

# Intonation as a Speech Act Modifier: Rising Declaratives and Imperatives<sup>\*</sup>

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## Outline

A talk in two parts:

### I. Predominantly theoretical, on Rising Declaratives (RDs)

- ▷ Farkas & Bruce (2010): discourse model incorporating commitment and projection
- ▷ more moving parts allows for precise characterization of further speech acts
- ▷ I argue that RDs fit the profile of one such speech act
- ▷ I argue that rising/falling intonation manipulates commitment, allowing a fully compositional account of RDs

### II. Predominantly empirical, on Rising Imperatives (RIs)

- ▷ I examine the behavior of (apparent) RIs in English
- ▷ I argue that these are not questions + ellipsis or fragment answers, i.e., they seem to really be imperatives with rising intonation
- ▷ I sketch an account of RIs that is parallel to the account of RDs given in Part I

## 1 Rising Declaratives

First, a preliminary note: I assume Jeong's (2017a, 2017b) distinction between Inquisitive and Assertive RDs, and take them to be associated with the L\* H-H% tune and the H\* H-H% tune, respectively. Because I only deal with Inquisitive RDs here, I will simply say RD when I mean Inquisitive RD, and I will simply say 'rising intonation' when I mean the L\* H-H% tune.

Also, a notational convention: an end-of-sentence period indicates that the sentence is accompanied by the H\* L-L% tune; an end-of-sentence question mark indicates that the sentence is accompanied by the L\* H-H% tune.

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<sup>\*</sup>This work has benefitted immensely from conversations with Pranav Anand, Adrian Brasoveanu, Donka Farkas, Sunwoo Jeong, Jim McCloskey, Floris Roelofsen, Matthijs Westera, and audiences at the UCSC/Stanford Workshop on Sentence Types.

- ▷ this account synthesizes many empirical observations and analytical ideas from prior work
- ▷ my goals are twofold:

I. Derive the behavior of RDs from the primitives independently proposed by Farkas & Bruce (2010) for asserting and questioning acts—no ad hoc extra components in the discourse model

II. Explain *why* RDs behave like they do, by deriving their behavior entirely from the contribution of rising intonation and the contribution of declarative form<sup>1</sup>

## 1.1 The Empirical Facts

I take four empirical phenomena to be desiderata for evaluating the success of an account of RDs. For any RD  $p?$  whose falling declarative counterpart denotes the proposition  $p$ :

### I. An utterance of $p?$ does not commit the speaker to $p$

- (1) A: Paul got fired.
  - a. B: Oh.
  - b. B: Wow, I had no idea!
- (2) A: Did Paul get fired?
  - a. B: #Oh.
  - b. B: #Wow, I had no idea!
- (3) A: Paul got fired?
  - a. B: #Oh.
  - b. B: #Wow, I had no idea!

- ▷ responses indicating receipt of information are felicitous with falling declaratives, but infelicitous with interrogatives and RDs
- ▷ q.v. Gunlogson (2008), Jeong (2017b), a.o.

### II. An utterance of $p?$ elicits addressee response about whether $p$ is true

- (4) A: Paul went to Harvard.
  - a. B: Yes, he did.
  - b. B: My mom went to Yale.

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<sup>1</sup>This section is a (sharply) condensed version of Rudin (2017), which contains a much more detailed account of the empirical facts, and of the relation of my proposal to various others. Email me for the manuscript if you're interested.

- (5) **A:** Did Paul go to Harvard?  
 a. **B:** Yes, he did.  
 b. **B:** #My mom went to Yale.
- (6) **A:** Paul went to Harvard?  
 a. **B:** Yes, he did.  
 b. **B:** #My mom went to Yale.

▷ following up immediately by offering related information is felicitous with falling declaratives, but infelicitous with interrogatives and RDs

### III. An utterance of $p?$ can allow an inference that the speaker has either positive or negative epistemic bias toward $p$ , depending on context

(7) POSITIVE BIAS

[Context: The ship's second-in-command has just been woken from hypersleep after the captain has been killed in an accident. He is consulting with the android who runs the ship about the logistics of their colonization voyage. The second-in-command says:]  
 We have eight more recharge cycles to go before we get to Origae-6?

▷ inference: the speaker is double-checking that  $p$  is true

(8) NEGATIVE BIAS

[Context: George Stephanopoulos is interviewing Donald Trump.]  
**DT:** I think I've made a lot of sacrifices. I work very, very hard. I've created thousands of jobs, tens of thousands of jobs, built great structures. I've had tremendous success. I think I've done a lot.  
**GS:** Those are sacrifices?

▷ inference: the speaker is expressing skepticism about whether  $p$  is true

Previous accounts have often hard-coded either positive (e.g. Gunlogson 2008, Malamud & Stephenson 2015, Westera 2017) or negative (e.g. Farkas & Roelofsen 2017) bias into their accounts of RDs.

The availability of inferences of both positive and negative bias in different contexts suggests instead that the explanation of these inferences should be derived from more flexible, context-sensitive pragmatics.

### IV. An utterance of $p?$ is only felicitous if the speaker has reason to suspect that the addressee believes $p$

- (9) [Context: The second-in-command is talking to one of his passengers, who is unaware of the details of the logistics of the voyage. He says:]  
 #We have eight more recharge cycles to go before we get to Origae-6?

- (10) [Context: George Stephanopoulos is interviewing Donald Trump.]  
**DT:** I work very, very hard. I've created thousands of jobs, tens of thousands of jobs, built great structures. I've had tremendous success. I think I've done a lot.  
**GS:** #Those are sacrifices?
- ▷ the speaker's biases are the same in these examples as they are in their contextual variants above
  - ▷ the contexts here remove the speaker's reason to suspect that their addressee believes  $p$ , and infelicity results
  - ▷ q.v. Gunlogson (2001), Jeong (2017b)

## 1.2 The Account

In broad strokes:

- ▷ take up a suggestion of Truckenbrodt (2006): that falling and rising intonation signal commitment and lack of commitment
- ▷ show that formalizing this idea in the discourse model of Farkas & Bruce (2010) allows us to explain the behavior of RDs as sketched above

### 1.2.1 Background on Farkas & Bruce (2010)

The Farkas & Bruce (2010) discourse model has five components:

- (11)
- a. COMMON GROUND ( $cg$ )  
The set of all propositions that all discourse participants are publicly committed to
  - b. CONTEXT SET ( $cs$ )  
The set of all worlds that are compatible with all propositions in the Common Ground ( $= \cap cg$ )
  - c. DISCOURSE COMMITMENTS  
For all discourse participants  $X$ , there is a set  $DC_X$  of propositions  $X$  has publicly committed to that are not yet in  $cg$
  - d. THE TABLE  
A push-down stack of Questions Under Discussion (QUDs—q.v. Roberts 1996, Ginzburg 1996), the uppermost element of which is the current QUD
  - e. PROJECTED SET ( $ps$ )  
The set of all Common Grounds that could result by adding an element of the current QUD to the current  $cg$ —i.e. by answering the current QUD

Conversation is driven by the desire to shrink  $cs$  (prompting Issue-raising) and by the desire to empty the Table (prompting Issue-resolution).

(12) ISSUES

An Issue is a set of sets of worlds (= a set of propositions). To add an Issue to the Table is called RAISING an Issue. Once an Issue has been raised, it can be removed from the Table in one of two ways:

a. RESOLVING an Issue

An Issue  $I$  is removed from the Table if  $\exists p \in I. cs \subseteq p$

b. AGREEING TO DISAGREE

An issue  $I$  can be removed from the Table if for any discourse participants  $X$  and  $Y$ ,  $\exists p \in DC_X, \exists q \in DC_Y. p \cap q = \emptyset \wedge (\exists r \in I. (\cap DC_X \cap cs) \subseteq r \wedge \neg(\cap DC_Y \cap cs) \subseteq r)$

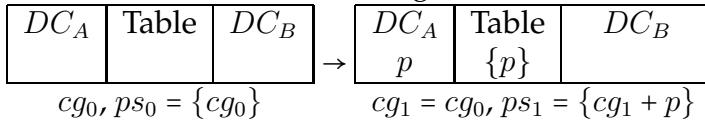
▷ note that Issues can only be removed from the Table if somebody makes a commitment!

Farkas & Bruce (2010) define assertion like so:

(13) ASSERTING

a. For any sentence  $s$  that denotes a proposition  $p$ , asserting  $s$  puts  $\{p\}$  on the Table and commits the speaker to  $p$

b.  $A$  utters a sentence  $s$  denoting  $p$ :



▷ commitment plus unitary projection is a natural combo:

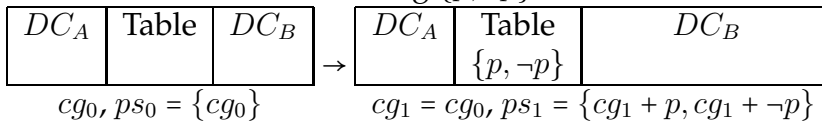
▷ because the speaker has committed to  $p$ , it is not possible that  $\neg p$  can become Common Ground, so it makes sense that a Common Ground that includes  $\neg p$  is not projected

Farkas & Bruce (2010) define questioning like so:

(14) QUESTIONING

a. For any sentence  $s$  that denotes a set of propositions  $P$ , asking a question with  $s$  puts  $P$  on the Table, and does not alter the speaker's commitments

b.  $A$  utters a sentence  $s$  denoting  $\{p, \neg p\}$ :



▷ no commitment plus multiple projections is a natural combo:

▷ the speaker hasn't made a commitment either way about  $p$ , and so either  $p$  or  $\neg p$  could still become Common Ground

▷ addressee response is required because the speaker hasn't made a commitment that could resolve the Issue they've raised

To summarize: Farkas & Bruce's (2010) model allows us to decompose conventional discourse effects into the results of setting two binary switches:

- ▷ commitment vs. no commitment
- ▷ unitary projection vs. multiple projection

They give an account of asserting and questioning speech acts as the results of two particularly natural settings of these switches.

My argument: RDs involve no commitment, like questioning acts, but involve unitary projection, like asserting acts—a less natural pairing, but not an incoherent one.

### 1.2.2 The core of the account

#### (15) INTERROGATIVE VS. DECLARATIVE SENTENCES

- a. Utterances of interrogative sentences place their Hamblin denotations on the Table
  - b. Utterances of declarative sentences place the set containing the proposition they denote on the Table
- ▷ i.e. declarative sentences raise singleton Issues, and interrogative sentences raise non-singleton Issues
  - ▷ cf. Farkas & Roelofsen (2017)

I assume the following conventional discourse effects for rising and falling intonation, following Truckenbrodt (2006):

#### (16) FALLING INTONATION

The H\* L-L% tune indicates that the speaker is committing to the content of the Issue they've raised.

Formally: an utterance by  $A$  of a sentence  $s$  raising an Issue  $I$  that is accompanied by the H\* L-L% tune adds  $\cup I$  to  $DC_A$ .

#### (17) RISING INTONATION

The L\* H-H% tune indicates that the speaker is not committing to the content of the Issue they've raised.

Formally: an utterance by  $A$  of a sentence  $s$  raising an Issue  $I$  that is accompanied by the L\* H-H% makes no changes to  $DC_A$ .

Note that this derives the speech acts of asserting and questioning defined by Farkas & Bruce (2010):

- ▷ an utterance of a falling declarative will raise the Issue  $\{p\}$ , by virtue of the sentence's declarative form, and add  $\cup\{p\}$  ( $= p$ ) to the speaker's  $DC$ , by virtue of its falling intonation

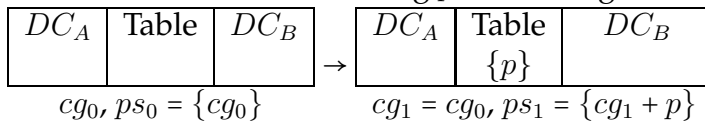
- ▷ an utterance of a rising interrogative will raise the Issue denoted by the sentence, by virtue of its interrogative form, and leave the speaker's *DC* untouched, by virtue of its rising intonation

### 1.2.3 Accounting for RDs

On this view, we can derive the behavior of an RD from its declarative form and its rising intonation:

- ▷ declarative form: raises a singleton Issue
- ▷ rising intonation: adds nothing to speaker's *DC*

(18) *A* utters a sentence *s* denoting *p* with rising intonation



How does this account for the empirical facts?

#### I. Lack of commitment

On this account, lack of commitment comes directly from the sentence's rising intonation.

#### II. Elicitation of response

Same explanation as for questions:

- ▷ speaker has raised an Issue without making a commitment that could resolve it
- ▷ so addressee response is necessary in order to remove the Issue from the Table

#### III. Speaker epistemic bias

Inferences of speaker epistemic bias follow from competition with falling declaratives.

- ▷ the speaker chose to raise the Issue  $\{p\}$  without committing to *p*
- ▷ they could've used a form that would've done so (a falling declarative)
- ▷ so: they must have a reason to avoid commitment to *p*

Crucially: in order for the choice of an RD to be felicitous, the speaker must only have *some* reason not to commit to *p*—there are many possible reasons to avoid a commitment!

- ▷ the speaker might be not quite sure that *p* is true, though they suspect it is
- ▷ the speaker might want to be deferential to the addressee's expertise by letting them make the initial commitment (q.v. Gunlogson 2008)
- ▷ the speaker might think *p* is false
- ▷ and so on

Different contexts will allow different inferences about what the speaker's reason for avoiding commitment is, allowing for inferences of both positive and negative epistemic bias in different contexts.

#### IV. Anticipation of addressee commitment

RDs are also in competition with polar interrogatives.

- ▷ the speaker chose to project only a future Common Ground that includes  $p$ <sup>2</sup>
- ▷ they could've used a form that would've also projected a future Common Ground that includes  $\neg p$  (a polar interrogative)
- ▷ so: they must have a reason to believe  $\neg p$  cannot become Common Ground

When the speaker uses an RD, they raise the Issue of whether  $p$  is true, and indicate that they think it is not possible for  $\neg p$  to become Common Ground.

It can only be the case that  $\neg p$  cannot become Common Ground if somebody makes an incompatible commitment—recall that with a falling declarative, it is natural that the speaker does not project a Common Ground including  $\neg p$ , as their commitment to  $p$  makes such a Common Ground impossible.

However, in the case of an RD, the speaker has indicated that they're *not* committing to  $p$ —if the speaker won't commit to  $p$ , the only way it can be impossible for  $\neg p$  to become Common Ground is if the addressee commits to  $p$ .

- ▷ pragmatically, the use of an RD indicates the speaker's expectation that the addressee will commit to  $p$

### 1.3 Summary

- ▷ an RD elicits addressee response about whether  $p$  is true, and predicts that they will say it is
- ▷ in effect, an RD solicits addressee commitment to  $p$ , which is cooperative only when the speaker thinks the addressee believes  $p$
- ▷ why might a speaker want to elicit addressee commitment to  $p$ ?

Maybe she takes the addressee to be an expert, and wants the addressee to confirm her hunch that  $p$  is true (cf. Gunlogson 2008).

Or maybe she disagrees with or is skeptical  $p$ , and wants to get the addressee's commit to it on record to provoke a confrontation.

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<sup>2</sup>That RDs project only *cgs* including  $p$ , despite not altering the context set, is central to Krifka's (2015) account of RDs as well.



## 2 Rising Imperatives

### 2.1 The Basic Facts

- ▷ very little prior work on RIs
- ▷ exception: Portner (2015)
- ▷ notes that intonation helps distinguish between more suggestiony and more com-mandy interpretations of imperatives, but remains agnostic about the specifics of the relevant intonational tunes<sup>3</sup>
- ▷ proposes an account of the effect of rising intonation on imperatives that is parallel to Gunlogson’s (2001) account of RDs, assuming the account of imperatives from Portner (2004):
- ▷ imperatives with falling intonation convey that the speaker treats the imperative as a priority, while imperatives with rising intonation convey that the addressee treats the imperative as a priority

I want to look specifically at imperatives accompanied by the L\* H-H% contour. These are actually quite common, e.g.:

(19) Buy me a drink?

(20) Let’s go?

Intuition (following Portner): RIs sound much more tentative/suggestiony than falling imperatives.

(21) **A:** I really like this present grandma gave me.

a. **B:** Write her a thank-you note.

b. **B:** Write her a thank-you note?

Impressionistically speaking:

- ▷ in (21a) **B** seems to be *telling* **A** to write her grandmother a thank-you note
- ▷ in (21b) **B** seems to be only pointing out that it is a possible course of action

Let’s put some empirical teeth on this intuition. Observe the following:

(22) **A:** I’m having trouble managing my time lately. I don’t know what my plans should be for this evening, do you have any advice?

a. **B:** Work on your paper? Blow it off and go to the beach?

b. **B:** Work on your paper. #Blow it off and go to the beach.

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<sup>3</sup>For other work on the interaction of imperatives and intonation, see Jeong & Condoravdi (2017), Keough et al. (2016)

Sequences of contradictory imperatives, which are infelicitous with falling intonation, are possible with rising intonation.

- ▷ compatible with the intuition that RIs are always merely suggestions
- ▷ one can cooperatively highlight a variety of different courses of action, even mutually incompatible ones
- ▷ but one cannot cooperatively ask that someone *pursue* mutually incompatible courses of action

This distinction doesn't follow from Portner's (2015) account, in which the rising imperatives would all be proposing updates to the same to-do list.

I'll propose instead that intonation modulates whether or not the speaker **endorses** that the addressee obey the imperative, taking inspiration from Condoravdi & Lauer (2017).

But before I sketch that account: how can we be sure that these are really imperatives?

## 2.2 RIs vs Fragment Answers

What if these are just fragment answers (Merchant 2004, Stainton 2005)?

- (23) **A:** I keep telling the guy who I broke up with that I'm not interested in talking to him, but he won't stop texting me. What should I do?
- a. **B:** Don't text him back anymore?
  - b. **B:** Not text him back anymore?

- ▷ the question 'what should I do?' licenses fragment answers
- ▷ we can tell that (23b) is a fragment, because it's not a possible imperative
- ▷ we can use the grammaticality of (23b) as a test for whether we're in a context that licenses fragments of the relevant kind

If we alter the context so that it no longer licenses fragment answers, rising imperatives are still possible:

- (24) **A:** I keep telling the guy who I broke up with that I'm not interested in talking to him, but he won't stop texting me. Do you have any advice?
- a. **B:** Don't text him back anymore?
  - b. **B:** \*Not text him back anymore?

- ▷ RIs are possible in contexts where fragment answers are ungrammatical
- ▷ so they can't all be fragments

## 2.3 RIs vs Left-Edge Ellipsis

What if these are just questions that have undergone ellipsis at their left edge (q.v. e.g. Weir 2016), like ‘Wanna see a movie?’

- ▷ plausible paraphrase for ‘Buy me a drink?’: ‘(Do you wanna) buy me a drink?’

I have two arguments that rising imperatives cannot be reduced to questions with left-edge ellipsis.

First, left-edge ellipsis is prosodically licensed, and only possible at the left edge of an intonational phrase:<sup>4</sup>

- (25) a. (Have you) seen the new Star Wars?  
b. I’m asking you whether \*(you have) seen the new Star Wars.
- (26) a. (I) won’t bother seeing it, I think.  
b. I think \*(I) won’t bother seeing it.

However, it’s possible to see a rising imperative that is not at the left edge of an intonational phrase:<sup>5</sup>

- (27) **A:** I’m having trouble managing my time lately. I don’t know what my plans should be for this evening, do you have any advice?  
**B:** Maybe work on your paper?

Second, it’s difficult to see how an ellipsis account could deal with negated RIs:

- (28) Don’t text him back anymore?

This could not possibly be derived via left-edge ellipsis from a question:

- ▷ if this were a question, ‘don’t’ would be sitting in C, to the *left* of the putatively elided subject
- ▷ no way to elide the subject without also eliding ‘don’t’

## 2.4 Lingering Questions

My empirical claims:

- ▷ apparent RIs in English can’t be reduced to sentence fragments
- ▷ apparent RIs in English can’t be reduced to questions with left edge ellipsis
- ▷ this suggests that they really are what they appear to be: rising imperatives

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<sup>4</sup>See Weir (2016) for copious further examples.

<sup>5</sup>Independent question, which I’m not going to touch with a ten-foot pole today: what exactly is ‘maybe’ doing here? How does ‘maybe’ interact with the meaning of an imperative?

This doesn't rule out them being some fourth thing, but I don't see what that would be.

Question I don't have the answer to: what is the cross-linguistic status of rising imperatives?

- ▷ turns out to be tough to investigate
- ▷ first one must find out whether a language has sentences that work like English RDs
- ▷ only then can one check whether that language's strategy for forming RD-like sentences can be applied to imperatives

Question I don't have the answer to: what is the cross-linguistic status of rising declaratives?

## 2.5 Analytical Sketch

This analysis is under construction quite actively at the moment—critical thoughts very welcome.

- ▷ I borrow heavily from Portner (2004) and Condoravdi & Lauer (2012, 2017)
- ▷ I'm less clear on how to deal with RIs from the point of view of Kaufmann (2012) or Starr (2017)

### 2.5.1 Basic Assumptions

- ▷ assumption, following Portner (2004):
- ▷ imperatives are proposals targeting the addressee's goal state
- ▷ assumption, following Condoravdi & Lauer (2012):
- ▷ the relevant goal state is an EFFECTIVE PREFERENCE STRUCTURE

Uttering an imperative that denotes  $p$  is a proposal that the addressee modify their effective preference structure such that  $p$  is a maximal element of it.

### 2.5.2 Endorsement vs Commitment

Proposal: as commitment is to declarative sentences, so endorsement is to imperative sentences.<sup>6</sup>

- ▷ for any imperative sentence  $s$  denoting  $p$ :
- ▷ uttering  $s$  puts forward  $p$  as an effective preference the addressee could adopt

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<sup>6</sup>Cf. Condoravdi & Lauer 2017, who take endorsement to play a crucial role in imperatives, though they do not go as far as I do here.

- ▷ when *A* utters *s* with falling intonation, she endorses that the addressee adopt *p* as an effective preference
- ▷ uttering *s* with rising intonation does not proffer the speaker's endorsement

We can think about endorsement in the following way:

- ▷ when *A* endorses that *B* adopt a preference, *A* compels *B* to do so by whatever authority she has
- ▷ so if *A* puts *p* forward as an effective preference that *B* could adopt, but does not endorse it, *A* is leaving it up to *B* whether or not to adopt that preference, rather than compelling her to do so

This captures the fact that RIs seem like pure suggestions, and the fact that it's not infelicitous to string together sequences of mutually incompatible RIs.

## Conclusion

There's obviously a lot of work left to be done here.

Goals I hope to have achieved in discussion of RIs:

- ▷ argue that these really are imperatives
- ▷ put some empirical teeth on the way their behavior differs from falling imperatives

Primary goals for future development of this account:

- ▷ unify the account of RIs more fully with the account of RDs
- ▷ work through how this data could be accounted for from the viewpoints of Kaufmann (2012) and Starr (2017)

Thanks for listening!

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