighbors would kill the speaker *unconditionally*, come what may; they would do so *only provided that the speaker buys the stereo in question*.”[[13]](#footnote-13) (My emphasis.)

Suppose this is correct. Two questions arise here. First, how does “a speech situation” make a set of possibilities prominent? The mechanism by which an utterance makes the set of possibilities that are its content prominent is familiar enough. But by what mechanism does “a speech *situation*” do so? Second, how is it that the possibilities in which the speaker *buys* the stereo are the ones made prominent? Why not, for example, the possibilities in which they steal it? While Stojnic’s discussion is suggestive, it fails to provide a clear answer to either of these questions. These are open research questions, ones I propose to answer here by appeal to the mechanisms by which interlocutors recognize Ritualized Situations.

*The canonical view*

For concreteness, the discussion here will be framed in terms of the canonical, Kratzerian semantics. One advantage of this is that the Kratzerian semantics is arguably the most plausible extant semantics for modals in English. A second advantage is that several rival contextualist theories share features with the canonical view, for example, treating modals as quantifiers over domains sensitive to a set of parameter values. For this reason, the elements of the general account here may be compatible with alternative contextualist proposals (Cariani, Kaufmann, and Kaufmann 2013; Cariani 2016; Rett 2016; and Stojnic 2021).

On the canonical view, modal expressions function as quantifiers over sets of possibilities.[[14]](#footnote-14) Restrictions on the domain of quantification are supplied by the context of utterance. While this section discusses a variety of modal flavors for illustrative purposes, it focuses most extensively on the case of deontic modal interpretation. It will be helpful, then to say a bit about what is distinctive of such uses of modal expressions.

Modal expressions that have a dedicated deontic use (for example, “ought”, “may”, and “must”), like other modal expressions, have a two-fold restriction. First, context supplies a value for the *modal base*, *f*, a function from a world of evaluation, *w*, to a set of propositions. The *modal background* is the set of worlds at which every *f*(w) proposition is true. The value for *f* in the case of deontic modals is *circumstantial*. Roughly, the value for *f* tells us to look for the circumstances in *w* that share certain properties. The modal background, then, will be the set of worlds alike with respect to those *f*(w) circumstances obtaining (Kratzer 1991, 2012). To illustrate: One common restriction is to those circumstances which fix an agent’s action-options in *w*, for example, her abilities, resources, and environment.

Second, the possibilities in the modal background are ranked in accordance with the degree to which they conform to some standard of ideality. That standard gets determined by the value for the *ordering source*, *g*. Like *f*, *g* is a function that takes a world of evaluation *w* as its argument and delivers a set of propositions as a value. Roughly, the value for *g* tells us to go to *w* and select the standard which has some property. The content of that standard is given by *g*(w)’s propositional value. The canonical view permits a wide variety of values for *g*. Such a value might select the rules of some club or the laws in some locality in *w*, for example. It may select some individual’s preferences or normative commitments in *w*. Or it may select the content of morality in *w*. Those worlds in the modal background that conform to *g*(w) to the greatest extent are ranked most highly. These most highly ranked worlds in the modal background make up the domain for the modal (Kratzer 1991, 2012). Call a “deontic modal sentence” a sentence where the modal has a deontic use and takes widest scope. Also, call “the prejacent” the sentence the modal scopes over. A deontic necessity modal sentence is true when the prejacent is true at all of the most highly ranked worlds,[[15]](#footnote-15) while a possibility modal is true when it is true in at least one. To illustrate, imagine a doctor says to a patient while handing them a prescription,

1. Given your physical condition and in order to promote your health, you have to/should take this.

Here, the circumstances restricting the modal’s domain will be those that fix the patient’s physical condition in *w*. These provide the value for *f*(w). The goal of health promotion provides the value for *g*. The value for *g*(w) will be what promotes the patient’s health in *w*. (8) will be true when all of the worlds compatible with the patient’s physical condition in *w* in which her health is maximally promoted are worlds in which she takes the prescription.

*Modal Interpretation, Questions Under Discussion, and Ritualized Situations*

Earlier I noted that any semantics for modal expressions must account for their flexibility, as illustrated in the ability of (1) to take both epistemic and deontic interpretations.

1. Sobel must be in his office.

There I suggested that their flexibility may be accounted for, at least in part, by the sort of question or concern an utterance of (1) is to address. Are we wondering where to look for Sobel? Or are we wondering about his commitments to his students? The interpretation will be epistemic or deontic depending upon which concern is guiding our discussion. Below I will expand on this suggestion, illustrating the role questions under discussion may play in determining modal domains for various modal flavors. Ritualized Situations play a role here, too, putting such questions on the scoreboard when none has been explicitly posed.

*Result Relations*

Like Explanation relations, Result relations are a type of Cause-Effect relation in Kehler’s sense.[[16]](#footnote-16) Such relations will figure in the modal examples below. Two utterances stand in such a relation when the second in some sense follows from the first. Here’s Kehler’s example (Kehler 2002:20).

(9) George is a politician. Therefore, he’s dishonest.

While “therefore” is an indicator of a Result relation, its appearance is not necessary for the relation to obtain. Three features of the Result relation will play a role in our discussion of modal interpretation. First, like in the case of Explanation relations, Result relations presuppose the generalizations that underwrites them. (9), for example, presupposes the Normalizing Generalization that politicians are dishonest. Second, in a Result relation the content of the first utterance is treated as a consideration that in some way justifies the acceptance of the content of the second. When both utterances are accepted, this justificatory relationship is also registered on the scoreboard. Finally, putting these two considerations together suggests that the presupposed information together with the content of the first utterance are jointly treated as considerations which justify the acceptance of the content of the second. This information too is registered on the scoreboard.

These claims can be tested using von Fintel’s test. To see this, consider these possible follow-ups to (9).

(9a) Hold on. Why assume politicians are a particularly dishonest group?

(9b) Wait a minute. Why think George’s being a politician is a reason to think he’s

dishonest?

While (9a) targets the Normalizing Generalization the utterance of (9) presupposes, (9b) targets the Result relation itself.

*An Initial Illustration and Application: Ritualized Situations, Discourse Relations, and Modal Interpretation*

Recall now the puzzle with which we began this section. Two friends are shopping in a high-end stereo store. One says to the other,

(7) (Looking at a high-end stereo in an electronics store) My neighbors would kill me.

Here, in contrast to (8), the restrictions on the modal domain are not explicit in the linguistic material. (Call the use of such modals “bare”.) Somehow, according to Stojnic 2021, the modal in (7) has its domain restricted by a set of possibilities made prominent “in the speech situation”. These, she tells us, are the possibilities in which “the speaker buys the stereo in question” (Stojnic 2021: 115). But how does this speech situation make *that* set of possibilities prominent?

Using the “therefore” test, we can see the set of possibilities in which the speaker buys the stereo stand in a Result relation to those in which his neighbors kill him. Prima facie, that would provide an explanation for why the possibilities in which the speaker buys the stereo constrain the domain of the counterfactual. The relevant mechanism would parallel the way the Narration relation explains the modal subordination in (6).

Passing the “therefore” test, though, can’t explain why this speech situation should make the *buying*-possibilities uniquely prominent, however. After all, the possibilities in which the speaker steals the stereo and those in which his neighbors kill him could equally stand in a Result relation. Part of the puzzle here is that, unlike in (6), the possibilities which stand in a discourse coherence relation to the modal in (7) are not part of the linguistic exchange. Yet somehow, they must already be there, prior to the interpretation of the latter.

I suggest that the restricting possibilities made prominent in the speech situation in (7) are background presuppositions about what the world is like, just as in the case of the Explanation relation exhibited in (2) and the Result relation exhibited in (9). Window shopping is a Ritualized Situation. Such situations are organized around addressing the question, “what would I buy, if I were buying something here?” That is because of the Normalizing Generalizations governing such situations. People who window shop usually spend time looking at items they would like to own. It’s more common to own an object by purchasing it than stealing it. People who enjoy high-end stereo equipment enjoy music and those who enjoy music sometimes enjoy playing it loudly. Few neighbors tolerate loud neighbors.

The explanation for why the possibilities in which the speaker buys rather than steals the stereo are made prominent in this speech situation, then, is that it is already presupposed that people tend to buy rather than steal their possessions. These possibilities (together with the others presupposed) in turn, stand in a Result relation to the counterfactual: [Were they to obtain], the speaker’s neighbors would kill him.[[17]](#footnote-17)

Here, too, these claims can be tested by seeing which follow-ups are felicitous. Consider, for example,

(7a) No, they wouldn’t. You’re too responsible to play it loudly.

(7b) Yeah, you would play it real loud, wouldn’t you?

(7c) No, they wouldn’t. Your neighbors are too chill to care if you played it loudly.

(7a) and (7b) each target a presupposition of the Result relation: that the speaker would play the stereo loudly. (7c) targets the presupposed applicability of the generalization that neighbors do not tolerate loud noise.

In addition, consider the contrast between,

(7d) Sure. *If* you bought it. But you’re not going to buy that stereo, are you?

(7e) Sure. *If* you stole it. But you’re not going to steal that stereo, are you? #

In contrast to (7d), (7e) sounds odd or surprising. That’s because (7d), but not (7e), targets a presupposition of the counterfactual.

Finally, a follow-up can felicitously target the Result relation itself.

(7f) Well, sure. But not for that reason. Your neighbors already hate you.

Spelling this all out a bit,

1. The counterfactual in (7) stands in a Result relation to the set of considerations which inferentially support it.
2. These considerations are registered on the scoreboard prior to discourse in the form of a set of background presuppositions.
3. Those presuppositions are shared due to interlocutors’ mutual recognition of which type of Ritualized Situation they are in.
4. Given the Normalizing Generalizations that govern situations of that type, these presuppositions will include that, if the speaker were to own the stereo, he would own it by purchasing it.
5. These presuppositions also constrain the domain of the modal. As Stojnic observes, the speaker’s neighbors wouldn’t kill him come what may, but only under the assumption that he buys the stereo and plays it loudly.

*Summing up:* While it is correct to say that the presence of a Result relation plays a role in explaining how the modal domain is determined in (7), that role is only partial and proximate. The full explanation requires appeal to the interlocutors’ recognition of the type of Ritualized Situation they are in.

As we’ll now see, these features of this example, the presence of a Result relation, of a Ritualized Situation, of Normalizing Generalizations, and an implicit question under discussion also have a role to play in domain determination for deontic modals.

*Ritualized Situations and Deontic Modal Domains*

In discussing the Explanation relation in (2), we’ve seen how the recognition of a Ritualized Situation may add a QUD to the conversational scoreboard. Such questions help determine which follow ups to an utterance are felicitous. And they help determine which discourse relation holds between utterances. (In (2), for example, the prominence of the Normalizing Generalization *people travel to visit their families* helps add “why did John travel to Istanbul?” to the scoreboard and helps determine an Explanation relation between “John traveled to Istanbul” and “he has family there”. Here the mechanism arguably involves a kind of accommodation, where the sentences used in (2) serve as a cue which retrieves that generalization from long-term memory.)

On the account here, deontic questions likewise structure an ensuing discourse. A deontic question is a must/should/may question the answer to which is to help advance a practical goal or to evaluate a state of affairs against some standard of ideality.[[18]](#footnote-18) The addition of such a question to a scoreboard serves to make the considerations relevant for determining their range of possible answers prominent. (See also Roberts 2004.) Those considerations will then be part of the most prominent Common Ground and will inferentially support deontic answers to those questions. This means that *when the utterance of a deontic modal sentence serves as an answer to a deontic question*, that utterance will stand in a Result relation to those supportive considerations.[[19]](#footnote-19) This most prominent context set supplies the modal domain. Thus, among those considerations will be values for *f*(w) and *g*(w).

When no deontic question has been explicitly posed, the recognition of a Ritualized Situation characterized by a practical or evaluative end may add such a question to the scoreboard and raise the associated Normalizing Worlds to prominence. In this way, such questions and the prominence of such worlds may be registered on the conversational scoreboard prior to any linguistic exchange.

Let’s put these ideas together in an illustration. Consider a bare modal variation on (8). Imagine a patient waiting for their doctor in an examination room. It is their first visit. The doctor arrives, looks at the patient’s chart, writes out a prescription, and hands it to them, saying,

(8’) You have to/should take this.

Here we have a bare deontic modal used discourse-initially. Yet it is clear enough what the doctor has said. She’s said what she would have said had she uttered (8) instead.

1. Given your physical condition and in order to promote your health, you have to/should take this.

How does this speech situation select just *this* modal domain between two strangers? Doctor visits are Ritualized Situations organized around a practical goal, the promotion of a patient’s health. This means that the practical question “which of the patient’s action-options best promotes their health?” is already registered on the scoreboard prior to any linguistic exchange. That’s because the Normalizing Generalization *patients visit doctors to promote their health* govern such situations, in part making them the type of situation they are. Recognition that this is the type of situation they are in both adds that discourse goal to the scoreboard and raises the associated Normalizing Worlds to prominence. The cognitive mechanisms by which this happens are plausibly just those that Horton and Gerrig posit.

We can test these claims by seeing which sorts of questions and assertions are felicitous discourse-initially. If that practical question is implicitly on the scoreboard prior to discourse, then assertions that serve to answer it and subquestions the answers to which would help answer that implicit question, should all be felicitous discourse-initially. In contrast, questions and assertions which don’t help answer that question should be infelicitous. This is what we find.

To see this, consider the following range of a doctor’s discourse-initial speech acts on first encountering a patient with a visible skin condition in an examination room.

(10) “What seems to be the trouble today?”

(11) “This is bad. It looks like you’ve got cellulitis.”

(12) (After looking at their chart) “You have to/should take this” (This is (8’) repeated.)

(13) “Do you play piano?” #

(14) “Our break room is comfortable.” #

(10)’s felicity is explained by its being a subquestion the answer to which would provide information relevant for answering an overarching question about how to promote the patient’s health. (11) provides information relevant for answering that overarching question. (12) answers that overarching question. Moreover, it is not felicitous unless it is interpreted as such. Finally, (13)’s infelicity is explained by its answer’s irrelevance for promoting patient outcomes. Similarly, (14) is infelicitous because irrelevant for pursuing that aim. Together, this suggests that the joint recognition of which Ritualized Situation interlocutors are in can add a question to the conversational scoreboard, even prior to discourse, and that such a question structures the ensuing discourse.

Notice that here, unlike in (2), the prominence of the needed presuppositions does not require accommodation. That’s because which Ritualized Situation structures the doctor-patient exchange is recognized prior to any discourse. Again, this means that the associated Normalizing Generalizations are already prominent on the conversational scoreboard prior to any linguistic exchange.

Finally, notice that the needed values for *f* and *g* in (8’) are here supplied by the Discourse Goal. To be an answer to a question about what a patient should or must do to improve her health, given her options, a deontic modal claim must have a value for *g*(w)which ranks her options in accordance with how well they improve her health.[[20]](#footnote-20) The features of her circumstances that determine those options provide the value for *f*. More generally, a should- or have to-question will not be deontic unless it is relative to some standard of ideality, provided, for example, by an agent’s preferences or goals or by the requirements of morality. And what is ideal at a world of evaluation *w* will depend upon *w*’s features.[[21]](#footnote-21) This suggests that deontic questions are themselves generally relative to values for *f* and *g*. Putting these considerations together, we now have one initial answer to the question of how deontic modal propositions may be determined as a function of the context of utterance discourse-initially. Ritualized Situations can add a deontic discourse goal to a conversational scoreboard. They do this by being situations characterized by a practical or evaluative goal. That deontic discourse goal constrains the range of propositions that can count as answers to it by supplying values for *f* and *g*.

Many situations in which deontic deliberation or evaluation take place are Ritualized. Deliberation about how to treat a patient or how to extinguish a fire are Ritualized. Situations in which someone’s record is assessed—an employee’s or a student’s—are Ritualized. In each case, what these situations Normally have in common will make prominent the circumstances and ideals which constrain answers to deontic questions.

*Answers to Deontic Questions and Result Relations*

Notice that as in (7), here too the considerations that support (8) as an answer to the deontic question of the context stand in a Result relation to (8). In addition to the Normalizing Generalizations associated with medical examinations, these will include that the physician has made her examination and correctly diagnosed the patient’s condition. Here too we find evidence for the presence of these presuppositions from which follow-ups are felicitous and infelicitous. Here the patient may respond,

(8a) Oh, I’m not here because of that rash. I’m looking for pain medication.

And a consulting physician may say,

(8b) Wait a minute. You didn’t check the patient’s blood pressure.

Both follow-ups target elements of the presupposed inferential basis for (8). (8a) targets the presupposition that the patient is there to treat the condition the doctor has diagnosed, while (8b) targets the presupposition that the doctor’s diagnosis is correct.

Finally, the Result relation itself may be the target of a follow-up. To see this, note that a consulting physician may also reply to (8) with

(8c) You can’t conclude that. You haven’t yet checked the patient’s blood pressure.

Putting these considerations together, the proposal here is that *when an utterance of a deontic modal sentence serves as an answer to a deontic question*, a conversational scoreboard must meet several conditions. First, they require a deontic question under discussion. Deontic questions are relative to a modal base, *f*, and ordering source, *g*. They don’t have the form *what must/should/may be the case similiciter?* They have the form *what must/should/may be the case, given a set of circumstances and some measure of ideality?* Second, the use of such sentences to serve as answers to such questions carries a Result relation requirement. That requirement is met when some prominent Common Ground propositions inferentially support that question’s answer.*[[22]](#footnote-22)*

Third, those considerations provide the propositional values for *f*(w) and *g*(w). Often, some of these propositions are made prominent by the mutual recognition of which Ritualized Situation structures their immediate concerns.[[23]](#footnote-23) Others are made prominent by the recognition of the cues as to which situation that is. Together, those possibilities in turn make up the modal’s domain.

*Epistemic Modals, Ritualized Situations, and a Result Requirement*

Though there isn’t space here to fully address the issue, there is reason to think that elements of the account of deontic modal interpretation defended here may extend to the case of epistemic modals. First, Rett (2016) provides independent evidence for the suggestion that epistemic modals are subject to some sort of Result relation requirement. I suggest instead that, like in the deontic case, it is only certain uses of epistemic modals that are subject to such a requirement. Roughly, in such uses an epistemic modal sentence serves as an answer to an epistemic question. In the sense reserved here, such questions structure discourse in contexts of inquiry. In such contexts, the point of the conversational exchange is to become better jointly opinionated about what the world is like. The answers to the questions that organize such exchanges are subject to some relevant standard of justification.

To test and illustrate this suggestion, consider again the first context for (1) mentioned above.

1. Sobel must be in his office.

In that context, we imagined looking for Sobel and wondering where he is or might be. Such a context is a context of inquiry in the present sense. If the current proposal is correct, such an utterance of (1) will stand in a Result relation to supportive considerations already registered on the scoreboard. And if that’s right, von Fintel’s HWAM test should be able to target that relation. To see that this is what we find, consider (1a) as a follow-up to (1).

(1a) Hey, wait a minute. You can’t conclude that. You haven’t ruled out that he’s out

to lunch.

Second, I suggest that contexts of inquiry are a broad type of Ritualized Situation Normally governed by appropriate standards of evidence. Consider any situation in which what the world is like is of high practical value, for example, medical examinations, visits to a car mechanic, parent-teacher meetings, and discussions between lab members. In such contexts, utterances are held to relevant standards of evidence rarely brought to attention explicitly. (For an additional illustration, consider again

1. “This is bad. It looks like you’ve got cellulitis.”

said discourse-initially in the context of (8’). Or consider instead,

(11’) “This is bad. You must have cellulitis”.

A consulting physician physician may respond with

(8c) You can’t conclude that. You haven’t yet checked the patient’s blood pressure.

Here too, a presupposed Result relation is targeted by a follow up on the grounds that some presupposed standard of evidence has not been met.)[[24]](#footnote-24)

*Ritualized Situations and Defective Contexts*

The account of how context-sensitivity is resolved discourse-initially proposed here relies on a newly posited resource heretofore unrecognized in the literature on this topic: The mutual recognition of a Ritualized Situation. What happens, then, when the speaker is mistaken about which Ritualized Situation she is in? Or when interlocutors have incompatible views about which situation that is? Suppose, for example, our doctor mistakes her patient for a new colleague. To make this plausible, let’s assume she meets her patient not in the examination room, but in the hallway. The patient is indeed medical personnel, but at a different facility. Though they wear their work clothes, they are in the doctor’s office for medical advice. Imagine now that, instead of (8’), the doctor says to the patient,

1. Well, hello! Welcome! Have you seen our break room? You should check it out! It’s

just down the hall.

Here the doctor is wrong about which Ritualized Situation she is in. What, if anything, has she said, on the present account? If she has managed to say something, is it determined by the Ritualized Situation she is in (giving advice to a patient)? Or the one she believes she is in (giving advice to a new colleague)?

To think about this, first recall that contexts of utterance are here understood as those aspects of a speech situation interlocutors jointly need to track for communication to occur. Given the role played by the joint recognition of a Ritualized Situation in bringing certain Common Ground propositions to prominence on the present account, when there is a divergence of this kind between which such situation interlocutors take to be at issue, we can expect the context to be defective. This *need not* be the case. In a conversational situation in which interlocutors have divergent presuppositions, but the divergence makes no difference to an utterance’s content, the defective Common Ground does not undermine communication. Similarly, if the difference between the Ritualized Situations each interlocutor takes to structure their conversational exchange bring similar enough Normalizing Worlds to prominence, communication will not be undermined. That is not so, however, in the present case.

This is compatible with the doctor’s having speaker’s-meant something like what would be expressed in the conversational context she takes herself to be in by

(15’) Given that you’re new staff and your expected preferences, you should check out

our break room.[[25]](#footnote-25)

And the patient may be able to work out that this is what the doctor intended. But this would be via a strategic mechanism of repair in a defective context. To be non-defective, on the present account, there needs to be *mutual* recognition of the relevant Ritualized Situation. In terms of mechanisms attested to in the work of Horton and Gerrig ((2005), (2016)) and borrowed here, that recognition occurs when each recognizes cues associated with the relevant situation. In Kehler’s fire-fighting example, such cues could include the presence of hoses, a hydrant, and a red truck. In the scenario in which (8’) is set, they could include the doctor’s coat, the accoutrement of the examination room, and the patient’s gown. Once stored in short-term memory, such cues trigger a search for the associated generalizations that govern medical examinations, those that make them the type of situation they are. What goes wrong in the context in which (15) is uttered is that the situation’s cues (e.g., the patient’s wearing of medical garb) trigger for the doctor the recall of a set of Normalizing Generalizations associated with a different type of Ritualized Situation. Recognition of that same cue may allow the patient to work out what the doctor has meant to say. But, again, this would be via a strategic mechanism of repair.

*Comparison with Stojnic’s Conventionalist Account*

Stojnic (2021) defends an account on which linguistic conventions alone[[26]](#footnote-26) resolve context-sensitivity via conventionalized discourse relations. Her argument involves two basic steps. First, the identification of a rival, non-conventionalized explanation for such resolution. Second, a putative demonstration that the empirical evidence is compatible only with the conventionalist’s account.

The rival view she identifies is a Gricean one on which resolutions are made via strategic reasoning that aims to recover a speaker’s intended meanings. In contrast, a conventionalist account predicts that such resolutions are made automatically via the governing linguistic convention.[[27]](#footnote-27) To decide between these two accounts, we examine cases in which the two make incompatible predictions regarding the comprehension of an utterance’s content. If that comprehension takes time and involves strategic reasoning over distinct hypotheses regarding its content, the evidence favors the Gricean account. If, instead, comprehension is automatic and involves no such reasoning, the evidence favors the conventionalist account.

The proposal here provides a challenge to Stojnic’s argument for the conventionalist view. The recognition of Ritualized Situations does not proceed by familiarity with linguistic conventions. Rather, it proceeds by a general purpose cognitive mechanism by which humans retrieve information stored in long term memory. Sometimes, the associated Normalizing Generalizations retrieved will be governed by conventions. But these conventions will be social, not linguistic. (Recall here Kehler’s fire-fighting example.) The recognition of such situations for the purposes of commonality assessment *may* involve strategic reasoning, as when the patient wearing medical garb needs to reason about which situation the doctor must take herself to be in to understand what she meant to say in (15). But often, that process involves resonance, a “fast, passive, and effort-free mechanism,” (Horton and Gerrig (2005: 10)).

In such cases, linguistic conventions alone do not secure the parameter values needed to determine contents. Instead, those values are supplied at least in part by a set of Normalizing Generalizations made prominent in the Common Ground. Those generalizations are not added by interlocutors’ familiarity with a language’s conventions. They are added by their joint, extra-linguistic, real-world knowledge. (Consider again here how the real-world information *people travel to visit their families* is required for the recognition of the Explanation relation in (2). Or how recall of real-world generalizations regarding window-shopping situations is required for the modal domain in (7) to be restricted to those in which the speaker buys, rather than steals, the stereo.) This means that, contra Stojnic, linguistic conventions are not a unique explanation for how interlocutors automatically converge on the same resolution for a context-sensitive item in discourse.

The current proposal, then, is a rival to Stojnic’s. It promises to explain the widespread, automatic comprehension of contents expressed using context-sensitive expressions without positing the near-universal operation of linguistic conventions. This is a significant advantage over a conventionalist’s account in that it clearly explains how parameter values are determined discourse-initially in terms of general cognitive mechanisms memory research gives us independent empirical reason to posit. In contrast, it is hard to see how linguistic conventions alone explain automatic resolution and comprehension in either of our discourse-initial modal examples—our window-shopping counterfactual or our medical examination deontic modal.

**3. Conclusion**

Here I’ve defended a novel account of how discourse coherence relations are determined and so how context-sensitivity may be resolved. On that account, interlocutors’ joint recognition of a Ritualized Situation may add an implicit question under discussion to the scoreboard when none has been explicitly posed. That recognition also brings the associated Normalizing Worlds to prominence. Following Horton and Gerrig (2005), I’ve argued that the cognitive processes by which such recognition makes the associated worlds prominent are ordinary memory processes. Thus, it enjoys existing empirical support.

This account also enjoys two significant advantages over conventionalist accounts of how discourse relations resolve context-sensitivity. First, it explains why and how two utterances stand in the particular discourse relation they do. Second, it explains why and how interlocutors can converge on the same interpretation of a context-sensitive item discourse-initially. Interlocutors’ joint recognition of a Ritualized Situation will make relevant, real world knowledge prominent on their conversational scoreboard, even when they are strangers and prior to any linguistic exchange.

**References**

Asher, N. and Lascarides, A. (2003), *Logics of Conversation*. Cambridge: Cambridge University Press.

Cariani, F., (2016), Deontic Modals and Probabilities: One Theory to Rule Them All? In N. Charlow and M. Chrisman (eds) *Deontic Modality* Oxford: Oxford University Press, pp.11-46.

Cariani, F., M. Kaufmann, and S. Kaufmann. (2013), “Deliberative Modality Under Epistemic Uncertainty”, *Linguistics and Philosophy* 36: 225-259.

von Fintel, K. (2004), Would you Believe it? The King of France is Back! In *Descriptions and Beyond*. M. Reimer and A. Bezuidenhout (eds.). Oxford: Oxford University Press, pp.315-

341.

Horton, S. and R, Gerrig, (2016). Revisiting the Memory-based Processing Approach to Common Ground, *Topics in Cognitive Science* 8, 780-95.

Horton, S. and R. Gerrig, (2005), Conversational Common Ground and Memory Processes in Language Production, *Discourse Processes* 40 (1), 1-35.

Kehler, A., (2002), *Coherence, Reference, and the Theory of Grammar*. CSLI Publications.

Kratzer, A., (2012), *Modals and Conditionals*. Oxford: Oxford University Press.

Kratzer, A., (1991), Modality. In A. von Stechow and D. Wunderlich (eds.), *Semantics: An*

*International Handbook of Contemporary Research* (de Gruyter), 639-650.

Stalnaker, R., (2002), Common Ground, *Linguistics and Philosophy* 25: 701-721.

Stojnic, U., (2021), *Context and Coherence*. Oxford: Oxford University Press.

Stone, M., (1997), The Anaphoric Parallel Between Modality and Tense, *IRCS Report* 97-

106, University of Pennsylvania, Philadelphia.

Ratcliff, R., (1978), A Theory of Memory Retrieval, *Psychological Review* 85, 59-108.

Rett, J., (2016), On a Shared Property of Deontic and Epistemic Modals. In *Deontic Modality*, N. Charlow and M. Chrisman (eds), Oxford: Oxford University Press, 200-229.

Roberts, C., (2012), Information Structure in Discourse, *Semantics and Pragmatics* 5.

Roberts, C., (2004), Context in Dynamic Interpretation. In *the Handbook of Pragmatics*. L.R.

Horn and G. Ward (eds.). Blackwell Publishing, 197-220.

Roberts, C., (1989), Modal Subordination and Pronominal Anaphora in Discourse.

*Linguistics and Philosophy* 12: 683-721.

1. Stojnic (2021). On p.174, she offers a few suggestive remarks on this issue. However, the discussion is compressed and limited to a single example that makes generalization difficult, at least for this reader. [↑](#footnote-ref-1)
2. Even when a question has been explicitly expressed, a part of that question may be implicit, for example, when a shop assistant asks, “may I help you?” [↑](#footnote-ref-2)
3. Roberts 2004, 2012 argues that prosodic stress has a role to play in determining which question will be implicitly put on the scoreboard. When the stress is on the subject as in (5), for example, the implicit question will be one denoting the set of answers that differ only in the replacement of the subject. [↑](#footnote-ref-3)
4. Many thanks to Ishani Maitra for discussion of this test. [↑](#footnote-ref-4)
5. Following Stalnaker 2002 we might view this as a case of accommodation where the sentence used puts the implicit question on the scoreboard, which then constrains interpretation. Below, I argue that interlocutors’ mutual recognition of a Ritualized Situation can directly and prior to any discourse add the needed generalizations to the scoreboard. Thus, they are already presupposed prior to discourse *and no accommodation is needed*. [↑](#footnote-ref-5)
6. What is it for something to normally be the case? This may vary to some extent with prevailing purposes. For concreteness, I’ll assume that it is a statistical notion requiring a comparison class. For example, *that politicians are dishonest* may underwrite the explanation in

   George is dishonest. He’s a politician.

   even if most politicians are honest. Here being a politician increases the likelihood of being dishonest, even if the likelihood of being dishonest, given one is a politician is low. [↑](#footnote-ref-6)
7. There are exceptions to this claim, for example, when events have unusual explanations. To illustrate, consider an unusual conversational context in which two close friends are discussing the recent travels of a third friend, John. The basis for their friendship is their shared love of good food and willingness to travel to indulge their tastes. When they meet, they regularly trade information where to find the finest, freshest ingredients. They have recently learned of a farmer in Istanbul who has a secret which allows him to grow highly coveted spinach, only available locally. In that case, the second sentence in (3) is easily read as explaining the first, even though the explanation does not depend upon some defeasible generalization about what is typically the case.

   More generally, what gives rise to an Explanation or some other Cause-Effect relation is in part supporting background presuppositions. Often shared background presuppositions will include Normalizing Generalizations. But, perhaps particularly with interlocutors well-known to each other, those presuppositions may be more particular and specialized. [↑](#footnote-ref-7)
8. Commonality assessment is ““the means by which language users gain access to information relevant to CG” (Horton and Gerrig 2016: 782). [↑](#footnote-ref-8)
9. As Horton and Gerrig (2005) make clear elsewhere, this formulation is a bit rough. More carefully, Nadia’s *concept of* her brother (triggered by the experience of talking with him, presumably) cues memories automatically that serve as a basis for commonality assessment. [↑](#footnote-ref-9)
10. “In such models, particular configurations of information function as probes to memory, triggering a parallel search for any stored information that shares overlapping features with or is in some ways similar to, the probe cue. This automatic search process has been termed *resonance* (Ratcliff, 1978), based on the metaphor of a tuning fork (i.e. stored memories) vibrating at particular frequencies in response to being ‘struck’ by a configuration of cues, with resonance strength being a function of the number of overlapping features between the stimulus cues and target memory traces. Importantly, when this resonance reaches some activation threshold, which is itself a function of the recency and frequency with which a memory has been previously retrieved, that knowledge can become accessible in a way that influences other processes…On this account, commonality assessment often emerges from a speaker’s automatic recognition that certain information can be treated as familiar or not within a particular context” (Horton and Gerrig 2016: 782-3). [↑](#footnote-ref-10)
11. The properties that define such communities include properties like “being a speaker of English”, “being a resident of the United States”, and “being a student at Syracuse University”. [↑](#footnote-ref-11)
12. This is especially a puzzle for account like Stojnic’s (2021), which holds that, except in cases of ambiguity, context-sensitivity is resolved by linguistic conventions alone. [↑](#footnote-ref-12)
13. Ibid. 115. [↑](#footnote-ref-13)
14. There may be reasons separable from the issues here, to hold that it is something more fine-grained than possibilities, such as situations, that modals quantify over. We may set this issue aside. [↑](#footnote-ref-14)
15. These truth-conditions don’t distinguish between weak and strong necessity modals. However, how best mark to that distinction is not at issue here. [↑](#footnote-ref-15)
16. [↑](#footnote-ref-16)
17. This is so at least in out of the blue contexts in Ritualized Situations. More specific presuppositions about the speaker’s situation (e.g., what his neighbors are like) may serve as the needed background presuppositions in cases in which interlocutors are familiars. [↑](#footnote-ref-17)
18. A range of practical or evaluative ends are possible. For example, they may be actual or hypothetical, action-guiding or purely evaluative, prudential, moral, social conventional or legal, etc. [↑](#footnote-ref-18)
19. Sometimes deontic modal sentences are uttered not to answer deontic questions, but, for example, to provide an action-explanation. This brief description of the basic account does not purport to cover such cases. Thanks to Una Stojnic for bringing such cases to my attention. [↑](#footnote-ref-19)
20. In the classical framework, an option will be represented by the set of worlds *w’* in the modal background alike with respect to which action-option an agent performs in w’. These options may be ranked by an appropriate value for *g*(w), for example, by ranking each world *w’* by the extent to which the action an agent performs in *w’* fulfills her commitments in the world of evaluation, *w*. [↑](#footnote-ref-20)
21. This will be so even relative to a priori and necessary moral requirements. For example, if it turns out that some form is consequentialism is true, what is best in *w* will depend upon the features of *w* that determine which actions and policies cause which outcomes. [↑](#footnote-ref-21)
22. Rett (2016) argues that deontic modals are subject to a Result requirement. My proposal here differs, first, in holding that such relations are only required when a deontic modal sentence is used to answer a deontic question, and second, that the relevant supporting considerations support the entire modal claim, not simply the prejacent. [↑](#footnote-ref-22)
23. Sometimes the relevant situation is the one interlocutors are in. But sometimes it is not, as when a witness later recounts a fire-fighting event. [↑](#footnote-ref-23)
24. Action-explanations provide a contrasting example. When we use an epistemic modal sentence to explain another’s action, what matters is what follows from the agent’s evidence, not the speaker’s. Thus, the utterance of an epistemic modal sentence need not be inferentially supported by the presuppositions of the speaker’s context. Dinner table conversations provide another good contrast. Often the prevailing aim in such situations is to entertain. This is why insistence on irrelevant accuracy is often seen as disruptive and infelicitous. [↑](#footnote-ref-24)
25. Thanks to an anonymous referee for raising consideration of such an example. [↑](#footnote-ref-25)
26. The account’s single exception is for cases of ambiguity. [↑](#footnote-ref-26)
27. As she writes, “On the account I have defended, extra-linguistic features of context (e.g., real world knowledge…) do not play a role as determinants of semantic content. So, it is the linguistic meaning, together with the linguistic mechanisms governing contextual parameters that determine the referent; *no extra linguistic supplementation is required*.” (Stojnic2021: 171) (My emphasis.) [↑](#footnote-ref-27)