Definedness conditions on admission-of-ignorance moves

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Given a set of alternatives, a speaker can explicitly admit ignorance about which of them hold true. The (in)felicity of such admission-of-ignorance moves immediately following disjunctions and conjunctions follows from the semantics of *or* and *and*. However, semantics alone turns out to be insufficient in cases when the disjunction/conjunction and the admission-of-ignorance move are separated by additional conversational moves of acceptance, objection, or removal of an existing assertion. I argue that these patterns follow if admission-of-ignorance are associated to a speech act operator admit whose input is restricted to propositions that the current speaker is publicly committed to at the current conversational stage.

Keywords: disjunction, conjunction, alternatives, discourse

1. Introduction

1.1 Background and proposal

Suppose our discourse contains two alternatives, defined as salient distinct sets of worlds p and q such that (i) neither p nor q is properly contained in the other, and (ii) p and q need not be simultaneously true (this can be easily generalized to an arbitrary number of alternatives). An attitude holder (which throughout this paper will invariably be the speaker) can then utter an explicit admission of her ignorance as to which alternative holds true — call this an *admission-of-ignorance* conversational move, and note that it amounts to an assertion of ignorance, rather than a presupposition or an implicature. I will concentrate exclusively on admission-of-ignorance moves realized with clauses headed by a wh-phrase (not necessarily questions in the sense of being information-seeking expressions) and embedded under predicates like *ask, wonder, forget, decide,* and others. The goal of

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this paper is to understand at least some of the conditions that govern the distribution of admission-of-ignorance moves.

The empirical domain is based on the hypothesis that disjunction is an alternative-creating function (Simons 2005, Alonso-Ovalle 2006, Groenendijk 2009, Groenendijk and Roelofsen 2009, and references). The first sentence in (1a) gives rise to the alternatives of teaching semantics and running the colloquium, and as such, it can be felicitously followed by an admission-of-ignorance move.[1] In contrast, conjunction does not create alternatives: replacing *or* with *and* yields a sentence that defines a single set of worlds (the intersection of the teach-semantics and the run-colloquium sets of worlds), which fails to license the same admission-of-ignorance move (1b).

(1) a. In the Fall, Sally is teaching semantics or running the colloquium.
✓ I forgot which one it is.
b. In the Fall, Sally is teaching semantics and running the colloquium.
I forgot which one it is.

The difference between *and* and *or* can be encoded in their respective lexical entries (see, e.g., AnderBois 2011:19–22). Abstracting away from the fine details of this semantics, we can subsume (1) under the following generalization.

(2) Disjunctions, but not conjunctions, create alternatives and license subsequent admission-of-ignorance moves.

This generalization, however, seems to fail when confronted with examples like (3), where a disjunction appears unable to license an admission-of-ignorance move. Similarly, in (4), a conjunction appears unexpectedly able to license such a move.

(3) *Scenario: two professors discuss the responsibilities of a new hire.*
A: In the Fall, Sally is teaching semantics or running the colloquium, right?
B: No, that's less work than her contract requires.
A: # Then we should ask her which one she wants to do.

(4) *Scenario: two professors discuss the responsibilities of a new hire.*
A: In the Fall, Sally is teaching semantics and running the colloquium, right?
B: No, that's more work than her contract allows for.
A:✓ Then we should ask her which one she wants to do.

1. Analogous sentences have been noted in work on sluicing (Chung et al. 1995, AnderBois 2011:ch. 3, AnderBois 2014, Barros 2014:sect. 2.1.3, and references). Here, I provide the unelided form of the sentences and stay away from the question of whether individual examples support sluicing or not. This is largely because sluicing is subject to its own set of restrictions (e.g., semantico-pragmatic and morphosyntactic parallelism conditions) that can introduce unwanted confounds.

The crucial property of (3)/(4) is that, unlike in (1), the disjunction/conjunction and the admission-of-ignorance move are separated by a distinct conversational move of objection to an assertion. Intuitively, we want to say that *B*'s utterance in (3) eliminates the alternatives created by the disjunction in *A*'s initial utterance. And conversely, *B*'s utterance in (4) creates alternatives that were not there after *A*'s initial utterance. To capture this intuition, we need a model of conversation capable of tracking how alternatives are created and eliminated at different conversational stages. The goal of this paper is to show that (1), (3), and (4) can be all subsumed under (5), which is a variation of (2) relativized to conversation participants and conversational stages.

(5) Given a set *S* of alternatives introduced at stage k_i of the conversation, a participant *A* can felicitously address *S* at a later stage k_j iff *A*'s list of public discourse commitments contains *S* at k_j.

Note that (5) is a composite condition: the set of alternatives must not only be among the discourse commitments of the appropriate participant, it also must be there at the appropriate conversational stage. In sections 3 and 4, I provide evidence that this formulation is correct at least for the narrow case of alternatives introduced by disjunctions.

1.2 Semantics vs. conversation dynamics

Condition (5) is formulated as constraint on possible conversation moves. Two referees have taken issue with this assumption. Specifically, given that at least some of the embedding predicates already presuppose the existence of multiple alternatives (as do *which one* phrases themselves), one could potentially derive the relevant patterns by appealing exclusively to the lexical semantics of these items and standard compositionality rules, without invoking an independent condition like (5).

This is an idea I'm sympathetic to, but its proper implementation is not immediately obvious. The main difficulty lies on the fact that, as (5) implies (see also section 2 for more detail), a given admission-of-ignorance move may only access a certain proper subset of alternatives, and this subset is best delimited in discourse terms. In order to derive (2) as a compositional semantic effect, one would have to define meanings for *ask/tell/forget/…* and *which one* that result in a compositional meaning roughly paraphraseable as "ask/tell/forget/… about the alternatives created by some salient proposition currently publicly accepted by the speaker". Unfortunately, length restrictions prevent me from exploring this possibility, so (5) will remain a separate condition, but one that perhaps can be deduced from other factors.

1.3 Some cases we want to exclude

Consider also the examples in (6), where a conjunction licenses an admission-of-ignorance move even in the absence of any intervening move.

(6) a. Foreign movies are sometimes dubbed and sometimes subtitled. ✓ The TV guide usually tells you which it is. [Webber 1978, adapted]

b. Some days all the students show up to class, and some days only the good ones do. ✓ I never know which it is going to be until I walk through the door. [author's colleague's complain about one of his courses]

c. The optimal strategy is to randomly kick some penalties to the left of the goalkeeper and some to the right. ✓ Some of the best specialists have revealed that, even as they are running up to they ball, they themselves still don't know which it is going to be. [*Nash's Penalty* documentary]

Contrary to what might seem at first sight, this kind of examples don't violate either (2) or (5). The relevant factor is the presence of indefinite expressions inside each conjunct. For one, we know indefinites can create alternatives in much the same way as disjunctions (AnderBois 2011, Slade 2011). Additionally, Groenendijk and Roelofsen (2009:sect. 3.1) observe that "if p and/or q are inquisitive, then the conjunction $p \wedge q$ might be inquisitive as well" — i.e., at least some of the alternatives inherent to p and q themselves might survive the effects of conjunction. Specifically, I conjecture that the following generalization holds true.

(7) A conjunction $\exists x P(x) \wedge \exists x Q(x)$ licenses an admission-of-ignorance move if it is truth-conditionally equivalent to the disjunction $\forall x(P(x) \vee Q(x))$.

Going back to the examples above, (6a) can be felicitously rephrased as an assertion that every foreign movie shown in Germany is dubbed or subtitled (or perhaps both); (6b) as an assertion that every class is attended by either all the students or only the good ones; and (6c), as an assertion that every penalty is kicked either to the left or to the right of the goalkeeper. All of these rephrasings conform to the pattern in (7).

To avoid this potential confound, all the examples that I use in the rest of this paper, and especially those involving conjunctions, are free of indefinites other alternative-creating expressions (e.g., foci).

2. A toy model of conversation

The model of discourse I assume here comprises the components listed below (this is the minimum necessary for the purposes of this paper; additional components, like Farkas and Bruce's 2010 Table and Projected Set, can be added if necessary to account for other aspects of conversation). All these components are fairly standard and can be found, in some implementation or another, in models like those of Farkas and Bruce (2010) and Ginzburg (2012). Of interest for this paper is the fact that any model that incorporates these components can keep track of the discourse commitments of each participant at each conversational stage.

(8) A conversation K consists of:

a. a set of participants $\{A, B, \ldots\}$, each associated to a list of propositions they are publically committed to $\{\mathrm{DC}_A, \mathrm{DC}_B, \ldots\}$.

b. a sequence of stages $\langle k_0, k_1, \ldots, k_n \rangle$, where k_0 is the distinguished empty state at the beginning of the conversation.

c. a set of propositions $\{p, q, \ldots\}$ closed under conjunction, disjunction, and negation, corresponding to declarative utterances by participants.[2]

d. a set of speech act operators that take update the speaker's DC, and advance the conversation to the next stage.

We can now define the speech act operators in (9). By definition, a participant can felicitously invoke a speech act operator only if its definedness conditions are satisfied. Note that all updates take effect at the immediately next conversational stage and affect exclusively the DC of the participant that invokes the operator.

(9) For proposition p, participants A and B, and conversation stages k_i and k_j (where k_i is the current stage and k_j, if referenced, is some previous stage),

a. assert (p, A, k_i)
   defined if A utters p at k_i; if defined, $p \in \mathrm{DC}_A$ at k_{i+1}

b. accept (p, A, k_i)
   defined if assert (p, B, k_j) has happened; if defined, $\neg p \in \mathrm{DC}_A$ at k_{i+1}

c. object (p, A, k_i)
   defined if assert (p, B, k_j) has happened; if defined, $p \in \mathrm{DC}_A$ at k_{i+1}

d. remove (p, A, k_i)
   defined if $p \in \mathrm{DC}_A$ at k_i; if defined, $p \notin \mathrm{DC}_A$ at k_{i+1}

Some of these operators deserve additional notes. First, I take acceptance to be B's default move after A utters p, not requiring any explicit verbal or non-verbal expression. This much is necessary to account for examples like (10), where B utters

2. Note the restriction to declarative utterances. This is largely for simplicity, i.e., to avoid potential confounds introduced by questions, imperatives, etc. For the same reason, I am ignoring declaratives containing modals, given that modal can interact with conjunction and disjunction in complex ways. Clearly, however, a complete model will have to integrate the contributions of these other sentence types.

an admission-of-ignorance move without any overt acknowledgment of having accepted *A*'s assertion.

(10) *Scenario: two professors discussing the responsibilities of a new hire*
A: In the Fall, Sally has to either teach semantics or run the colloquium.
B: Let's ask her which one she wants to do.

Second, consider the idea that object updates the speaker's DC with the negation of another participant's assertion. Importantly, if the assertion in question is a conjunction, the objection $\neg(p \wedge q)$ (where I use $\wedge$ as the metalanguage representation of and, and similarly for $\vee$ and or) will create a set of alternatives that can then be addressed. Conversely, if the assertion is a disjunction, the objection $\neg(p \vee q)$ will fail to create alternatives that can be addressed. The examples below illustrate this pattern by abstracting away from objection and employing an overt negation. The negation allows the conjunction in (11a) to license an admission-of-ignorance move (compare to (1b)), and it prevents the disjunction in (11b) from licensing one (compare to (1a)).

(11) a. In the Fall, Sally isn't (both) teaching semantics and running the colloquium, ✓ She will tell us soon which one she wants to do.
b. In the Fall, Sally isn't (either) teaching semantics or running the colloquium. # She will tell us soon which one she wants to do.

With this background in place, we can now define the additional discourse move admit, which integrates (5) as its definedness condition.

(12) admit (p, A, k_{i})
defined if
i. p contains alternatives.
ii. $p \in \mathrm{DC}_A$ at k_i
if defined, DC_A at k_{i+1} contains an assertion of *A*'s ignorance about the truth of the alternatives associated to p.

I won't say anything about the details of the update. The rest of this paper is an extended argument to show that the definedness conditions in (12) are correct. Condition (12i) can arguably be taken as correct without much argument (one cannot address the alternatives created by p if p does not create any alternatives). Condition (12ii) is a rephrasing of (5), in that it requires that p be present in the DC of participant that invokes admit at the conversation stage that admit is invoked. The rest of this paper is an argument to the effect that admission-of-ignorance moves are infelicitous if (i) p is present at k_i but only in another participant's DC; or (ii) p is present in the speaker's DC but only in a previous conversational stage.

From now on, I use the notation schema in (13) to illustrate how a conversation evolves. For each conversation stage in $\langle k_0 \ldots k_n \rangle$, the first line indicates the relevant utterance; the second line, prefixed with ⊳ for saliency, indicates the state of each participant's DC; and the third line, also prefixed with ⊳, indicates the speech act operator being invoked and the update it triggers, with the squiggly arrow $\rightsquigarrow$ relating the operator to its update.

(13) k_0 A: *Some utterance p*
⊳ $DC_A = \{\emptyset\}$, $DC_B = \{\emptyset\}$
⊳ assert (p, A, k_0) $\rightsquigarrow p \in DC_A$ at k_1
k_1 B: *Acceptance of p*
⊳ $DC_A = \{p\}$, $DC_B = \{\emptyset\}$
⊳ accept(p, B, k_1) $\rightsquigarrow p \in DC_B$ at k_2
k_2 [*no utterance, final state*]
⊳ $DC_A = \{p\}$, $DC_B = \{p\}$

3. Baseline

To illustrate the mechanics of this system, consider (1a)/(1b) again, and assume that such sequences can be effectively modelled as monologues. Although DC_A is empty at k_0, the assert operator ensures that it will contain $p \vee q$ (which amounts to a set of alternatives) at k_1. As such, the definedness conditions on admit are satisfied at k_2, and the admission-of-ignorance utterance is felicitous.

(14) k_0 Sally is [$_p$ teaching semantics] or [$_q$ running the colloquium].
⊳ $DC_A = \{\emptyset\}$
⊳ assert ($p \vee q$, A, k_0) $\rightsquigarrow p \vee q \in DC_A$ at k_1
k_1 ✓ I forgot which it is.
⊳ $DC_A = \{p \vee q\}$
⊳ admit($p \vee q$, A, k_1)[defined, felicitous]

In contrast, asserting a conjunction updates DC_A with $p \wedge q$, without creating any alternatives. Therefore, admit at k_1 is undefined and (by hypothesis) infelicitous.

(15) k_0 Sally is [$_p$ teaching semantics] and [$_q$ running the colloquium].
⊳ $DC_A = \{\emptyset\}$
⊳ assert ($p \wedge q$, A, k_0) $\rightsquigarrow p \wedge q \in DC_A$ at k_1
k_1 # I forgot which it is.
⊳ $DC_A = \{p \wedge q\}$
⊳ admit ($p \wedge q$, A, k_1)[undefined, infelicitous]

This is, of course, the same result that follows from the standard semantics for disjunction and conjunction developed by Simons (2005), Alonso-Ovalle (2006), Groenendijk (2009), and others. In order to appreciate why one also needs to satisfy the definedness conditions on admit, and especially (12ii), it is necessary to examine a number of dialogic interactions.

4. The distribution of alternatives in conversations

4.1 Alternatives must be in the speaker's DC

The first step in showing that (12ii) is correct consists on constructing examples where alternatives are present at the stage where admit is invoked, and then contrast examples where they are only present in the speaker's DC against examples where they are only present in another participant's DC. The prediction is that only the former class of addressals will be felicitous. Consider (16), to begin with: here, *A*'s utterance at k adds $p \vee q$ to DC_A. At k_1 *B* accepts this assertion by uttering *Ok,* causing $p \vee q$ to be present in DC_B at k_2. The admission-of-ignorance move is then felicitous at k_2 because condition (12ii) is satisfied.

(16) k_0 A: Next Fall, Sally is [$_p$ teaching semantics] or [$_q$ running the colloquium].
▻ $DC_A = \{\varnothing\}$; $DC_B = \{\varnothing\}$
▻ assert $(p \vee q, A, k_0) \rightsquigarrow p \vee q \in DC_A$ at k_1
k_1 B: Ok.
▻ $DC_A = \{p \vee q\}$; $DC_B = \{\varnothing\}$
▻ accept$(p \vee q, B, k_1) \rightsquigarrow p \vee q \in DC_B$ at k_2
k_2 B: Let's ask her which one she wants to do.
▻ $DC_A = \{p \vee q\}$; $DC_B = \{p \vee q\}$
▻ admit (p $\vee$ q, B, k_2)[defined, felicitous]

Now consider (3) again, which differs from (16) in that *B* objects to *A*'s assertion at k_1, rather than accepting it. By the definition of object, DC_B ends up containing $p \wedge q$ at k_2, which doesn't create alternatives. Lacking alternatives, *B*'s admission-of-ignorance move is undefined and infelicitous. Note, importantly, that the presence of $p \vee q$ in DC_A at k_2 fails to license *B*'s move. I take this as evidence that $p \vee q$ must be located (not necessarily exclusively) in the DC of the participant that invokes admit.

(17) k_0 A: Next Fall, Sally is [$_p$ teaching semantics] or [$_q$ running the colloquium].
▻ $DC_A = \{\varnothing\}$; $DC_B = \{\varnothing\}$
▻ assert $(p \vee q, A, k_0) \rightsquigarrow p \vee q \in DC_A$ at k_1

k_1 B: No, that's less work than her contract requires.
⊳ $DC_A = \{p \vee q\}$; $DC_B = \{Ø\}$
⊳ object $(p \vee q, B, k_1) \rightsquigarrow p \wedge q \in DC_B$ at k_2
k_2 B: # Let's ask her which one she wants to do.
⊳ $DC_A = \{p \vee q\}$; $DC_B = \{p \wedge q\}$
⊳ admit $(p \wedge q, B, k_2)$[undefined, infelicitous]

The opposite dynamics play out in (4). Here, *A*'s assertion contains a conjunction, which *B* objects to at k_2. Given that DC_B now contains a set of alternatives, admit is defined and the admission-of-ignorance move becomes felicitous, as desired.

(18) k_0 A: Next Fall, Sally is [$_p$ teaching semantics] and [$_q$ running the colloquium].
⊳ $DC_A = \{Ø\}$; $DC_B = \{Ø\}$
⊳ assert $(p \wedge q, A, k_0) \rightsquigarrow p \wedge q \in DC_A$ at k_1
k_1 B: No, that's more work than her contract allows for.
⊳ $DC_A = \{p \wedge q\}$; $DC_B = \{Ø\}$
⊳ object$(p \wedge q, B, k_1) \rightsquigarrow p \vee q \in DC_B$ at k_2
k_2 B: ✓ Let's ask her which one she wants to do.
⊳ $DC_A = \{p \vee q\}$; $DC_B = \{p \vee q\}$
⊳ admit $(p \vee q, B, k_2)$[defined, felicitous]

It is not difficult to modify these conversations to reverse the felicity of the admission-of-ignorance moves. Consider first (19), a variant of (3): at k_1, *B* objects to *A*'s disjunction, and then at k_2, *A* counterobjects to *B* objection. Crucially, *B* accepts *A*'s counterobjection at k_3, causing $p \wedge q$ to be replaced with $p \vee q$.[3] As a consequence, *A* can felicitously invoke admit at k_4.

(19) k_0 A: Sally is [$_p$ teaching semantics] or [$_q$ running the colloquium]
⊳$DC_A = \{Ø\}$, $DC_B = \{Ø\}$
⊳assert $(p \vee q, A, k_0) \rightsquigarrow p \vee q \in DC_A$ at k_1
k_1 B: No, that's less work than her contract requires.
⊳$DC_A = \{p \vee q\}$, $DC_B = \{Ø\}$
⊳object$(p \vee q, B, k_1) \rightsquigarrow p \wedge q \in DC_B$ at k_2
k_2 A: You are forgetting about last week's renegotiation.
⊳$DC_A = \{p \vee q\}$, $DC_B = \{p \wedge q\}$
⊳object $(p \wedge q, A, k_2) \rightsquigarrow p \vee q \in DC_A$ at k_3
k_3 B: Ah, yes, you are right!
⊳$DC_A = \{p \vee q\}$, $DC_B = \{p \wedge q\}$

3. For exposition, I am placing **accept** and **remove** in one single conversational move. Arguably, it would be more appropriate to assign each operator its own move, so that updates can take place sequentially, in a one-to-one relation with moves.

$\rhd$accept ($p \vee q$, B, $\rightsquigarrow p \vee q \in \mathrm{DC}_B$ at k_4
$\rhd$remove ($p \wedge q$, B, k_3) $\rightsquigarrow p \wedge q \notin \mathrm{DC}_B$ at k_4
k_4 B: ✓ Let's ask her which one she wants to do.
$\rhd\mathrm{DC}_A = \{p \vee q\}$, $DC_B = \{p \vee q\}$
$\rhd$admit ($p \vee q$, B, k_4)[defined, felicitous]

Compare (19) to (20) where B maintains her objection, rather than accepting A's counterobjection. As a consequence, DC_B remains the same at k_4 and the admission-of-ignorance move becomes infelicitous. Note that, in the same way as in (3), the presence of $p \vee q$ in DC_A at k_4 is insufficient to license the admission-of-ignorance move. This is consistent with the hypothesis that admit is sensitive exclusively to the propositions contained in the current speaker's DC.

(20) k_0 A: Sally is [$_p$ teaching semantics] or [$_q$ running the colloquium]
$\rhd\mathrm{DC}_A = \{\emptyset\}$, $\mathrm{DC}_B = \{\emptyset\}$
$\rhd$assert ($p \vee q$, A, k_0) $\rightsquigarrow p \vee q \in \mathrm{DC}_A$ at k_1
k_1 B: No, that's less work than her contract requires.
$\rhd\mathrm{DC}_A = \{p \vee q\}$, $\mathrm{DC}_B = \{\emptyset\}$
$\rhd$object ($p \vee q$, B, k_1) $\rightsquigarrow p \wedge q \in \mathrm{DC}_B$ at k_2
k_2 A: You are forgetting about last week's renegotiation.
$\rhd\mathrm{DC}_A = \{p \vee q\}$, $\mathrm{DC}_B = \{p \wedge q\}$
$\rhd$object ($p \vee q$, A, k_2) $\rightsquigarrow p \vee q \in \mathrm{DC}_A$ at k_3
k_3 B: But the Dean has said he won't accept the new contract terms.
$\rhd\mathrm{DC}_A = \{p \vee q\}$, $\mathrm{DC}_B = \{p \wedge q\}$
$\rhd$object ($p \vee q$, B, k_3) $\rightsquigarrow p \wedge q \in DC_B$ at k_4
k_4 B: # Let's ask her which one she wants to do.
$\rhd\mathrm{DC}_A = \{p \vee q\}$, $\mathrm{DC}_B = \{p \wedge q\}$
$\rhd$admit ($p \wedge q$, B, k_4)[undefined, infelicitous]

4.2 Alternatives must appear at the appropriate conversational stage

The second step of the argument consists of showing that the relevant alternatives, besides being in the DC of the participant that invokes admit, must also be there at the conversational stage where admit is invoked. Consider the dialogue in (21) below, which is an extension of (4). At k_1, B objects to A's conjunction, placing a set of alternatives in DC_B at k_2; but then, after A counterobjects, B accepts the counterobjection and removes the alternative-creating $p \vee q$ from DC_B. As a consequence, B's invocation of admit at k_4 is undefined.

(21) k_0 A: Sally is [$_p$ teaching semantics] and [$_q$ running the colloquium]
$\rhd\mathrm{DC}_A = \{\emptyset\}$, $\mathrm{DC}_B = \{\emptyset\}$
$\rhd$assert ($p \wedge q$, A, k_0) $\rightsquigarrow p \wedge q \in \mathrm{DC}_A$ at k_1

k_1 B: No, that's more work than her contract allows for.
$\rhd DC_A = \{p \wedge q\}, DC_B = \{\emptyset\}$
$\rhd$object $(p \wedge q, B, k_1) \rightsquigarrow p \vee q \in DC_B$ at k_2
k_2 A: You are forgetting about last week's renegotiation.
$\rhd DC_A = \{p \wedge q\}, DC_B = \{p \vee q\}$
$\rhd$object$(p \vee q, A, k_2) \rightsquigarrow p \wedge q \in DC_A$ at k_3
k_3 B: Ah, yes, you are right!
$\rhd DC_A = \{p \wedge q\}, DC_B = \{p \vee q\}$
$\rhd$accept $(p \wedge q, B, k_3) \rightsquigarrow p \wedge q \in DC_B$ at k_4
$\rhd$remove$(p \vee q, B, k3) \rightsquigarrow p \vee q \in DC_B$ at k_4
k_4 B: # Let's ask her which one she wants to do.
$\rhd DC_A = \{p \wedge q\}, DC_B = \{p \wedge q\}$
$\rhd$admit $(p \wedge q, B, k_4)$[undefined, infelicitous]

There are two relevant aspects of this example. First, note that DC_A never contains a suitable set of alternatives; as such, the (in)felicity of *B*'s admission-of-ignorance move rests entirely on the contents of DC_B. Second, although DC_B did contain a suitable set of alternatives from k_1 through k_3, it does not at k_4, when *B* invokes admit. The fact that the previous contents of DC_B fail to license the alternative addressing move suggest that the definedness condition in (12ii) is correct: admit has no "memory", and therefore is limited to the current contents of the speaker's DC.

As in the previous section, this outcome can be reversed if *B* doesn't accept *A*'s counterobjection, which would allow $p \vee q$ to remain DC_B until the stage where *B* invokes admit. In this case, the definedness conditions on admit are satisfied and the admission-of-ignorance move is felicitous.

(22) k_0 A: Sally is [$_p$ teaching semantics] and [$_q$ running the colloquium]
$\rhd DC_A = \{\emptyset\}, DC_B = \{\emptyset\}$
$\rhd$assert$(p \wedge q, A, k_0) \rightsquigarrow p \wedge q \in DC_A$ at k_1
k_1 B: No, that's more work than her contract allows for.
$\rhd DC_A = \{p \wedge q\}, DC_B = \{\emptyset\}$
$\rhd$object$(p \wedge q, B, k_1) \rightsquigarrow p \vee q \in DC_B$ at k_2
k_2 A: You are forgetting about last week's renegotiation.
$\rhd DC_A = \{p \wedge q\}, DC_B = \{p \vee q\}$
$\rhd$object$(p \vee q, A, k_2) \rightsquigarrow p \wedge q \in DC_A$ at k_3
k_3 B: But the Dean has said he won't accept the new contract terms!
$\rhd DC_A = \{p \wedge q\}, DC_B = \{p \vee q\}$
$\rhd$object$(p \wedge q, B, k_3) \rightsquigarrow p \vee q \in DC_B$ at k_4
k_4 B: ✓ Let's ask her which one she wants to do.
$\rhd DC_A = \{p \wedge q\}, DC_B = \{p \vee q\}$
$\rhd$admit$(p \vee q, B, k_4)$[defined, felicitous]

5. Conclusions and outlook

To sum up, we have seen that a proper account of the distribution of admission-of-ignorance moves cannot be captured only by reference to the semantics of *or* and *and*. Rather, one has to rely on a theory of conversation that (i) can track each participant's public commitments at each conversational stage, and (ii) provides speech act operators sensitive to the distribution of these commitments across participants and stages. We can conclude, then, that the definedness conditions on admit, and specifically (12ii), are correct for the narrow case of alternatives introduced by disjunctions and objections to conjunctions. Whether they are also correct for alternatives introduces by a wider class of expressions (foci, indefinites, polar questions, etc) remains to be determined.

More broadly, the line of attack I have sketched here can be used to investigate the kind of factors, whether purely linguistic or not, that affect the rise and fall of alternatives in conversations. Consider, for example, the following variant of (20), where the now-felicitous admission-of-ignorance move is preceded by a non-verbal action on B's part. From the perspective of the analysis I have laid out in the previous sections, the asymmetry between (20) and (23) suggests that B's actions are a non-verbal communicative act equivalent to a retraction of $p \wedge q$ from DC_B and an acceptance of $p \vee q$. But how are such acts to be encoded in a formal theory of conversation?

(23) A: In the Fall, Sally is teaching semantics or running the colloquium.
B: No, that's less work than her contract allows.
A: She's going through a rough patch, I think we can bend the rules for her just this one time.
B: You know we are not the kind of department that bends rules.
A: [*raises eyebrow incredulously*]
B: [*pauses, sighs, gives A a look of reluctant defeat*]
✓ Let's ask her which one she wants to do.

Similarly, consider the asymmetry between (24C) and (25C). In both cases, there is a presupposition that the amount of things one can ask the Dean for positively correlates with both the strength of the department and the amount of money available. In (24C), the fact that the professors belong to a weak department in a poor university seems to favor (24A) and (24B) as if they were disjoined ("we should ask either for lab space or a new hire"),[4] licensing an admission-of-ignorance move. In contrast, in (24C), the fact that the professors belong to a strong

4. As Jakub Dotlačil (p.c.) points out, against the standard assumption in Dynamic Predicate Logic (Groenendijk and Stokhof 1991) that sequences of propositions are interpreted as if they were conjoined.

department in a rich university seems to favor interpreting (24A) and (24B) as conjoined assertions ("we should ask for both lab space and a new hire"), precluding the possibility of an admission-of-ignorance move. Here, we face the same problem as above: how are these presuppositions and inferences to be encoded in a formal theory of conversation?

(24) *Context: three professors are planning their upcoming meeting with the Dean*
A: I think we should ask the Dean for more lab space.
B: I think we should ask him for money for a new hire.
C: Guys, remember that we are a weak department and there isn't much money going around. ✓ We need to decide what we really want to ask for.

(25) *Context: three professors are planning their upcoming meeting with the Dean*
A: I think we should ask the Dean for more lab space.
B: I think we should ask him for money for a new hire.
C: Guys, remember that we are a strong department and there's lots of money going around. # We need to decide what we really want to ask for.

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