Proceedings of SALT 35: 164–185, 2025

On speech act disjunction*

Yichi (Raven) Zhang
Heinrich Heine University

Abstract In this paper, we investigate disjunctions that combine an assertion with a question. We will explore a number of puzzles arising from such constructions and propose an account that construes speech act disjunction as a device to introduce alternative discourse strategies.

Keywords: disjunction, assertion, question, retraction, commitment space semantics

1 Introduction

In this paper, we investigate disjunctions in which "or" combines a declarative first disjunct with an interrogative second disjunct, as exemplified by sentences in (1).

(1) a. Anna will visit Argentina in May, or has she changed her travel plans?
b. Bo graduated from Harvard, or was it MIT?
c. Dave will be here in an hour, or is his train not on time?
d. Eli won't make it to our meeting on time, or is he not coming at all?

We call such constructions ***Assertion-Or-Questions*** **(AOQs)**.[1] To put our current investigation into perspective, it is sometimes argued that speech acts can only be conjoined but not disjoined (e.g. Szabolcsi 1997; Krifka 2001). Szabolcsi (1997: 325) illustrates this point with the following example.

(2) Who did you marry? Or where do you live?

She argues that the *or* "does not really offer a choice but, instead, is an idiomatic device that allows one to cancel the first question and replace it with the second."

∗ I would like to thank the semantics group at HHU, audience at SALT35, and Manfred Krifka for helpful discussion and comments.

1 While we focus on AOQs where the second disjunct is a polar question, we can also find examples where the second disjunct is a constituent question.

(i) He's lying, or what do you call changing your story three times?

Challenging this claim, Ciardelli, Groenendijk & Roelofsen (2018) have presented the following example, in which the disjunction does appear to offer a genuine choice between answering two different questions.

(3) Where can we rent a car, or who might have one that we could borrow?

Additionally, while we agree that the examples in (1) exhibit a revisionist flavor, we argue below that they should not be understood as cases of retraction—that is, the initial assertion is fully retracted and replaced by a question. We will provide evidence showing that "or" retains its disjunctive force. While AOQs remain largely unexamined, a similar type of constructions has garnered a lot of attention. Known as **IoDs**, they disjoin an imperative first disjunct with a declarative second disjunct (e.g., Clark 1993; Franke 2005; Kaufmann 2012), as shown in (4).

(4) Don't park here or you will be fined.[2]

Given the abundance of such constructions, we believe a serious exploration of speech act disjunction (SAD) is warranted. We shall offer an analysis capable of solving a number of puzzles arising from AOQs. At the core of our analysis is the idea that disjunction introduces alternatives. Alternatives can be combined at the propositional level as in question semantics (Hamblin 1973; Ciardelli et al. 2018). But they can also be combined at the speech act level. While similar ideas have been explored (cf. Cohen & Krifka 2014; Murray & Starr 2020), what makes our treatment of SAD unique is that it incorporates the insight from dynamic semantics/pragmatics that the second disjunct of a disjunction is evaluated with respect to its "local context" which is informed by the first disjunct (cf. Karttunen 1973; Heim 1983; Schlenker 2009). To cash out this idea at the speech act level, we will devise a notion of *quasi-retraction*: the second disjunct of an AOQ is evaluated with respect to the "local context" in which the first disjunct is quasi-retracted.

After presenting the key puzzles, we offer our analysis in section 3, couched in *commitment space semantics* (CSS) developed by Krifka (2015, 2021, 2023). We then show how this framework solves the puzzles in section 4. Section 5 concludes by briefly exploring an alternative way of implementing our analysis and outlining directions for future research.

2 Puzzles and Desiderata

2.1 Disjunctive force

We aim to show that the apparent disjunction in an AOQ indeed retains its disjunctive force. First, we argue against the contention that "or" is simply a correction device

2 While not being the focus of this paper, it is worth noting that imperatives can also be disjoined with interrogatives, as demonstrated by "Don't park here, or do you want to get fined?"

that replaces the first speech act with the second. While AOQs often receive a revisionist interpretation, this should not be mistaken for a full-fledged retraction, as conveyed by phrases such as "scratch that" and "let me take that back" (Bussière-Caraes, Incurvati, Sbardolini & Schlöder 2024; Caponetto 2024; Egan 2024; see also Krifka 2022). For one thing, the addressee cannot respond to an AOQ with simple polarity particles (*yes/no*), as would be expected if the first disjunct had been fully retracted. Compare:

(5) Anna will visit Argentina in May. [*Remembering that she has canceled her hotel.*] Hmm, let me take that back. Has she changed her travel plans?
Answer: Yes.

(6) Anna will visit Argentina in May, or has she changed her travel plans?
Answer: #Yes.

Unlike in (5), *yes* is ambiguous in (6): it can be taken to mean either "yes, she will visit Argentina" or "yes, she has changed her plans," which would be unexpected if the first disjunct had been fully retracted.[3]

As another competing hypothesis, this kind of juxtaposition, often with a prosodic pause, between a declarative and an interrogative may be reminiscent of a *nuclear tag question* (Ladd 1981), as exemplified by (7).

(7) Bo graduated from Harvard, ‖ didn't he?

In a nuclear tag question, the declarative clause is asserted while the interrogative clause merely provides a hedge. In contrast, the disjunction "or" in an AOQ appears indispensable, without which the sentences in (1) become degraded. Compare:

(8) a. Bo graduated from Harvard, or was it MIT?
b. # Bo graduated from Harvard. Was it MIT?

Moreover, while both (8a) and (7) carry a positive speaker bias for "Bo graduated from Harvard," the bias in (8a) appears *optional* whereas the bias in (7) is *obligatory*, as reflected by the *by any chance* test (cf. Bill & Koev 2025; Sadock 1971).

(9) a. Bo graduated from Harvard, ‖ #didn't he *by any chance*?
b. Bo graduated from Harvard, or was it MIT *by any chance*?

Given these discrepancies, we believe the most appealing strategy is to analyze AOQs as involving a genuine kind of disjunction which retains its disjunctive force,

3 This also raises the interesting question of how polarity particles behave as answers to AOQs more generally (cf. Roelofsen & Farkas 2015). We will leave this question to future research.

albeit at the level of speech acts. In addition to the obvious difference in the illocutionary force of the two disjuncts, there is another consideration suggesting that the two disjuncts in AOQs are combined at the speech act level. It is worth noting that the two disjuncts in AOQs can target different addressees. In fact, this is arguably the most natural interpretation of AOQs in many contexts. Consider the dialogue.

(10) (*Context: A, B, and C are discussing Bo's educational background.*)
A: Where did Bo graduate from?
B: He graduated from Harvard, (*turning to* C) or was it MIT?

While the assertion in the first disjunct directly addresses *A* or the whole group, the question in the second disjunct is most likely intended to be directed only at *C*. Given that the question was initially raised by *A*, *B* knows that *A* will not be able to answer it anyway. If *A* and *B* were to be the only two interlocutors in this conversation, B's response would become quite odd indeed.

2.2 Negative questions and biases

It is well-observed that a low negation question (LNQ) such as those found in the second disjunct of (1c-d) requires contextual evidence for the negated prejacent (e.g., Büring & Gunlogson 2000; Sudo 2013; Goodhue 2024). For example, "Is Dave's train not on time?" can be felicitously used only in contexts where there is negative contextual evidence suggesting that his train is not on time.

(11) a. (*Context: We are sitting in the conference room, and Dave is still missing.*)
I ask: Is Dave's train not on time?

b. (*Context: I'm looking at a list of attendees in preparation for the meeting.*)
I ask: #Is Dave's train not on time?

This is perplexing as (1c-d) are felicitous in neutral contexts in terms of evidence. For example, (1c), repeated below, can be felicitously used in the same context as (11b), where the simple LNQ is defective.

(12) (*Context: I'm looking at a list of attendees in preparation for the meeting.*)
I utter: Dave will be here in an hour, or is his train not on time?

Now, one could contend that the evidential condition for the LNQ is fulfilled by the second disjunct's local context as traditionally construed (Heim 1983; Schlenker 2009). For example in (12), if the local context of the second disjunct has already been made to accommodate "Dave won't be here in an hour," then this additional information suffices to license the LNQ "Is his train not on time?" The problem,

however, is that taking the local context to be the propositional negation of the first disjunct gives us the wrong interpretation of the question in the second disjunct. Intuitively, the second disjunct asks the plain question "Is his train not on time?" rather than the conditional question "If Dave won't be here in an hour, then is his train not on time?" If we are in a context where the only plausible reason for Dave's being late is that his train is delayed, then this conditional question becomes trivial. However, this is clearly not the attested reading.

The puzzle concerning LNQs is further complicated by the fact that the corresponding high negation questions (HNQs) are inadmissible in AOQs.

(13) a. # Dave will be here in an hour, or isn't his train on time?

b. # Dave will be here in an hour, or isn't his train late?

A HNQ of the form "*n't p*" requires some prior belief or expectation of the speaker that *p* is true (e.g., Ladd 1981; Romero & Han 2004; Domaneschi, Romero & Braun 2017). To felicitously use "Isn't Dave's train on time/late?" the speaker must have expected, prior to the current conversational exchange, that Dave's train is on time/late. However, the infelicity of (13a-b) suggests that the local context of the second disjunct remains neutral in regard to speaker bias. To explain (13a), we can resort to the revisionist flavor imparted by the speech act disjunction. Even though the speaker most likely has a prior bias towards Dave's train being on time, which prompts her to assert the first disjunct, the disjunction filters out this bias when we evaluate the second disjunct. What is perhaps more surprising in light of (12) is that the local context of the second disjunct in (13b), which contains the required negative contextual evidence to license the LNQ in (12), does not contain the required information about speaker bias to license the HNQ in (13b).[4]

This means that whatever account of "local contexts" we end up giving, it must be able to tease apart information about contextual evidence and information about speaker bias. Once again, this suggests that the notion of "local contexts" needed for the present purpose cannot be defined at the propositional level, given that explicit domain restriction provided by a proposition (e.g., by the antecedent of a conditional) can in fact license HNQs (cf. Frana & Rawlins 2019).

(14) A: It might rain later; you should bring a rain jacket to the party.
B: I don't think it will. But if it rains, won't the party be indoors?

4 Although we do not have space to explore this further, it is worth noting that rising declaratives (Gunlogson 2003) also sound degraded in the second disjunct of an AOQ.

(i) a. # Dave will be here in an hour, or his train is on time↗?

b. # Dave will be here in an hour, or his train is late↗?

2.3 Or-to-if inference

From a propositional disjunction $p \vee q$, one can reasonably infer the conditional $\neg q \rightarrow p$ provided that $\neg q$ is epistemically possible (Stalnaker 1975). In parallel, from an AOQ $\bullet p \vee ?q$, where $\bullet$ and $?$ represent the assertion and question operators respectively, one can infer the conditional $\neg q \rightarrow p$ as well. For instance,

(15) Dave will be here in an hour, or is his train not on time?
⇒ If Dave's train is on time, then he will be here in an hour.

This parallelism provides additional support for the thesis that AOQs involve a genuine kind of disjunction. In order to formally derive this inference, we need a uniform account of how declaratives and interrogatives update conversational contexts. While such analyses do exist (e.g., Ciardelli et al. 2018; Murray & Starr 2020), they all fail to capture this inference, in part due to the fact that polar questions receive a symmetric denotation as in Hamblin-style alternative semantics.[5]

Take inquisitive semantics as an example. In brief, sentences in inquisitive semantics denote sets of sets of worlds (i.e., sets of truth sets) that are closed under the subset relation. A polar question $?q$ receives a symmetric denotation that contains the two truth sets $|q|$ and $|\bar{q}|$ together with their subsets. The two maximal elements $|q|$ and $|\bar{q}|$ represent the positive and negative alternatives of the polar question. A declarative sentence p denotes the set which contains $|p|$ as its sole alternative together with its subsets. The inquisitive disjunction $\veebar$ takes the union of what each disjunct denotes. Thus, $\bullet p \veebar ?q$ would come to denote a set that contains three maximal elements, i.e., $|p|, |q|, |\bar{q}|$. In order to derive the conditional $\neg q \rightarrow p$ in inquisitive semantics, the denotation of $\bullet p \veebar ?q$ needs to satisfy the following: all truth sets in it that make $\neg q$ true must also make p true. This condition fails because $|\bar{q}|$ does not force p to be true: $|\bar{q}|$ may contain worlds where p is true but also worlds where p is false. Therefore, an asymmetric representation of $?q$ is needed at some level (Krifka 2015; Roelofsen & Farkas 2015) so as to rule out the negative alternative $|\bar{q}|$.

In addition to the inference from $\bullet p \vee ?q$ to $\neg q \rightarrow p$, a further inference to $q \rightarrow \neg p$ also seems available: e.g., we can further infer from (15) that if Dave's train is not on time he won't be here in an hour. However, this additional inference is likely due to conditional perfection from $\neg q \rightarrow p$ to $q \rightarrow \neg p$ (cf. Herburger 2015). As (16) reveals, we can cancel the inference from $\bullet p \vee ?q$ to $q \rightarrow \neg p$ but not the inference to $\neg q \rightarrow p$.

(16) Anna visited Paraguay last May, or was it Uruguay? Maybe she visited both/#neither.

Therefore, the only inference we need to directly capture is the inference to $\neg q \rightarrow p$.

5 While polar questions are interpreted asymmetrically in Krifka's (2021) commitment space semantics, the difficulty persists because of a lack of constraints on commitment spaces. In sections 3 and 4, we will see how adding additional constraints allows us to capture this inference.

2.4 Asymmetry

Lastly, all disjunctions in (1) display asymmetry: reversing the order of the two disjuncts results in infelicity, as demonstrated by the contrast in (17).

(17) a. Bo graduated from Harvard, or was it MIT?
b. # Did Bo graduate from MIT? Or he graduated from Harvard.

The oddness of the ***Question-Or-Assertion*** (QOA) above cannot simply be attributed to the interrogative first disjunct or to the combination of disjuncts of different clause types, given that disjunctions such as (3) and (4) are felicitous. More interestingly, it seems some QOAs may not sound so bad after all. For example,

(18) Did Bo graduate from MIT? Or maybe he graduated from Harvard.

(19) Can we rent a car? Or we could borrow John's if he doesn't mind.

Adding an epistemic modal in the second disjunct as in (18) or using the QOA as a means to entertain options for some joint plan as in (19) improves the acceptability of QOAs.[6] Accordingly, we seek an analysis that does not outright ban QOAs but instead accounts for the contrast between AOQs and QOAs in pragmatic terms.

3 Speech Act Disjunction in CSS

3.1 Speech act disjunction (SAD): an informal sketch

Let us first supply a general recipe for how to solve the aforementioned puzzles; we then present a concrete implementation using commitment space semantics in section 3.2. To account for the disjunctive force of AOQs, we will treat SAD as a device that introduces alternatives, but unlike propositional alternatives, they are alternatives at the speech act level; in other words, they represent alternative ways to develop a discourse. To elaborate on the nature of SAD, let us turn to a general constraint governing felicitous use of propositional disjunction, namely its disjuncts must be relevant to some common *question under discussion* (QUD) (cf. Roberts 2012; Simons 2001). This constraint explains the following contrast.

(20) a. Bo graduated from Harvard, or he graduated from MIT.
b. # Bo graduated from Harvard, or it is raining in Paris.

6 As an aside, we can also find felicitous instances of an interrogative conjoined with a declarative.

(i) Are you going to clean your room today? And I won't take *no* as an answer.

(ii) (*A teacher quizzing her students.*) What's the capital of Turkey? And it is not Istanbul.

In contrast to (20a), (20b) sounds odd. It sounds odd because without further contextual information, we are unable to identify a suitable QUD to which the two disjuncts together respond. The same requirement for relevance applies to AOQs.

(21) a. Bo graduated from Harvard, or was it MIT?

b. # Bo graduated from Harvard, or is it raining in Paris?

(21a) is felicitous because both disjuncts are relevant to the question "Where did Bo graduate from?" albeit in different ways: the first disjunct directly answers this question whereas the second disjunct serves as a *subquestion* (Groenendijk & Stokhof 1984) to it. Suppose now that the QUD is "Did Bo graduate from Harvard?" instead. Under the assumption that Bo did not graduate from both Harvard and MIT, the second disjunct would still be relevant in the sense that at least some possible answer to it, namely the positive answer "he graduated from MIT," answers the QUD. Hence, a SAD's disjuncts can be conceived of as offering distinct strategies to resolve or further develop an inquiry. In contrast, (21b) is infelicitous because it is difficult to envision a common QUD to which the two disjuncts together respond.

As we have discussed in section 2.2, a suitable notion of "local contexts" cannot be spelled out at the propositional level so as to adequately explain the contrast in admissibility between the LNQ and HNQ in AOQs. Rather, we shall define "local contexts" at the speech act level. If $\mathfrak{A}$ and $\mathfrak{B}$ are two speech acts, then the "local context" of $\mathfrak{B}$ in $\mathfrak{A} \vee \mathfrak{B}$ is given by $-\mathfrak{A}$. We call "$-\mathfrak{A}$" the *quasi-retraction* of $\mathfrak{A}$. It is so-called because, as we have seen in section 2.1, the first disjunct of an AOQ is never fully retracted. Moreover, in order for $\mathfrak{A}$ to be genuinely retracted, it must have been performed first. However, since SAD introduces alternative discourse strategies on the present account, within the strategy associated with the second disjunct the first disjunct is not actually performed. Thus, the first disjunct is only *quasi-retracted*: we can zone in on cases in which the discourse strategy associated with the first disjunct is not accepted and its update effect not realized when we evaluate the second disjunct. Arguably, this is done for the purpose of facilitating computation of the update effect induced by the entire sentence as the interpreter parses the sentence incrementally from left to right, in a way analogous to how local contexts are computed in the standard propositional setting (cf. Schlenker 2009).

Looking ahead, we use quasi-retraction to serve as a weaker kind of negation. This helps us resolve the puzzle of negative questions. By appealing to how retracting an assertion and retracting a question differ in their discourse effects, we can resolve the asymmetry puzzle. Formally, we choose to implement our analysis utilizing CSS because we can define quasi-retraction via *illocutionary denegation* which is already definable in CSS. Furthermore, CSS affords an asymmetric interpretation of polar questions which helps derive the or-to-if inference.

3.2 Commitment space semantics

We begin by introducing a few key notions from CSS (Krifka 2021):

(22) a. A commitment state c is a set of worlds.

b. A commitment space C is a set of non-empty commitment states.

c. The root of a commitment space $\surd C$ is defined as $\{c \in C \mid \neg\exists c' \in C : c \subset c'\}$

A commitment state (or simply "context" henceforth) is essentially a Stalnakerian (1974) context set representing the current common ground (CG); in addition, it also explicitly encodes each discourse participant's public commitment, through expressions of the form "$s \vdash p$" which reads "speaker s commits to p." We will call such expressions *commitment phrases*. Commitment phrases can be understood as a new type of atoms and get assigned a set of worlds as their semantic value. We then define a notion of support.

(23) **(Support)** Let φ be a propositional sentence or a commitment phrase; a context c supports φ (written $c \vDash \varphi$) iff $\forall w \in c : w \in [\![\varphi]\!]$, with $[\![\varphi]\!]$ being the semantic value of φ.

A commitment space C consists of the current context, represented by the root (i.e., the set of maximal elements in C), together with all licit ways to develop this context.[7] Speech acts modify commitment spaces by introducing new commitment phrases. For example, updating C with an assertion of p by speaker s (notated by $C[\bullet p]^s$) produces the output $\{c \in C \mid c \subseteq [\![s \vdash p]\!]\}$, which makes "$s$ is committed to p" true in the current context and all of its future developments.

Note that in CSS, an assertion of p does not directly update the context with p; rather, it merely updates the context with the speaker's commitment to p, understood as a proposal to update the context with p. Only when no discourse participant objects to this proposal will the context be further updated to yield $\{c \in C \mid c \subseteq [\![p]\!]\}$.

Polar questions are interpreted asymmetrically in CSS with a hearer-oriented commitment. On Krifka's original account, updating C with a polar question $?p$ performed by speaker s (viz., $C[?p]^s$) yields $\surd C \cup \{c \in C \mid c \subseteq [\![h \vdash p]\!]\}$. By uttering $?p$, the speaker checks whether the hearer would commit to p. The update leaves the root intact while restricting future developments to contexts in which the hearer is committed to p. For the purpose of validating the or-to-if inference, we will make one modification by changing the update output to only $\{c \in C \mid c \subseteq [\![h \vdash p]\!]\}$.

7 More precisely, the "current context" is in fact a set of contexts since the root may contain multiple commitment states. A multi-rooted commitment space is indeterminate as to what the current CG is, and for this reason it was deemed illicit in Krifka 2015. In more recent work (e.g., Krifka 2021), Krifka has come to embrace such possibilities. As we shall see, SAD usually results in a multi-rooted commitment space as it introduces two competing discourse strategies.

Another modification that we will make to Krifka's original analysis concerns representation of commitment phrases. Instead of construing $\vdash$ as a two-place relation between a proposition and a commitment holder, we will define it as a three-place relation between a proposition, a commitment holder, and a speaker who performs the speech act that introduces this commitment. We will use a superscript above $\vdash$ to represent this additional index. For example, $s \vdash^s p$ means that s is committed to p and this commitment is introduced by a speech act performed by s. This change enables us to distinguish a hearer-oriented commitment that results from a polar question $?p$ raised by the speaker from a similarly hearer-oriented commitment yet resulting from an assertion $\bullet p$ made by the hearer. The former will introduce the commitment $h \vdash^s p$, while the latter will introduce the commitment $h \vdash^h p$.[8]

The update potentials of assertion and question can now be defined as follows:

(24) a. Assertion : $C[\bullet\varphi]^s := C[s \vdash^s \varphi] = \{c \in C \mid c \subseteq [\![s \vdash^s \varphi]\!]\}$

b. Polar question: $C[?\varphi]^s := C[h \vdash^s \varphi] = \{c \in C \mid c \subseteq [\![h \vdash^s \varphi]\!]\}$

One key reason for defining updates at the level of commitment space is that it enables us to spell out *quasi-retraction*. This is defined in terms of *illocutionary denegation* (cf. Searle & Vanderveken 1985; Cohen & Krifka 2014). Denegation is commonly illustrated by the following contrast.

(25) a. I don't promise to come.

b. I promise not to come.

In contrast to (25b) which is a speech act containing some negative propositional content, the denegation in (25a) aims to make it explicit that the speaker refrains from performing a certain speech act. On a related note, denegation has been used to model the discourse effect associated with epistemic possibility modals such as *perhaps* and *might* (Zhang 2024; see also Incurvati & Schlöder 2019).

(26) Perhaps Bo graduated from Harvard.

In line with an expressivist account of epistemic modals (Veltman 1996; Yalcin 2007), it is argued that (26)'s main discourse purpose is not to add any new proposition to the CG; rather, it functions as a test to check whether the CG is compatible with the modal's prejacent. $\Diamond p$ makes the prejacent p a live possibility in future developments of the discourse by removing contexts in which $\neg p$ is settled true.

8 To be fair, this third index is already present in Krifka 2015. The difference is that on Krifka's account it is the output commitment space itself that is indexed to the discourse participant who initiated the update. Appending the indices directly to commitment phrases on our account facilitates articulating constraints on reasonable contexts (see section 3.3).

Let ~$\mathfrak{A}$ be the denegation of some speech act $\mathfrak{A}$; then its update effect on commitment space can be defined in CSS as follows.

(27) Denegation: $C[\sim\mathfrak{A}]^s := C - C[\mathfrak{A}]^s$

The update excludes from C all contexts in which $\mathfrak{A}$ is performed. Figure 1 illustrates the contrast between the update $C[\bullet\neg p]^s$ and $C[\sim\bullet p]^s$. Assume that the input commitment space C consists of all the nodes shown in the figure below.

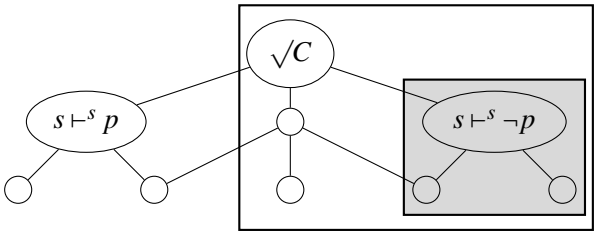

Figure 1 The bigger square is the output from updating with the denegation $C[\sim\bullet p]^s$, which is $C - C[\bullet p]^s$; the smaller square is the output from updating with the propositional negation $C[\bullet\neg p]^s$.

Quasi-retraction can then be defined via denegation. It yields different results depending on whether it is applied to an assertion or a question. If $\mathfrak{A}$ is an assertion, quasi-retracting $\mathfrak{A}$ simply amounts to updating with the denegation ~$\mathfrak{A}$, indicating that the speaker is no longer committed to its asserted content, as shown in (28a).

(28) a. $C[-\bullet\varphi]^s := C[\sim\bullet\varphi]^s = C - C[s \vdash^s \varphi]$

b. $C[-?\varphi]^s := C[\sim h \vdash^s \varphi] \cap C[\sim h \vdash^s \neg\varphi] = (C - C[h \vdash^s \varphi]) \cap (C - C[h \vdash^s \neg\varphi])$

By contrast, quasi-retracting a polar question means that the question is no longer worth pursuing within the current discourse. Consequently, the speaker no longer expects the hearer to provide an answer, be it positive or negative. In this respect, quasi-retraction is akin to full retraction as demonstrated by the following example.

(29) A: Is Anna a conservative?
B: Well ...
A: Stop, I take that back. I'm no longer interested.

With a notion of quasi-retraction at hand, we can define our Heimian speech act disjunction as follows. Let $\mathfrak{A}$ and $\mathfrak{B}$ be speech acts:

(30) $C[\mathfrak{A} \vee \mathfrak{B}] := C[\mathfrak{A}] \cup C[-\mathfrak{A}][\mathfrak{B}]$

Lastly, we provide a notion of logical consequence in CSS. Here, we combine the familiar *update-to-test* consequence from update semantics (Veltman 1996) with Strawson-entailment which has been employed to analyze conditionals in a dynamic setting (e.g., von Fintel 2001). Call this *dynamic Strawson-entailment*.

(31) (**Dynamic Strawson-entailment**) $\varphi \vDash \psi$ iff $C[\varphi][\psi'] = C[\varphi][\psi'][\psi]$ for all C, where ψ' is the presupposition of ψ.

In words, φ entails ψ just in case after updating with φ, any commitment space that satisfies the presupposition of ψ should remain unchanged upon updating with ψ.

3.3 Constraints on pragmatically reasonable contexts

There are a number of ways in which a context (i.e., a commitment state) can be considered pragmatically unreasonable. For instance, no discourse participant can commit to a contradiction. Thus, any context in which a discourse participant commits to both φ and $\neg\varphi$ will be considered absurd. Absurd contexts are represented by the empty set $\varnothing$, which supports every proposition, as usual. As another example, no context in which some discourse participant publicly commits to $\neg\varphi$ can support φ. This is so because a context can only support φ if no discourse participant objects to it. Hence, any context that supports both φ and a commitment to $\neg\varphi$ from any discourse participant should also be regarded as unreasonable and treated as empty.

Providing an exhaustive list of constraints on pragmatically reasonable contexts is beyond the scope of this paper. Instead, we will focus on two constraints that contribute to solving the puzzles of AOQs. The first constraint is a familiar idealization: if s is committed to φ, then s is also committed to all logical consequences of φ. Barring the common issues revolving around logical omniscience (cf. Hintikka 1962), this assumption is easy to motivate.

(32) Commitment closure under logical consequence (CLC): for any discourse participants s, s' and context c, if $c \vDash s \vdash^{s'} \varphi$ and $\varphi \vDash \psi$, then $c \vDash s \vdash^{s'} \psi$.

The second constraint is called No Self-Disagreement (NSD), stated as follows:

(33) No Self-Disagreement (NSD): for any discourse participants s, s', s'' and context c, if $c \vDash s' \vdash^{s} \varphi$, $c \vDash s'' \vdash^{s} \psi$, and $\varphi, \psi \vDash \bot$, then $c = \varnothing$.

In words, if φ and ψ are inconsistent, then there can be no reasonable context in which s' is committed to φ while s'' is committed to ψ with both commitments having been introduced by the same speaker s. The underlying intuition is that a cooperative discourse participant when making her discourse contribution should not presume that the discourse will run into a disagreement or stalemate. For instance, a cooperative speaker s is prohibited from making two consecutive discourse

moves such that one introduces the commitment $h \vdash^s p$ whereas the other introduces the commitment $s \vdash^s \neg p$. Doing so would amount to wishfully presupposing a disagreement between the speaker and the hearer.

This is different from a genuine case of disagreement, as in (34), where the two conflicting commitments are introduced by two different speakers.

(34) s: Bo graduated from Harvard. $[s \vdash^s Harvard]$
h: No, he didn't. $[h \vdash^h \neg Harvard]$

This scenario still yields a reasonable context, albeit one in which the interlocutors genuinely disagree. The speaker may then retract her assertion and agree with the hearer, thereby adding "Bo didn't graduate from Harvard" to the CG, or the interlocutors may agree to disagree.

4 Solving the puzzles

We are now poised to solve the puzzles of AOQs. The disjunctive force is immediately captured since the disjunction in AOQs is treated as genuine speech act disjunction which introduces alternative ways to develop the conversation.

Negative questions: Recall the contrast in felicity within the following pair:

(35) a. Dave will be here in an hour, or is his train not on time?
b. # Dave will be here in an hour, or isn't his train late?

To reiterate the two puzzles, first, we need to explain why the LNQ in (35a) is licensed. Since the negative evidence cannot come from the propositional negation "Dave won't be here in an hour," a different construal of "local contexts" is needed. Second, this new notion of "local contexts" should be able to differentiate between information that counts as contextual evidence and information that counts as speaker bias. This is needed so as to explain why the HNQ in (35b) is not licensed.

By taking the local context of an AOQ's second disjunct as supplied by the quasi-retraction of the first disjunct, we can solve both puzzles. Start with the first puzzle. (35a) produces the following update $C[s \vdash^s \textit{be here}] \cup C[\sim s \vdash^s \textit{be here}][h \vdash^s \neg \textit{on time}]$. It opens up two discourse strategies: either the speaker commits herself to Dave's being here in an hour, or she quasi-retracts this commitment and then commits the hearer to Dave's train being not on time. We submit that a quasi-retraction of p suffices to generate the negative evidence against p, thereby licensing the LNQ $?\neg p$. Hence, in (35a) the quasi-retraction of "Dave will be here in an hour" suffices to license the LNQ "Is his train not on time?" To bolster this claim, we note that a full retraction is capable of licensing a LNQ in a similar fashion without the

need for the speaker to assert the opposite proposition. Consider (36), and suppose there is no contextual evidence in the background suggesting that Dave's train is not on time.

(36) A: Dave will be here in an hour. … Oh, let me take that back.
B: Is his train not on time?

Additionally, as we have alluded to, epistemic possibility modals can be viewed as exerting similar denegational effects on commitment spaces. Accordingly, epistemic possibility claims should also license LNQs, a prediction that is borne out.

(37) A: Perhaps Dave won't be here in an hour.
B: Is his train not on time?

Moving on to the second puzzle, to explain why quasi-retraction does not license the HNQ, we resort to an intuitively plausible distinction between discourse commitments and doxastic attitudes. Suppose that B does not have any prior beliefs about whether or not Dave's train is late, the HNQ "Isn't his train late?" sounds odd as a response in both (36) and (37). In order for the HNQ to be licensed, B should be biased towards the train being late, which is different from the negative contextual evidence supplied by A's full retraction of p and the possibility claim of *perhaps not p*.

Although the foregoing example involves two agents, this distinction between doxastic attitudes and discourse commitments still applies when it comes to an agent's private beliefs and her public commitments (cf. Geurts 2024). Undeniably, there can be things that an agent believes without publicly committing to their truths. Given that a public commitment typically comes with a normative burden to defend one's claim when challenged, a speaker may refuse to take on this burden. Conversely, there can be things an agent commits to in a conversation without believing their truths. One may, for the sake of having a smoother conversation, commit to or *accept* certain propositions that are perceived as harmless or inconsequential even though one does not believe them. A similar distinction is already present on Stalnaker's (1984) account of common ground which is construed in terms of mutual acceptance rather than mutual beliefs. Therefore, we can readily block the inference from the speaker's quasi-retraction of p to that the speaker has a preexisting bias towards $\neg p$, especially in light of the fact that the first disjunct already conveys a bias for p.

Or-to-if inference: our goal is to explain the inference from (38a) to (38b):

(38) a. Bo graduated from Harvard, or was it MIT?
b. If Bo didn't graduate from MIT, then he graduated from Harvard.

More precisely, our goal is to explain how after uttering (38a), the speaker incurs an automatic commitment to (38b), because (38b) may not always get added to the common ground as the hearer may disagree. Hence, what we want to establish, roughly, is the entailment: $[\bullet p \vee ?q]^s \vDash s \vdash^s \neg q \rightarrow p$. In order to apply the definition of dynamic Strawson-entailment from (31), we need two further assumptions. First, we shall assume that an indicative conditional presupposes that its antecedent is compatible with the current context (Stalnaker 1975; Willer 2017). We take this to be uncontroversial: if it is already common ground that $\neg p$, any indicative conditional of the form "*if* p" cannot be felicitously uttered. Given the first assumption, we shall further assume that if the speaker commits to an indicative conditional, then she must also commit to its antecedent being epistemically possible. That is, $s \vdash^s \varphi \rightarrow \psi$ presupposes that $s \vdash^s \Diamond \varphi$.[9] Applying the definition of dynamic Strawson-entailment, we want to establish the following equivalence.

(39) $C[\bullet p \vee ?q]^s[s \vdash^s \Diamond \neg q] = C[\bullet p \vee ?q]^s[s \vdash^s \Diamond \neg q][s \vdash^s \neg q \rightarrow p]$

To begin, Figure 2 depicts the update $C[\bullet p \vee ?q]^s$ which comes down to $C[s \vdash^s p] \cup C[{\sim}s \vdash^s p][h \vdash^s q]$. The light and dark gray areas represent the outputs resulting from updating with the left and right disjunct respectively.

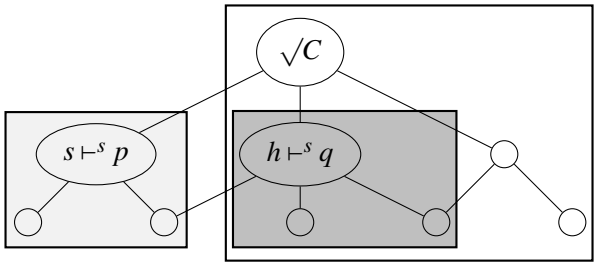

Figure 2 Update $C[\bullet p \vee ?q]^s$, represented by the combined areas shaded in gray.

Now, upon the update with the presupposition $[s \vdash^s \Diamond \neg q]$, all contexts in the dark gray region will be eliminated. This is so because every context from this part will come to support both $h \vdash^s q$ and $s \vdash^s \Diamond \neg q$. But since $q, \Diamond \neg q \vDash \bot$ qua *epistemic contradiction* (Yalcin 2007), every context in there contains self-disagreement. Thus, by NSD in (33), all such contexts are considered absurd and therefore get removed.

What remains then are contexts that belong to the light gray area, or more precisely those that belong to $C[s \vdash^s p][s \vdash^s \Diamond \neg q]$. We want to show that all of them indeed support $s \vdash^s \neg q \rightarrow p$, thereby rendering the update with $[s \vdash^s \neg q \rightarrow p]$ idle.

9 Alternatively, on a more expressivist interpretation of $\Diamond$, we can say $s \vdash^s \varphi \rightarrow \psi$ presupposes that ${\sim}s \vdash^s \neg\varphi$, viz., that the speaker is not publicly committed to the antecedent being false.

Since we know that these contexts already support $s \vdash^s p$, to show that they also support $s \vdash^s \neg q \rightarrow p$ by CLC in (32), it suffices to show that the dynamic Strawson-entailment $p \models \neg q \rightarrow p$ holds. This entailment indeed obtains under many analyses of indicative conditionals including dynamic strict analyses (von Fintel 2001; Gillies 2007; Willer 2017) as well as that of Stalnaker 1975.[10] In short, the or-to-if inference can be derived under minimal assumptions about conditionals.

Asymmetry: Lastly, we turn to the contrast in felicity between AOQs and QOAs.

(40) a. Bo graduated from Harvard, or did he graduate from MIT?

b. # Did Bo graduate from MIT? Or he graduated from Harvard.

We leverage the differing effects between retracting an assertion and retracting a question to explain this contrast. The AOQ in (40a) introduces two discourse strategies both of which are reasonable: first, it commits the speaker to "Bo graduated from Harvard"; second, it quasi-retracts this commitment and commits the hearer to "Bo graduated from MIT."

By contrast, the QOA in (40b) comes with a second strategy that is pragmatically odd. To elaborate, let us first consider a case where we may easily assume, as part of the background information, that the declarative disjunct contextually entails a negative answer to the interrogative disjunct. That is, we assume that Bo did not graduate from both Harvard and MIT; consequently, $Harvard$ contextually entails $\neg MIT$. Given this, the second disjunct of $?MIT \vee \bullet Harvard$ introduces a strategy that can be perceived as uncooperative. The update with the second disjunct yields $(C[\sim h \vdash^s MIT] \cap C[\sim h \vdash^s \neg MIT])[s \vdash^s Harvard]$. It first quasi-retracts the question "Did Bo graduate from MIT?" which signals that the speaker no longer expects the hearer to respond either positively or negatively to the question; it then adds the speaker's commitment to $Harvard$ to the resulting commitment space. Since $Harvard$ contextually entails $\neg MIT$, it follows that the speaker is also committed to $\neg MIT$. However, due to the update $C[\sim h \vdash^s \neg MIT]$, the speaker does not expect the hearer to ever commit to $\neg MIT$. In other words, by quasi-retracting the first disjunct, the speaker suggests that the question $?MIT$ is no longer under discussion, but by asserting $Harvard$ which implies a commitment to $\neg MIT$, the speaker proposes to further discuss $?MIT$, making this discourse strategy unproductive and odd.

By contrast, consider the felicitous QOAs such as (18) and (19), repeated below.

(41) Did Bo graduate from MIT? Or maybe he graduated from Harvard.

(42) Can we rent a car? Or we could borrow John's if he doesn't mind.

10 On Stalnaker 1975, if p is supported/accepted in the context set c, and $\neg q$ is compatible with c, then c must also support $\neg q \rightarrow p$ given that the selection function for an indicative conditional must select a world within the current context set whenever possible.

In these examples, the second disjunct is not in any practical conflict with quasi-retraction of the first disjunct. In (41), since the weaker possibility claim "maybe he graduated from Harvard" can be supported by a context in which both "Bo graduated from Harvard" and "Bo graduated from MIT" remain as live possibilities, it does not contextually entail "Bo didn't graduate from MIT." Thus, the quasi-retraction which indicates that the speaker no longer wishes to pursue the inquiry "Did Bo graduate from MIT?" does not clash with her proposal to merely check that "Bo graduated from Harvard" is compatible with the common ground. In fact, it is very natural to follow up (41) with something like "Anyway, he graduated from an Ivy League college," indicating that whether Bo actually graduated from MIT is indeed no longer of discourse interest. Likewise, no pragmatic inconsistency arises in (42). Since knowing that we could borrow John's car does not contextually entail an answer to the first question, the speaker can reasonably suggest a discourse strategy within which we no longer try to answer whether or not we can rent a car and instead accept that we could borrow John's.

This explanation, though simple, faces one limitation. As we saw with (16), repeated below, the additional inference that the declarative disjunct contextually entails a negative answer to the interrogative disjunct can be blocked.

(43) Anna visited Paraguay last May, or was it Uruguay? Maybe she visited both/#neither.

Since the foregoing explanation relies on this additional inference, it will not be able to explain the oddness of QOAs in contexts where this inference is blocked.

(44) ?? Did Anna visit Uruguay last May? Or she visited Paraguay. Maybe she visited both.

To explain the oddness here, let us break it down into two cases, depending on whether the QUD addressed by the QOA is a mention-all or a mention-some question. Consider the first possibility that (44) is intended as an answer to a mention-all question such as "What are all the countries Anna visited last May?" In this case, each disjunct of the QOA in (44) should constitute a reasonable discourse strategy to fully resolve the QUD. But given that in the second strategy, the first disjunct "Did Anna visit Uruguay last May?" is quasi-retracted, and this question is a subquestion to the mention-all question, it signals that the speaker expects that the mention-all question will never be fully resolved. This makes the second strategy uncooperative, leading to the perceived oddness.

What about a mention-some question such as "Did Anna visit any country in South America last May"? In this case, what makes the second strategy uncooperative is that it violates the Gricean (1975) first sub-maxim of quantity which requires discourse participants to be as informative as is required. Given that "Anna visited

Paraguay" is embedded in the second disjunct, the speaker can be understood as only proposing to add this information to the common ground in situations where the question of whether Anna visited Uruguay has been quasi-retracted and thus cannot be resolved. However, given that "Anna visited Paraguay" is able to fully resolve the mention-some question, the speaker should have asserted it plainly; otherwise, the speaker can be accused of not being as informative as is required.

By contrast, in (41) and (42), the second disjuncts do not and arguably are not intended by the speaker to completely settle their respective QUD. In (41), the epistemic modal only draws attention to a live possibility and does not fully answer where Bo graduated from. In (42), given that discourse participants are entertaining various options to come up with a joint plan, merely suggesting one option is unlikely to be perceived as an attempt to fully settle the issue. As such, these second disjuncts do seem to constitute legitimate alternative strategies in situations where the questions raised by their corresponding first disjuncts are deemed unanswerable.

5 Conclusion and outlook

To take stock, here is a summary of the key ingredients of our analysis of AOQs.

(45)
a. To account for disjunctive force, we need to treat AOQs as involving speech act disjunction which provides alternative ways to develop the CG.
b. To account for evidential bias, we need a notion of quasi-retraction whose discourse effect can be distinguished from that of propositional negation.
c. To account for the or-to-if inference, we need to interpret a polar question asymmetrically in regard to its discourse effect such that the question's prejacent is singled out as the privileged way to develop the CG.
d. To account for asymmetry, we need to take quasi-retraction of a polar question as signaling that neither the positive nor the negative answer to the question is of further discourse interest.

While we gave a concrete implementation utilizing CSS in this paper, we can envision other ways to realize this general recipe. Since the speaker-oriented and hearer-oriented aspects of CSS do not appear essential, we may consider an implementation that does not invoke this distinction. For example, we can try recasting the analysis into the *table model* (Farkas & Bruce 2010) by making the conversational table not just a stack of issues but rather a partial order of issues. Conversational tables can then encode competing ways to further develop a discourse. The asymmetric aspect of polar questions can be handled via the notion of a *projected CG*, which represents a privileged way for the CG to evolve. We can take a polar question to only project its prejacent as a *highlighted* proposition (cf. Roelofsen & Farkas 2015).

Quasi-retraction can be defined if we allow the table to also project negatively, which prevents certain propositions from being added to the CG.

Another line of research is to investigate how standing problems about disjunction manifest in AOQs, including presupposition projection, anaphoric accessibility, and redundancy. It is illuminating to observe the following parallelism.

(46) a. John has stopped smoking, or he never smoked.

b. John has stopped smoking, or did he never smoke?

(47) a. There is no bathroom in this house, or it is in a funny place.

b. There is no bathroom in this house, or is it in a funny place?

(48) a. # John is in France, or he is in Paris.

b. # John is in France, or is he in Paris?

Both sentences in (46) prevent the presupposition that John used to smoke from projecting globally. In (47), similar to how negating the first disjunct with a propositional negation can introduce a discourse referent which thereby licenses the anaphor in the second disjunct, quasi-retracting the first disjunct also appears capable of achieving this. In (48), the simple Hurford disjunction can also take the form of an AOQ. These parallelisms remain to be further investigated in the future.

References

Bill, Cory & Todor Koev. 2025. Bias in tag questions. In Anton Benz, Daniel Goodhue, Manfred Krifka, Tue Trinh & Kazuko Yatsushiro (eds.), *Biased Questions: Experimental Results and Theoretical Modelling*, 141–174. Language Science Press. doi:10.5281/zenodo.17084327.

Bussière-Caraes, Lwenn, Luca Incurvati, Giorgio Sbardolini & Julian Schlöder. 2024. Nevermind: On retraction as a speech act. In *Retraction Matters: New Developments in the Philosophy of Language*, 139–160. Springer. doi:10.1007/978-3-031-66081-8_7.

Büring, Daniel & Christine Gunlogson. 2000. Aren't positive and negative polar questions the same? Manuscript, University of California, Santa Cruz.

Caponetto, Laura. 2024. "Actually, scratch that!": A tour into the illocutionary fabric of retraction. In *Retraction Matters: New Developments in the Philosophy of Language*, 119–138. Springer. doi:10.1007/978-3-031-66081-8_6.

Ciardelli, Ivano, Jeroen Groenendijk & Floris Roelofsen. 2018. *Inquisitive Semantics*. Oxford University Press. doi:10.1093/oso/9780198814788.001.0001.

Clark, Billy. 1993. Relevance and "pseudo-imperatives". *Linguistics and Philosophy* 16. 79–121. doi:10.1007/bf00984723.

Cohen, Ariel & Manfred Krifka. 2014. Superlative quantifiers and meta-speech acts. *Linguistics and Philosophy* 37. 41–90. doi:10.1007/s10988-014-9144-x.

Domaneschi, Filippo, Maribel Romero & Bettina Braun. 2017. Bias in polar questions: evidence from English and German production experiments. *Glossa: A Journal of General Linguistics* 2(1). 26. doi:10.5334/gjgl.27.

Egan, Andy. 2024. Assertion and retraction. In *Retraction Matters: New Developments in the Philosophy of Language*, 161–184. Springer. doi:10.1007/978-3-031-66081-8_8.

Farkas, Donka F & Kim B Bruce. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27(1). 81–118. doi:10.1093/jos/ffp010.

von Fintel, Kai. 2001. Counterfactuals in a dynamic context. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, Cambridge, MA: MIT Press. doi:10.7551/mitpress/4056.003.0006.

Frana, Ilaria & Kyle Rawlins. 2019. Attitudes in discourse: Italian polar questions and the particle mica. *Semantics and Pragmatics* 12(16). 1–55. doi:10.3765/sp.12.16.

Franke, Michael. 2005. *Pseudo-Imperatives*. Amsterdam: ILLC MA thesis.

Geurts, Bart. 2024. Common ground in pragmatics. In Edward N. Zalta & Uri Nodelman (eds.), *The Stanford Encyclopedia of Philosophy*, Metaphysics Research Lab, Stanford University Winter 2024 edn.

Gillies, Anthony S. 2007. Counterfactual scorekeeping. *Linguistics and Philosophy* 30. 329–360. doi:10.1007/s10988-007-9018-6.

Goodhue, Daniel. 2024. Simplifying the evidential condition on asking polar questions. In *Semantics and Linguistic Theory (SALT)*, vol. 33, 520–540. Linguistic Society of America. doi:10.3765/zrth5z63.

Grice, H. Paul. 1975. Logic and conversation. In Donald Davidson & Gilbert Harman (eds.), *The Logic of Grammar*, 64–75. Encino, CA: Dickenson.

Groenendijk, Jeroen Antonius Gerardus & Martin Johan Bastiaan Stokhof. 1984. *Studies on the Semantics of Questions and the Pragmatics of Answers*: University of Amsterdam PhD dissertation.

Gunlogson, Christine. 2003. *True to Form: Rising and Falling Declaratives as Questions in English*. Routledge. doi:10.4324/9780203502013.

Hamblin, C. L. 1973. Questions in Montague English. *Foundations of Language* 10(1). 41–53. http://www.jstor.org/stable/25000703.

Heim, Irene. 1983. On the projection problem for presuppositions. In Michael Barlow, Dan Flickinger & Michael Westcoat (eds.), *West Coast Conference on Formal Linguistics (WCCFL)*, vol. 2, 114–125. Stanford, CA: Stanford Linguistics Association. Reprinted as On the Projection Problem for Presuppositions. In Paul Portner & Barbara H. Partee (eds.), *Formal Semantics: The Essential Readings*, 249–260, Blackwell, 2002. doi: 10.1002/9780470758335.ch10.

Herburger, Elena. 2015. Conditional perfection: The truth and the whole truth. In *Semantics and Linguistic Theory (SALT)*, vol. 25, 615–635. Linguistic Society of America. doi:10.3765/salt.v25i0.3079.

Hintikka, Jaakko. 1962. *Knowledge and Belief: An Introduction to the Logic of the Two Notions*. Ithaca: Cornell University Press.

Incurvati, Luca & Julian J Schlöder. 2019. Weak assertion. *The Philosophical Quarterly* 69(277). 741–770. doi:10.1093/pq/pqz016.

Karttunen, Lauri. 1973. Presuppositions of compound sentences. *Linguistic Inquiry* 4(2). 169–193. https://www.jstor.org/stable/4177763.

Kaufmann, Magdalena. 2012. *Interpreting Imperatives*. Springer Netherlands. doi:10.1007/978-94-007-2269-9.

Krifka, Manfred. 2001. Quantifying into question acts. *Natural Language Semantics* 9(1). 1–40. doi:10.1023/a:1017903702063.

Krifka, Manfred. 2015. Bias in commitment space semantics: Declarative questions, negated questions, and question tags. In *Semantics and Linguistic Theory (SALT)*, vol. 25, 328–345. Linguistic Society of America. doi:10.3765/salt.v25i0.3078.

Krifka, Manfred. 2021. Modelling questions in commitment spaces. In *Asking and Answering: Rivalling Approaches to Interrogative Methods*, 63–95. Narr Francke Attempto Tübingen. doi:10.24053/9783823394808.

Krifka, Manfred. 2022. Adjacency pairs in common ground update: Assertions, questions, greetings, offers, commands. In *Workshop on the Semantics and Pragmatics of Dialogue (SemDial)*, vol. 26, 94–105.

Krifka, Manfred. 2023. Layers of assertive clauses: propositions, judgements, commitments, acts. In Jutta M Hartmann & Angelika Wollstein (eds.), *Propositionale Argumente im Sprachvergleich: Theorie und Empirie/Propositional Arguments in Cross-Linguistic Research: Theoretical and Empirical Issues (= Studien zur deutschen Sprache 84).*, 115–182. Tübingen: Narr. doi:10.24053/9783823394105.

Ladd, D Robert. 1981. A first look at the semantics and pragmatics of negative questions and tag questions. In *Regional Meeting of the Chicago Linguistic Society (CLS)*, vol. 17, 164–171. Chicago Linguistic Society.

Murray, Sarah E. & William B. Starr. 2020. The structure of communicative acts. *Linguistics and Philosophy* 44(2). 425–474. doi:10.1007/s10988-019-09289-0.

Roberts, Craige. 2012. Information structure: Towards an integrated formal theory of pragmatics. *Semantics & Pragmatics* 5. 1–69. doi:10.3765/sp.5.6.

Roelofsen, Floris & Donka F Farkas. 2015. Polarity particle responses as a window onto the interpretation of questions and assertions. *Language* 91(2). 359–414. doi:10.1353/lan.2015.0017.

Romero, Maribel & Chung-Hye Han. 2004. On negative yes/no questions. *Linguistics and Philosophy* 27(5). 609–658. doi:10.1023/b:ling.0000033850.15705.94.

Sadock, Jerrold M. 1971. Queclaratives. In *Regional Meeting of the Chicago Linguistic Society (CLS)*, vol. 7, 223–232. Chicago Linguistic Society.

Schlenker, Philippe. 2009. Local contexts. *Semantics and Pragmatics* 2. 1–78. doi:10.3765/sp.2.3.

Searle, John R. & Daniel Vanderveken. 1985. *Foundations of Illocutionary Logic*. Cambridge: Cambridge University Press.

Simons, Mandy. 2001. Disjunction and alternativeness. *Linguistics and Philosophy* 24(5). 597–619. doi:10.1023/a:1017597811833.

Stalnaker, Robert. 1974. Pragmatic presuppositions. In Milton K. Munitz & Peter Unger (eds.), *Semantics and Philosophy*, 197–214. New York: New York University Press.

Stalnaker, Robert. 1975. Indicative conditionals. *Philosophia* 5(3). 269–286. doi:10.1007/bf02379021.

Stalnaker, Robert. 1984. *Inquiry*. Cambridge: Cambridge University Press.

Sudo, Yasutada. 2013. Biased polar questions in English and Japanese. In *Beyond Expressives: Explorations in Use-Conditional Meaning*, 275–295. Brill. doi:10.1163/9789004183988_009.

Szabolcsi, Anna. 1997. Quantifiers in pair-list readings. In *Ways of Scope Taking*, 311–347. Springer Netherlands. doi:10.1007/978-94-011-5814-5_9.

Veltman, Frank. 1996. Defaults in update semantics. *Journal of Philosophical Logic* 25(3). 221–261. doi:10.1007/bf00248150.

Willer, Malte. 2017. Lessons from Sobel sequences. *Semantics and Pragmatics* 10(2). 1–57. doi:10.3765/sp.10.4.

Yalcin, Seth. 2007. Epistemic modals. *Mind* 116(464). 983–1026. doi:10.1093/mind/fzm983.

Zhang, Yichi (Raven). 2024. Discourse consistency and dynamic modals in commitment space semantics. In *Sinn und Bedeutung (SuB)*, vol. 28, 1060–1078.

Yichi (Raven) Zhang
Heinrich Heine Universität Düsseldorf
Universitätstr.1, 40225
yichi.zhang@hhu.de