Parenthetical *say* as a window into sincerity and commitment[1]

Eli SHARF — *University of California, Santa Cruz*

Abstract. This paper offers an analysis of the parenthetical use of *say* in English: e.g., *Can we meet in, **say**, an hour?*. This expression can be used to perform a speech act without incurring its canonical "sincerity condition" (Searle, 1975): for example, using *say* in a declarative sentence with content φ can conversationally commit the speaker to φ without communicating that the speaker believes φ. Using *say* does not always void an utterance's sincerity condition, however: sincerity conditions only disappear when the focal alternatives of the host sentence are inconsistent with each other. This suite of behavior allows us to draw a novel empirical line between an utterance's dynamic effects and its usual implications about speaker attitudes. I derive this behavior from the metalinguistic, focus-sensitive, and imperative semantics of *say*. Specifically, I propose that *say* in an utterance *u* (i) conventionally implicates that the speaker could have uttered a sentence systematically similar to *u* (a focal alternative to *u*), but (ii) effectively prefers to utter *u*. The effective preference encoded in *say* requires speaker commitment, even when its implication about focal alternatives weakens belief. I motivate (i) by showing that *say* is conventionally focus sensitive (Beaver and Clark, 2008). I motivate (ii) by arguing that *say* is related to the suppositional imperative use of *say* (*e.g., **Say** that the house was in New York.*), which is analyzed using the theory of imperatives as commitments to effective preferences (Condoravdi and Lauer, 2012).

Keywords: speech acts, discourse particles, focus sensitivity, discourse dynamics, commitment, sincerity, communicative predicates

1. Introduction

A number of recent investigations into root modifiers and discourse particles have led to richer theories of how discourse structure and dynamics are encoded in the semantics of natural language (Faller, 2002; Repp, 2013; Murray, 2014; AnderBois, 2016; Krifka, 2017; Law et al., 2024). This paper seeks to contribute to this line of investigation through an analysis of the parenthetical use of the word *say* in English. This word can appear in all major clause types in English, declaratives (1a), imperatives (1b), and interrogatives (1c), and is commonly used as a device of exemplification:

(1) *Examples from Corpus of Contemporary American English (COCA)*
   a. [The development of A.I.] is not something that can be trivially done by a single person, unlike, **say**, the development of calculus.
   b. If you do wear jeans, dress them up. Pair them with, **say**, a pressed oxford shirt and a jacket or vest.
   c. [Lawyer:] Ms. Paige, do you feel vindictive toward your ex-husband? Was he ever, **say**, late on alimony?

[1]I'd like to thank Jess Law, Maziar Toosarvandani, Pranav Anand, and the audience at SuB 29 for their help and useful comments on this project.

This paper focuses on the observation that *say* enables speakers to perform speech acts without their canonical "sincerity conditions", or implications about speaker attitudes (Searle, 1975; Searle and Vandeveken, 1985; Faller, 2002; Lauer, 2013). For instance, *say* can be used to make an assertion with content φ without communicating that the speaker believes φ:

(2) My great-grandfather bought his first house at the age of 30. The house was in, **say**, New York.[2]

In the second sentence, the speaker offers an example of where the house might have been; crucially, they do not communicate that they believe it was actually in New York. Despite this lack of belief, the speaker in (2) in some sense commits to acting as if the house was in New York "for the sake of the narrative". Indeed, I will show in section §2 that *say* preserves the core discourse effects of its host utterance – in the case of an assertion like (2), establishing a speaker commitment that is not easily overridden. Moreover, I will show that this behavior is non-standard among sentential modifiers: expressions that weaken belief tend to also weaken speaker commitment.

How can *say* achieve this effect? This paper derives this behavior from its fundamentally metalinguistic, focus-sensitive, and imperative semantics. In particular, I propose that *say* makes the following two contributions:

(3) **Parenthetical *say* in utterance *u* (informal):**
   a. Conventionally implicates that the speaker could have uttered another sentence systematically similar to *u* (a focal alternative to *u*) but…
   b. … effectively prefers to utter *u*.

The implication in (3a) blocks a default inference of sincerity in cases like (2) where the focal alternatives contradict one another (e.g., *the house was in New York*, *the house was in Chicago*). I motivate this effect by showing that *say* is conventionally focus sensitive, a member of the class of "particularizers" discussed in Beaver and Clark (2008).

The discourse effect in (3b) is couched in Condoravdi and Lauer's (2012) theory of effective preferences, and explains why commitment is preserved even in the absence of belief. In essence, if the speaker effectively prefers to utter *u*, it would be incoherent to act against that preference. In this way, the discourse effects of *u* piggyback on the constraints associated with effective preferences, and take effect as if *u* had been used on its own. I motivate this effect by arguing that *say* is related to the suppositional imperative use of *say* (*e.g., Say the house was in New York. Then what?*), which is analyzed in a theory of imperatives as commitments to effective preferences (Condoravdi and Lauer, 2012; Lauer, 2013; Portner, 2018; Rudin, 2018).

This paper proceeds as follows. **Section §2** introduces generalizations about how and when *say* modulates the sincerity conditions and discourse effects of its host utterance. **Section §3**

[2] Some speakers don't initially accept this use of *say*, while some accept it. For those speakers for whom it is natural, the second sentence in (2) implies that the speaker doesn't know where their grandfather's house was, and that it doesn't matter for the purposes of the narrative where it was, besides the fact that it shared some property with New York, like being an urban center. I assume that variation in acceptance of the felicity of this sentence follows from this narrative strategy being more or less natural to speakers.

outlines the formal theory of discourse dynamics, motivates and formalizes the analysis in (3), and uses it to derive these generalizations. **Section §4** discusses open questions and concludes.

2. Sincerity conditions, belief, and commitment

Clause types tend to express certain kinds of speaker attitudes. In Speech Act Theory, these attitudes are encoded as "sincerity conditions" for performing the speech act associated with each clause (Searle, 1975; Searle and Vandevenken, 1985). Example sentences with their force and sincerity conditions are below.

(4) Speech acts (Searle, 1975)

	Clause Type	**Force**	**Sincerity Condition**
a. The house was in New York.	Declarative	Assert(φ)	*The speaker believes* φ.
b. Wear a tux to the wedding.	Imperative	Direct(φ)	*The speaker wants for* φ *to be the case.*
c. Was your husband ever late on alimony?	Interrogative	Ask(ψ)	*The speaker wants the hearer to answer* ψ.

Declarative sentences express speaker belief: (4a) expresses a belief that the house was in New York. Imperative sentences express speaker desire: (4b) expresses a desire for the hearer to wear a tux to the wedding. Lastly, interrogative sentences express the specific desire that the hearer perform a certain kind of speech act – an answer to the question: (4c) expresses a desire for the hearer to say whether or not their husband was ever late on alimony.

As demonstrated in (2) (repeated in (5a) below), the use of *say* can make an assertion like (4a)'s sincerity condition disappear. The same can be said for the other clause types above. In contrast to (4b), for instance, (5b) does not express a desire for the hearer to wear a tux, and specifically a tux, to the wedding; if the hearer shows up in a three-piece suit, the speaker cannot claim that the hearer acted against their wishes. Similarly, the second question in (5c) is merely used to provide an example of the kind of reasoning that would serve to help answer the first question, but does not express that the speaker is interested in an answer to that specific question, per se.

(5) a. The house was in, **say**, New York.
b. We want you to look fancy at the wedding. Wear, **say**, a tux.
c. Ms. Paige, do you feel vindictive toward your ex-husband? Was he ever, **say**, late on alimony?

There are other sentential modifiers that weaken the attitudes that would be expressed by a bare utterance of their prejacent. One common method in an assertion is to weaken the proposition itself, by, e.g., embedding it under a possibility modal. In this case, the sincerity condition itself isn't weakened, but the speaker expresses belief in a weakened proposition:

(6) The house might have been in New York. ⇝ *The speaker believes* ◇φ

Another method of weakening belief available in language is to modify the evidential basis of an assertion (Faller, 2002; Murray, 2014; AnderBois, 2014; Northrup, 2014). In this case, what level of belief is expressed depends on the particular evidential used.

(7) a. The house was in New York, I hear. ⇝ *The speaker believes* ◇φ
b. The house was in New York, they say. ⇝ *The speaker may or may not believe* φ

Expressions that weaken belief in a proposition φ typically reduce the speaker's commitment to its truth. For example, modalized or evidentially marked sentences can naturally be followed by sentences suggesting that φ might not be true, as seen in (8a) and (8b). In the case of reportative evidentials, it is even acceptable to outright deny φ, as illustrated in (8c) (Faller, 2002; AnderBois, 2014).

(8) My great-grandfather bought his first house at the age of 30…
a. The house might have been in New York. The house might have been in Boston.
b. The house was in New York, I hear, but I'm not sure because he hated city life.
c. The house was in New York, they say, but I saw the deed and it was in Boston.

In contrast, one cannot elaborate on a bare assertion of φ with the same utterances (9). The infelicity in these examples follows from constraints such as **consistency**, which have been used to diagnose speaker commitment (Gunlogson, 2004). The fact that the utterances in (8) allow these continuations indicate that the speaker has not committed to φ.

(9) My great-grandfather bought his first house at the age of 30. The house was in New York…
a. # …The house was in Boston.
b. # ...but I'm not so sure, because he hated city life.
c. # ...but I saw the deed and it was in Boston.

Since speaker belief aligns with speaker commitment in cases like (8), one might wonder if these two notions are actually the same. Indeed, the consistency constraint at play in (9a) can be easily derived from the fact that it is irrational to believe two inconsistent propositions. What makes *say* particularly interesting is that, despite its ability to weaken an expression of belief, it behaves like a bare assertion in enforcing speaker commitment: a sentence of the form *say* φ cannot be followed by utterances that deny or express uncertainty about φ (10).

(10) My great-grandfather bought his first house at the age of 30. The house was in, **say**, New York.
a. # …The house was in, say, Boston.
b. # …but I'm not so sure because he hated city life.
c. # …but I saw the deed and it was in Boston.

Of course, one can always retract commitments through metalinguistic or other means, some of which may differentiate utterances with *say* from bare assertions. But the normal means of elaborating or commenting on the truth of propositions that are not yet speaker commitments are unavailable after the use of a sentence containing *say*. This leads us to our first generalization:

(11) **The Commitment Generalization:** uttering a declarative root clause *say* φ establishes speaker commitment to φ regardless of whether belief in φ is expressed.

This generalization, along with the examples presented above, might lead one to analyze *say* as an illocutionary modifier in the sense of Searle and Vandeveken (1985): *say* modifies the sincerity condition of its containing utterance, leaving the force (and its subsequent discourse effects) intact. Such an analysis has been proposed for evidentials in Faller (2002).

Crucially, however, this analysis would fail to account for utterances with *say* where sincerity conditions are not affected at all. Consider the second sentence of (12): despite containing *say*, the utterance still expresses the belief that people in L.A. don't generally take public transportation to work.

(12) People in New York generally take public transit to work. This is not the case with, **say**, people in L.A.

The basic generalization surrounding when *say* weakens belief in a declarative clause[3] concerns the focus structure of the host sentence, and is stated in (13) below:

(13) **The Belief Generalization:** in a declarative root clause *say* φ, belief in φ disappears when the focal alternatives of φ are inconsistent with one another, given world knowledge.

In (2), for example, focus is on *New York*, generating alternatives where the house was in different locations, as shown below (Rooth, 1992). Since world knowledge tells us that the house could not have been in two places at once, these focal alternatives cannot be true at the same time. In this case, there is no expression of speaker belief.

(14) $[\![\text{The house was in } [\text{NY}]_F]\!]^{foc}$ = {*The house was in NY, The house was in L.A. …*}

In (12), focus is on *people in L.A.*, generating alternatives where there are different groups of individuals that don't generally take public transit to work. None of these alternatives are inconsistent with one another: it's perfectly compatible with world knowledge that multiple groups of people tend to, e.g., drive to work rather than take public transit. In this case, belief sticks around.

(15) $[\![\text{This is not the case with } [\text{people in L.A.}]_F]\!]^{foc}$ = {*People in L.A. don't generally take public transit to work*, *People in Dallas don't generally take public transit to work…*}

[3] *Say*'s variable weakening of sincerity conditions extends to interrogatives and imperatives. In (F1a), for example, the speaker expresses a desire to know what Fredo got (along with everyone else). In (F1b), the speaker expresses a desire for the hearer to go to Canada (along with every other North American country). How sincerity conditions get weakened or not in these clause types also depends on focus, but has some additional complications, and I will not discuss them in this paper.

(F1) a. Can you tell me who got which gifts? What did Fredo, say, get?
b. You should visit every country in North America. Go to, say, Canada, and see the Northern Lights.

Indeed, belief disappears so long as we modulate world knowledge to make the focus alternatives inconsistent. Let's say, for example, that the world has developed to the point where public transit is generally used everywhere except for a single city. In this context, (12) can only express uncertainty about the location of this city.

This discussion suggests that the implication of speaker belief associated with a declarative clause depends on both contextual information and information structure. Therefore, it should not be analyzed as directly manipulable by semantic or lexical mechanisms.

The analytical goal of this paper is to derive the two generalizations in (11) and (13). How does *say* in an assertion with content φ commit the speaker to φ, without in some cases leading the hearer to infer that the speaker believes φ (10)? And why does the focus structure of the sentence contribute to whether or not belief is inferred (2)/(12)?

To capture these generalizations, our analysis of *say* will have to treat commitment and sincerity conditions differently in the conversational context, such that constraints on commitments can be operative regardless of speaker belief or justification. Moreover, we have to treat sincerity conditions as inferences that systematically relate to the force of an utterance but can be triggered (or not) in different contexts. I will show in the next section that these analytical requirements are naturally captured by theories of discourse dynamics that take commitments to be commitments to act as if one has a particular attitude (Gunlogson, 2004; Gunlogson, 2008; Farkas and Bruce, 2010; Condoravdi and Lauer, 2012; Lauer, 2013). The novel contribution of this proposal is a semantics for *say* that can be embedded in these theories, and that when embedded, explains both of the generalizations above.

3. The proposal

This section provides evidence for and formalizes the proposal in (3) and shows how the proposal explains the two generalizations above. The formalization is based in Rudin (2018)'s extension of the Table model of discourse dynamics (Farkas and Bruce, 2010; Rudin, 2018). Sincerity is treated as a default, but defeasible, inference tied to discourse commitments (c.f., Lauer (2013)). The proposal is repeated below:

(16) (repeated) **Parenthetical *say* in utterance *u* (informal)**
   a. Conventionally implicates that the speaker could have uttered another sentence systematically similar to *u* (a focal alternative to *u*) but…
   b. … effectively prefers to utter *u*.

The implication in (16a) explains how and when belief disappears. In short, if the speaker asserted φ but could have asserted some focal alternative ψ that is inconsistent with φ, unless the speaker is irrational, they must not believe φ (and must be asserting φ for some other reason). If φ and ψ are consistent, on the other hand, the default sincerity inference is not blocked from going through.

The discourse effect in (16b) explains why *say* establishes a speaker commitment regardless of belief. In short, it would be incoherent for the speaker to effectively prefer to utter *u*, which

itself would establish a speaker commitment, and then perform some speech act that works against this preference.

Section §3.1 outlines the adopted formal model of discourse dynamics, along with some formal machinery needed to model the meaning of *say*. Section §3.2 uses *say*'s focus sensitivity to motivate (16a) and derive the Belief Generalization. Section §3.3 uses *say*'s imperative semantics to motivate (16b) and derive the Commitment Generalization.

3.1. A model of discourse dynamics

In the theory adopted here, clause types come with "conventional discourse effects" (CDEs). Declaratives and imperatives, in particular, establish commitments to act as if one held a certain attitude (Condoravdi and Lauer, 2012; Lauer, 2013).

(17) a. **Declarative CDE**: DECL(φ): speaker commits to act as if they <u>believe</u> φ
b. **Imperative CDE**: IMP(φ): speaker commits to act as if they <u>effectively prefer</u> φ

I model these discourse effects as context change potentials (CCPs), or functions from input contexts c to output contexts c'. Contexts include discourse commitment sets (DC^x) for each interlocutor x, tracking their commitments. Following Rudin (2018), I call the set of discourse commitments associated with imperatives "teleological"; this term is intended to refer to the kind of modality associated with effective preferences in the sense of Condoravdi and Lauer (2012). Thus, discourse commitments are relativized to doxastic (declarative – $DC^{DOX,x}$) and teleological (imperative – $DC^{TEL,x}$) modal bases.

(18) a. **Declarative CDE**: $[\![\text{DECL}]\!] = \lambda\varphi.\lambda c.\ c'$ s.t. $c' = c$ except $\varphi \in DC^{DOX,spkr(c)}(c')$
b. **Imperative CDE**: $[\![\text{IMP}]\!] = \lambda\varphi.\lambda c.\ c'$ s.t. $c' = c$ except $\varphi \in DC^{TEL,spkr(c)}(c')$

In addition to their modal flavors, what makes commitments distinct is that they are subject to several pragmatic constraints. One such constraint, already discussed, is **consistency**. Consistency ensures that each commitment set contains no contradictory propositions (Gunlogson, 2004; Farkas and Bruce, 2010; Lauer, 2013; Rudin, 2018).

(19) **Consistency:** For any modal base B, participant x in c, $\bigcap DC^{B,x}(c) \neq \varnothing$

The constraint of **realism** regulates the relationship between doxastic and teleological commitments. Essentially, a participant must believe that their teleological commitments can be made true (Lauer, 2013; Rudin, 2018):

(20) **Realism**: For any participant x in c, $\forall p \in DC^{TEL,x}(c) : p \cap \bigcap DC^{DOX,x}(c) \neq \varnothing$

These two constraints are what make the preferences expressed by imperatives "effective" or useful in guiding action (Lauer, 2013). Indeed, although it is reasonable to have inconsistent or unrealistic preferences, those preferences cannot be (sincerely) expressed by imperatives (Lauer, 2013, Rudin, 2018).

Because they constrain the context, these rules also limit the range of performable speech acts. Conversational participants can only use declaratives that are consistent with their doxastic commitments, and imperatives that are consistent with their teleological commitments and realistic with respect to their doxastic commitments.

Next, I define **sincerity** as the following default inference: that a participant's commitments reflect their private attitudes (Lauer, 2013). Any proposition p in a commitment set implies another proposition that p holds in the speaker's private version of the modal base associated with the commitment set.

(21) **Sincerity:** For any modal base B, participant x in c: $p \in \mathrm{DC}^{B,x}(c) \rightarrow B^x(p)$
where $B^x(p) = \forall w' \in B^x: p(w')$

Importantly, in contrast with the other rules discussed above, I assume that this inference is defeasible, given enough evidence to the contrary.

Along with discourse commitments, I will adopt the following components as part of the contextual representation:

(22) A context c contains:
   a. Participants: **spkr**, **hr**, **inter**
   b. Commitments: $\mathrm{DC}^{B,x}$ for $B \in$ {DOX, TEL} and $x \in$ **inter**
   c. A set of alternatives: QUD

The question under discussion models the set of alternatives referenced by the semantics of focus and focus sensitive items (Rooth, 1992; Roberts, 2012; Beaver and Clark, 2008).

Finally, I define one formal component necessary to model the semantics of *say*. In order to capture *say*'s felicity with any clause type – declaratives, interrogatives, and imperatives – I propose that it is tightly linked to what I call the **manifest effect** of a discourse update (Stalnaker, 1978; Lauer, 2013). This is the often-discussed fact that asserting "there is a goat" gives rise to a presupposition that *the speaker asserted "there is a goat*" (Stalnaker, 1978). As an extension, I assume that every speech act gives rise to the presupposition that the speech act has been performed. So, e.g., the use of an imperative sentence, committing the speaker to some effective preference for φ, gives rise to the presupposition that the speaker committed to an effective preference for φ. In order to model this assumption, I treat contexts, with all their components, as linguistically distinguished kinds of situations that take place in a world, regulated by the relation c **in** w. I propose that *say* targets the updated context after a discourse move has been made in order to access the worlds where the facts about the update context hold. This is modeled via the predicate **utter**, which**,** for any CCP u and context c, characterizes those worlds that contain $u(c)$:

(23) $[\![\textbf{utter}]\!] = \lambda u.\lambda c.\lambda w.\ u(c)$ **in** w

This predicate encodes the basic "metalinguistic" component of the meaning of parenthetical *say* and will be used in the subsequent sections to model its semantics.

3.2. How *say* weakens belief

As demonstrated in section §2, the focus structure of a clause influences whether declarative sentences with *say* convey belief. This aligns with the broader observation that *say* is conventionally focus-sensitive, in the sense of Beaver and Clark (2008) (henceforth: BC). I illustrate this fact below.

The meaning of sentences containing *say* systematically depends on which constituent in the host sentence is focused. Consider the following sentences:

(24) a. The law can be used to, say, [evict tenants from their HOUSES]$_F$.
b. The law can be used to evict, say, [TENANTS]$_F$ from their houses.
c. The law can be used to evict tenants from their, say, [HOUSES]$_F$.

Each sentence in (24a-c) communicates different facts about what the described law can do in addition to evicting tenants from their houses. For example, only (24b) communicates that the law can be used to evict people other than tenants. This interpretative dependency mirrors *say*'s positional dependency on focus: *say* most naturally occurs directly next to the focus marked constituent.

A further test confirms that *say*'s association with focus is conventional, rather than incidental. This test examines whether *say* can associate with a "leaner", or a phonologically reduced expression (Beaver and Clark, 2008). As BC show, *only* cannot associate with such an expression:

(25) a. I only see'im when I go to the park.
b. I only see HIM when I go to the park.

(25a) cannot have the same meaning as (25b). Specifically, it cannot mean that the speaker sees only *him* and no one else when they go to the park. This suggests that *only* must conventionally associate with the alternatives evoked by a focus-marked element, as the pronoun's reduced phonology prevents it from bearing focus. In contrast, other focus-sensitive expressions, such as *always*, do not exhibit this restriction (Beaver and Clark, 2008).

Parenthetical *say* patterns with *only*: it cannot associate with leaners.

(26) a. Jess could talk to'im, say.
b. Jess could talk to HIM, say.

Only (26b) can imply that there are other people Jess could speak with. In contrast, (26a) leads to different implications—for instance, if *Jess* is focused, it suggests that others could talk to him as well. This supports an analysis of *say* as conventionally associating with focus.

In this paper, I adopt BC's analysis of conventional focus sensitivity. Their analysis consists of two parts. First, the focus alternatives of some part of an utterance must form a superset of the QUD, a requirement I refer to as **congruence** following Roberts (2012). Second, conventionally focus-sensitive expressions comment on the QUD. As a result, these

expressions are necessarily dependent on the focus-marked constituents within their containing utterance.

Indeed, BC have already observed that the discourse marker *for example*, an expression often interchangeable with *say*, is conventionally focus sensitive, in a class of focus-sensitive expressions they call "particularizers". They suggest that *for example* signals that the QUD has multiple answers. A more precise formulation of this suggestion is as follows: *for example* signals that its host sentence, as well as some other possible answer(s) to the QUD, stand in an exemplification relation with a previous discourse segment. In other words, the exemplification relation distributes across multiple answers to the QUD, thereby accounting for the existence of multiple true answers.

My proposal for *say* follows this schema. Specifically, I propose that *say* implicates that its host sentence, as well some other possible answer to the QUD, were both potential utterances for the speaker in the input context. Importantly, I assume that from the speaker's perspective, a potential utterance in a given context is one that aligns with what they would say, given their own beliefs and goals.

To formally model this implication, I use a circumstantial modal base anchored to the input context and speaker (Hacquard, 2006):

(27) $\text{CIRC}(c) := \{ w' \mid w'$ is compatible with the circumstances of c, including the same speaker with their same beliefs and goals $\}$

The focus sensitivity of *say* consists of the implication that this circumstantial modal base includes worlds where the speaker uttered the host sentence as well as an alternative in the QUD. This implication was informally stated in (16a), and is defined formally below:

(28) **Parenthetical *say* (first discourse effect):** Given an input context c and sentence with the logical form *say* u:
   a. $\forall w \in \textbf{utter}(u)(c): w \in \text{CIRC}(c)$
   b. $\exists v \neq u \in \text{QUD}(c): \forall w \in \textbf{utter}(v)(c): w \in \text{CIRC}(c)$

Compositionally, I propose that *say* takes its host sentence u in its scope and adds these implications to the speaker's doxastic discourse commitments, as shown below:

(29) $[\![say]\!]$[4]: $\lambda u.\lambda c.\ c'$ s.t. $c' = c$ except $\boxed{\forall w \in \textbf{utter}(u)(c): w \in \text{CIRC}(c)}$,

$\boxed{\exists v \neq u \in \text{QUD}(c): \forall w \in \textbf{utter}(v)(c): w \in \text{CIRC}(c)} \in \text{DC}^{\text{DOX},\textbf{spkr}}(c')$

[4] Note that these implications predict that congruence is evaluated only after the compositional semantics returns a CCP, as the QUD must contain semantic objects that can serve as an argument for **utter**. In other words, congruence applies after the force head (DECL, IMP, or INT) has entered the compositional semantics. Our proposal thus assumes that the QUD is type-flexible—a potentially surprising claim, given that the QUD is typically conceived as a set of propositions. However, this flexibility aligns with findings that focus can operate on different kinds of semantic objects (Rooth, 1992). Determining whether this is the right way to model the focus-sensitivity of discourse markers is left for future work.

This implication allows us to derive the Belief Generalization**.** Consider a sentence like (2), where belief disappears:

(2) (repeated) My great-grandfather bought his first house at the age of 30. The house was in, say, [New York]$_F$.

The second sentence leads to the following discourse update:

(30)

$c' = c + say(u)$, where $u =$ DECL([[*the house was in New York*]])	
$DC^{DOX,spkr}$	$\forall w \in$ **utter**$(u)(c)$: $w \in$ CIRC(c), $\exists v \neq u \in$ QUD(c): $\forall w \in$ **utter**$(v)(c)$: $w \in$ CIRC(c), ...

In this context, focus and *say* force the QUD to consist of alternative declarative CCPs, each differing in location from *New York*. Following Büring (2019)'s **proper question** constraint, I assume that the alternatives in the QUD have to contrast, in an intuitive sense. In (2), the alternatives may replace *New York* with other cities, for example, but not locations that lead to an entailment relation with the original sentence, like *Times Square* or *the U.S.A*.[5] This constraint forces the focal alternatives of (2) to be inconsistent with one another, since the house could not have been in distinct, contrasting locations simultaneously.

Given this assumption, the discourse update in (30) commits the speaker to the proposition that, given the input context, it was contextually permissible for them to doxastically commit to both the house being in New York and one of these inconsistent alternatives. Now, consider a hypothetical scenario in which the speaker genuinely believes the house was in New York. In that case, it would not have been compatible with the input context—where the speaker holds the same beliefs and goals—for them to commit to a proposition inconsistent with the one they believe, unless one of their goals was to deceive the hearer. However, if deception were the speaker's goal, then it wouldn't be compatible with their goals to commit to the house being in New York. This contradiction implies that the speaker must not actually believe the house is in New York. The same logic holds for the speaker believing the house was somewhere else. Therefore, the speaker must not know where the house actually was.

Now consider a sentence like (12), where belief sticks around:

(12) (repeated) People in New York generally take public transit to work. This is not the case with, **say**, people in L.A.

[5] The clause of the Büring (2019)'s proper question constraint relevant to this case requires each alternative in the QUD to be consistent with the negation of the rest. How to model this clause in a proposal like the one here, where the QUD can consist of CCPs, is non-trivial. For the time being, we can define it as follows:

Proper Question: $\forall v \in$ QUD(c): INFO$(v, c) \setminus \bigcup(\{$INFO$(v', c) \mid v' \in (QUD(c) \setminus \{v\}) \neq \varnothing$

INFO(v, c) in the case of a declarative assertion consists of the new discourse commitment in the updated context $v(c)$, i.e., $\iota p[\, p \in DC^{DOX,spkr(c)}(v(c)) \wedge p \notin DC^{DOX,spkr(c)}(c)]$.

The second sentence leads to the following discourse update:

(31)

$c' = c + say(u)$, where $u =$ DECL(⟦*This is not the case with people in L.A.*⟧)	
$DC^{DOX,spkr}$	$\forall w \in$ **utter**$(u)(c)$: $w \in$ CIRC(c), $\exists v \neq u \in$ QUD(c): $\forall w \in$ **utter**$(v)(c)$: $w \in$ CIRC(c), …

In this case, Büring (2019)'s **proper question** constraint does not force the focal alternatives to be mutually inconsistent. For example, the two propositions *This is not the case with people in L.A.* and *This is not the case with people in Dallas* contrast for the purposes of creating a proper question, but they are not inconsistent with one another.

Since the focal alternatives are not inconsistent with the host sentence, there is no reason for the hearer to assume the speaker does not believe it. To clarify this reasoning: the speaker is committed to it being contextually permissible for them to doxastically commit to the proposition that people in L.A. don't generally take public transit to work. Assuming the speaker is sincere in this latter commitment, they must believe this fact about people in L.A. Now, unlike with (2), there is no reason to drop the default assumption that the speaker is sincere, since it is entirely coherent for the speaker to sincerely commit to both the host sentence and a focus alternative. Therefore, the commitments in (31) lead to an implication of speaker belief in the host sentence, as well as some focal alternative.

The logic in both cases above applies to any proposition whose focus structure and content renders its alternatives consistent or inconsistent with one another. In this way, the implications in (29) derive the Belief Generalization.

3.3. How *say* gives rise to commitment

These implications do not explain why the speaker becomes committed to the host sentence, as shown in (10). In cases like (2) where the speaker is implied to be uncertain about the truth of the matter, there is no reason, so far, that explains why they cannot express that uncertainty. Moreover, there is no reason to believe the speaker is any more committed to the host sentence than to some focal alternative, which they also indicated was compatible with the input context.

In order to understand where commitment comes from, I take note of another use of *say* which shares certain interpretive and formal properties with parenthetical *say*: when *say* is used as an imperative to mean *suppose*.

(32) **Say** the house was in New York. He would have been rich by now!

There's evidence that these two expressions are related. For one, previous corpus and historical analyses have led researchers to conclude that parenthetical *say* is a fossilized imperative (Goossens, 1982; Brinton, 2008). Additionally, *say* is sometimes interchangeable with *let's say*, a clear hortative imperative (Goossens, 1982; Brinton, 2008).

(33) **Let's say** the house was in New York.

(34) *Examples from COCA, parentheses mine*
- a. I'm a little worried about his name, though. Clint Bundt. It's abrupt. Clint Eastwood, sure, that works. But on anyone else, I don't know. Clint and Faith. Faith and Clint. Faith Bundt. " It was much less pleasing than, oh, **(let's) say**, Faith and Jeremy or Jeremy and Faith.
- b. What I'm saying here is that the interests of France in the Middle East are not the same as the interests of, **(let's) say**, Germany or Britain.
- c. Okay, so what if I'm back in, (**let's) say**, an hour?

The second discourse effect of *say* in my proposal takes inspiration from this connection: *say*, like imperatives, deals in effective preferences. Specifically, I propose that parenthetical *say* commits the speaker to an effective preference to utter the host sentence. This discourse effect was informally stated in (16b), and is defined formally below:

(35) **Parenthetical *say* (second discourse effect):** Given sentence with the LF *say u*, that maps an input context c to an output context c': $\mathbf{utter}(u)(c) \in \mathrm{DC}^{\mathrm{TEL,spkr}(c)}(c')$

The complete formal analysis of *say* is stated below:

(36) $[\![say]\!]$: $\lambda u.\lambda c.\ c'$ s.t. $c' = c$ except $\boxed{\forall w \in \mathbf{utter}(u)(c): w \in \mathrm{CIRC}(c)}$,

$\boxed{\exists v \neq u \in \mathrm{QUD}(c): \forall w \in \mathbf{utter}(v)(c): w \in \mathrm{CIRC}(c)} \in \mathrm{DC}^{\mathrm{DOX,\mathbf{spkr}}}(c')$,

$\boxed{\mathbf{utter}(u)(c)} \in \mathrm{DC}^{\mathrm{TEL,\mathbf{spkr}}}(c')$

This component of *say*'s meaning allows us to understand how it can induce commitment regardless of belief. Consider (10), repeated below:

(10) (repeated) My great-grandfather bought his first house at the age of 30. The house was in, **say**, New York.
- a. # …The house was in, say, Boston.
- b. # …but I'm not so sure because he hated city life.
- c. # …but I saw the deed and it was in Boston.

The second sentence in (10) leads to the following discourse update:

(37)

$c' = c + say(u)$, where $u =$ DECL($[\![$*the house was in New York*$]\!]$)	
$\mathrm{DC}^{\mathrm{DOX,spkr}}$	$\forall w \in \mathbf{utter}(u)(c): w \in \mathrm{CIRC}(c)$, $\exists v \neq u \in \mathrm{QUD}(c): \forall w \in \mathbf{utter}(v)(c): w \in \mathrm{CIRC}(c)$,
$\mathrm{DC}^{\mathrm{TEL,spkr}}$	$\mathbf{utter}(u)(c)$ …

The infelicity of examples in (10) arises as follows. First, (10a) would lead to an additional update where both **utter**(*u*)(*c*) and **utter**(*w*)(*c'*) are in the speaker's teleological commitment set. This means the speaker would be committed to two conflicting effective preferences, each corresponding to worlds where they are doxastically committed to inconsistent statements. Committing to both of these preferences violates the **consistency** constraint on teleological commitments, as this is impossible according to the rules of the discourse model. This reasoning leads the sentence to sound incoherent.

Example (10b) and (10c) doxastically commit the speaker to $\Diamond\neg\varphi$ and $\neg\varphi$ respectively. These statements violate the requirement of **realism** with respect to the speaker's teleological commitment to utter *u*, since by virtue of committing to these propositions the speaker is acting against their own preference to commit to φ. In the case of (10c), committing to $\neg\varphi$ makes it impossible to commit to φ due to **consistency**, making the earlier preference of the speaker to utter *u* unrealistic. Next, (10b) exemplifies Moore's paradox (*the cat is dead, but #I don't believe it's dead*). Following Gillies (2001), I adopt an explanation of the paradox that treats φ and $\Diamond\neg\varphi$ as inconsistent. Thus, (10b), like (10c), also leads to a situation in which it would be unrealistic for the speaker to maintain their prior commitment to utter *u*.

In this way, the constraints tied to effective preferences explain the Commitment Generalization, since they require the speaker to act as if the discourse effects of *u* hold in the context. This contrasts with the modals and evidentials in (8) which do not commit the speaker to such a preference and therefore straightforwardly weaken commitment.

4. Conclusion

This paper examined the role of parenthetical *say* in English as a device that can (i) variably modulate sincerity conditions while (ii) leaving the core discourse effects of its containing utterance unaffected.

To derive this behavior, I proposed that *say* makes two conventional contributions. The first contribution is the implication that both the host sentence, and some focal alternative, were potential utterances for the speaker in the input context. This contribution was used to derive how and when belief implications disappear in assertions containing *say*. I motivated this contribution by showing that *say* is a focus-sensitive "particularizer" in the sense of Beaver and Coppock (2008).

My analysis of this first contribution relies on certain assumptions that I believe should be further investigated and/or refined. For example, in order to allow *say* to access the discourse effect of both its host sentence and any potential alternative, I assumed that the QUD can contain alternative context change potentials (see: footnote 4). I leave open the possibility that there is a better way to state the analysis so we can preserve our standard assumption that the QUD is a set of propositions. Alternatively, this assumption may be an accurate reflection of the general type-flexibility of focus (Rooth, 1992). In that case, more work needs to be done to see how to integrate these expressions into theories of focus in general.

Moreover, I analyzed the "potentiality" of each alternative utterance in terms of a modal base anchored to the circumstances of the input context. This analysis is reminiscent of two previous proposals in the literature. The first, Anand and Hacquard (2009), treats the modal base of speech report verbs (*claim, say*) as picking out worlds compatible with both the goals of the speech event as well as the proposed common ground after the event occurs. Although this analysis would not work as stated for imperatives and questions that embed *say*, it could be modified to account for these cases. The second proposal, Rett (in press), claims that all illocutionary content is descriptive content about the utterance event. Combining this approach with Anand and Hacquard (2009)'s semantics for speech reports may prove fruitful, but would still have to be paired with a pragmatics that encodes constraints like consistency.

Regardless of these potential refinements, the dependence of belief implications on focus alternatives gives us a novel empirical hook into the linguistic mechanisms that shape speech acts. Fundamentally, this generalization challenges theories of illocutionary modification that assume sincerity conditions can be directly accessed by lexical expressions. The proposal here instead follows theories of force that treat clause types as encoding commitments to act *as if* one holds a particular attitude – commitments that may, but do not necessarily, give rise to default inferences of sincerity (Condoravdi and Lauer, 2012; Lauer, 2013). Since these inferences are defeasible, they can be variably affected by contextual and focus-dependent implications. This motivates a more nuanced picture of the interaction between linguistic semantics and illocutionary force.

The second conventional contribution is that *say* commits the speaker to an effective preference for uttering the host sentence. I supported this proposal by arguing that parenthetical *say* is related to *say*'s use as a suppositional imperative, which suggests it may carry imperative-like semantics (Goossens, 1982; Brinton, 2008).

Further work may be needed to refine this part of the proposal as well. One open question concerns the assumption that the speaker's preference is for *themselves* to utter the host sentence, rather than for the hearer to do so. This assumption conflicts with the general tendency of imperatives to take the hearer as their subject. How might this theory account for *let's say*, which encodes both the speaker and hearer as its subject?

Another issue that should be explored is whether *say u* operates alongside the discourse effects of *u* ($c' = u(c)$), rather than neutralizing them, as I proposed here ($c' = c$). The former approach could potentially explain the Commitment Generalization without having to appeal to effective preferences. I did not pursue this alternative since there is evidence that *say* encodes an imperative-like semantics. I leave it to future work to discover whether such an approach would yield testable predictions that differ from the approach proposed here.

References

Anand, P. and V. Hacquard (2009). Epistemics with attitude. In T. Friedman and S. Ito (Eds.), *Proceedings of Semantics and Linguistic Theory (SALT) 18*, pp. 37–54.

AnderBois, S. (2014). On the exceptional status of reportative evidentials. In T. Snider, S. D'Antonio and M. Weigand (Eds.), *Proceedings of Semantics and Linguistic Theory (SALT) 24*, pp. 234–254.

AnderBois, S. (2016). Semantics and pragmatics of (not-) at-issueness in Yucatec Maya attitude reports. *Semantics and Pragmatics 9*, 19-1.

Beaver, D. I., and B. Z. Clark (2008). *Sense and sensitivity: How focus determines meaning*. Malden, MA: Blackwell.

Büring, D. (2019). Focus, Questions and Givenness. In M. Zimmermann, K. von Heusinger, and E. Onea, *Questions in Discourse*, pp. 6–44. Leiden: Brill.

Brinton, L. J. (2008). Processes underlying the development of pragmatic markers: The case of (I) say. In J. Skaffari, M. Peikola, R. Carroll, R. Hiltunen, and B. Wårvik (Eds.), *Opening windows on texts and discourses of the past*, pp. 279–299. Amsterdam: John Benjamins.

Condoravdi, C. and S. Lauer (2012). Imperatives: Meaning and illocutionary force. In C. Piñón (Ed.), *Empirical Issues in Syntax and Semantics 9*, pp. 37–58. Paris: Colloque de syntaxe et de sémantique de Paris.

Davies, Mark. (2019-). The Corpus of Contemporary American English: 450 million words, 1990-2019. Available online at http://corpus.byu.edu/coca/.

Faller, M. T. (2002). *Semantics and pragmatics of evidentials in Cuzco Quechua.* Ph. D. thesis, Stanford.

Farkas, D. F., and Bruce, K. B. (2010). On reacting to assertions and polar questions. *Journal of semantics 27*(1), 81-118.

Gillies, A. (2001). A new solution to Moore's paradox. *Philosophical Studies*, *105*(3), 237–250.

Goossens, L. (1982). "Say: Focus on message". In R. Dirven, L. Goossens, Y. Putseys, and E. Vorlat (Eds.), *The Scene of Linguistic Action and Its Perspectivization by speak, talk, say and tell*, pp. 85–131. Amsterdam and Philadelphia: John Benjamins.

Gunlogson, C. (2004). *True to form: Rising and falling declaratives as questions in English.* New York: Routledge.

Gunlogson, C. (2008). A question of commitment. *Belgian Journal of Linguistics 22*(1), 101-136.

Hacquard, V. (2006). *Aspects of Modality*. Ph. D. thesis, Massachusetts Institute of Technology.

Krifka, M. (2017). Epistemic, evidential and discourse modalities in commitment space semantics. In *Not-At-Issue-Meaning and Information Structure Workshop* (1), 1-13.

Lauer, S. (2013). *Towards a dynamic pragmatics*. Ph. D. thesis, Stanford.

Law, J. H. K., Li, H., and D. Bhadra (2024). Force shift: a case study of Cantonese ho2 particle clusters. *Natural Language Semantics*, 1-43.

Murray, S. E. (2014). Varieties of update. *Semantics and Pragmatics 7*(2), 1–53.

Northrup, O. (2014). *Grounds for Commitment*. Ph. D. thesis, University of California, Santa Cruz.

Portner, P. (2018). Commitment to priorities. In Daniel Harris, Matt Moss and Daniel Fogal (eds.), *New work in speech acts*, pp. 296–316. New York: Oxford University Press.

Repp, S. (2013). Common ground management: Modal particles, illocutionary negation, and VERUM. In D. Gutzmann and H.-M. Gärtner (Eds.), *Beyond Expressives: Explorations in Use-Conditional Meaning*, pp. 231–274. Brill.

Rett, J. (in press). Characterizing illocutionary content. To appear in *Proceedings of Semantics and Linguistic Theory (SALT) 34.*

Roberts, C. (2012). Information structure: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics 5*(6), 1–69.

Rooth, M. (1992). A theory of focus interpretation. *Natural Language Semantics 1*(1), 75–116.

Rudin, D. (2018). *Rising above commitment*. Ph. D. thesis, University of California, Santa Cruz.

Searle, J. R. (1975). A Taxonomy of Illocutionary Acts. In Keith Gunderson (Ed.), *Language, mind, and knowledge*, pp. 344–369. Minneapolis: University of Minnesota Press.

Searle, J. R. and D. Vanderveken (1985). *Foundations of Illocutionary Logic*. Cambridge University Press.

Stalnaker, R. (1978). Assertion. In P. Cole (Ed.), *Syntax and Semantics 9*, pp. 78–95. New York: Academic Press.