The Semantic and Pragmatic Interpretation of Rising Declaratives

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1 Introduction

Assertions and questions are basic direct speech acts that are used to exchange information. Typically, assertions provide information, while questions seek it. In English, these speech acts align with distinct sentence types. Assertions correspond to (falling) declaratives and questions correspond to (rising) polar interrogatives. However, RISING DECLARATIVES (RDs) are non-canonical structures that accompany declarative sentences with rising intonation: ASSERTIVE RISING DECLARATIVES (ARDs) are tentative assertions that overlap with falling declaratives, while INQUISITIVE RISING DECLARATIVES (IRDs) are biased questions that overlap with rising polar interrogatives (Jeong, 2018). In this paper, I first aim to shed some light on specific functions of RDs that have not received as much attention. I then propose how the interpretive effects of RDs arise from the combination of their semantics and pragmatics, which allows them to be interpreted as one function over the others.

2 Paradigms

I propose two paradigms of ARDs in terms of the uncertainty they implicate:

(1) a. EPISTEMIC UNCERTAINTY (EU) ARD
   A: Where’s Sally?
   B: (Um…) She’s home?

b. METALINGUISTIC UNCERTAINTY (MU) ARD
   A: Do you speak Chinese?
   B: I speak Cantonese?

(1a) indicates the speaker’s tentativeness on the truth value of the expressed proposition, analogous to epistemic modals. Speaker B is not perfectly certain that Sally is home, which leads to her epistemic tentativeness. In contrast, (1b) conveys an uncertainty of the relevance to the context, which is not directly associated with the truth value of the proposition. The speaker is not sure whether they are giving an adequate answer to the prior question. Thus, EU ARDs can be substituted with epistemic modals (e.g., She might be home), while MU ARDs cannot. Parallel behaviors of EU ARDs and epistemic modals are also observed in terms of modal subordination (Roberts, 1987, 1989).

(2) a. B: (Um…) She’s home? She must have come from school early.
   b. B: I speak Cantonese? #I must be born in Hong Kong.

An EU ARD can be followed by a modal utterance, as in (2a), while an MU ARD does not exhibit modal subordination, as in (2b). Note also that both types of ARDs can be used for politeness strategies (Jeong, 2021).

I argue two paradigms for IRDs as well, according to their biases.

(3) a. CONFIRMATIVE IRD

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The text continues with examples and analysis of the syntactic and pragmatic effects of rising declaratives.
A: There’s one flight to Seoul.
B: *The flight leaves at 5pm?*

b. CONTRADICTORY IRD
A: I went to the concert last night. Dave is a good singer.
B: *Dave is a good singer?* No way. You must be thinking about John.

b’. MIRATIVE IRD
A: I met Dave’s brother yesterday.
B: (What?) He has a brother?

(3a) and (3b) respectively implicate the speaker’s bias toward the expressed proposition \( p \) and its negation \( \neg p \). In (3a), speaker B indicates a high probability that the expressed proposition is true, while in (3b), speaker B conveys a contradiction against the proposition. Furthermore, Mirative IRDs, which are a specific subtype of Contradictory IRDs, can be used to express mirativity along with a negative bias. To express her surprise, the speaker should not have been committed to \( p \) prior to the discourse act, which aligns with the nature of Contradictory IRDs. The distinctive bias of each IRD results in differences in the licensed particle responses, analogous to positive and negative polar questions (Roelofsen & Farkas, 2015).

(4) a. Yes / #No, it is.
   a’. #Yes / No, it isn’t.
   b. Yes / No, it isn’t.
   b’. Yes / No, it is.

For Confirmative IRD, an acceptable response to agree on \( p \) is *yes*, while *no* is acceptable to disagree with \( p \), as demonstrated in (4a) and (4a’). In contrast, Contradictory IRDs can elicit either *yes* or *no* as a felicitous response. The former confirms \( \neg p \), while the latter rejects \( \neg p \), making both (4b) and (4b’) as felicitous responses.

3 Framework

I will propose an account of RDs couched in the extended Lewisian framework (Stalnaker, 1978; Lewis, 1979). I adopt the following components, which are extensions and adaptations proposed by Farkas & Bruce (2010) and Malamud & Stephenson (2015).

(5) Discourse Components
a. Common Ground (\( CG \)): the set of propositions that all speakers are publicly committed to
b. Discourse Commitments (\( DC \)): the set of propositions that the speaker has publicly committed to during the conversation up to the relevant time, and which are not shared by all the other participants
c. Table (\( T \)): the stack that records the at-issue content in the conversation
d. Projected Common Ground (\( CG^* \)): the set of potential \( CGs \) that gives possible resolutions for the top issue on the Table in the next expected stage of the conversation
e. Projected Discourse Commitments (\( DC^* \)): the set of propositions that the speaker is expected to become committed to (Speaker’s Projected Commitment; \( DC^*_{sp} \)) or the best guess of commitments made by other interlocutors (Addressee’s Projected Commitment; \( DC^*_{ad} \))
4 Interpretive Effects

The interpretation of an utterance involves at least three factors: semantics (semantic denotations and conventional discourse effects), pragmatics, and discourse context. In the case of interpreting RDs, I propose that assertive and inquisitive meanings can be conventionally derived, and that specific functions of each RD are associated with pragmatic reasoning that arise from the context. I adopt the convention of falling declaratives from Farkas & Bruce (2010), which is defined as follows:

(6) Convention of Falling Declaratives
   (i) $\text{Table}_n = \text{Table}_i \cup \{p\}$
   (ii) $\text{DC}_{sp,o} = \text{DC}_{sp,i} \cup p$

Rising intonation overrides the convention of falling declaratives in two distinct ways: (i) it increases the inquisitive content of the proposition and (ii) it projects discourse components. The former is conventionally marked, while the latter is context-dependent.

4.1 Semantic Convention

In Inquisitive Semantics (Ciardelli et al., 2019 and references therein), a sentence not only conveys informative content but it also expresses inquisitive content by raising an issue. Within this framework, declaratives are considered non-inquisitive, while polar interrogatives are considered non-informative. Since the convention of each RDs overlaps with the corresponding two canonical sentence types, I argue that both the informative content and inquisitive content of RDs are not trivial, as illustrated in Figure 1. Specifically, ARDs are more informative than inquisitive, denoting a singleton set $\{p\}$, while IRDs are more inquisitive than informative, denoting a non-singleton set $\{p, \neg p\}$.

![Figure 1. Informativeness and Inquisitiveness of Rising Declaratives](image)

The difference between the singleton and non-singleton sets in ARDs and IRDs, respectively, arises from the effect of rising intonation increasing the inquisitiveness of the semantic content. A weak rise ($H^* H-H%$) increases inquisitive content up to the point where it is no higher than informative content, which means that the proposition remains primarily informative, resulting in a singleton $\{p\}$. In contrast, with a steep rise ($L^* H-H%$), inquisitive content surpasses informative content, and thus the content is shifted from a singleton set $\{p\}$ to a non-singleton set $\{p, \neg p\}$, turning the primary speech act into a question.

4.2 Pragmatic Reasoning

The function of an RD is determined by pragmatic reasoning on its conveyed meaning in context. Then, rising intonation serve to project discourse components, accordingly.
The uncertainty of an ARD can be captured by comparing the semantic contents of the current Question Under Discussion (QUD) and the ARD. If the content of the ARD is a subset of the current QUD, it conveys an epistemic tentativeness. In (2a), the content of an ARD, \{Sally is home\}, is a subset of the current QUD, \{Sally is home, Sally is at school, Sally is at the café, Sally is at the gym, ...\}, which is updated to the topmost stack of the Table. In contrast, in (2b), \{I speak Cantonese\} is not a subset of \{I speak Chinese, I don't speak Chinese\}. An ARD that conveys a proposition that is a subset of the current QUD is construed as an EU ARD, whereas an ARD that conveys a proposition that is not a subset of the current QUD is understood as an MU ARD.

For IRDs, the inference regarding the speaker's negative bias only emerges when the speaker has a prior contextual information about the addressee's belief or bias toward \(p\). If (3b) is modified as in (7), an IRD is more likely to be interpreted as having a positive bias.

(7) A: I'm a big fan of Dave.
   B: Dave is a good singer?

In (7), the prior context does not provide direct information that speaker A believes Dave is a good singer. It matches with the previous accounts on the contextual condition that Contradictory IRDs require (e.g., Gunlogson, 2003; Farkas & Roelofsen, 2017): Contradictory IRDs are attested when the context indicates that the addressee believes \(p\).

5 Discourse Effects

5.1 Assertive Rising Declaratives

I analyze EU ARDs as updating \(p\) to the \(DC_{sp}^-'\), since the speaker's tentativeness is concerned with the truth value of the expressed proposition. Alternatively, the uncertainty on the relevance of MU ARDs can be captured systemically by updating the newly proposed discourse component, the projected Table (Table; c.f., Bhadra, 2020), which is defined as follows:

(8) Table': the stack that records at-issue content which the speaker expects to be relevant to the current QUD.

It is analogous to the \(DC_X'\) and the \(CG'\), since they all reflect the expected next stage of conversation. Updating semantic content to the Table' reflects, at the same time, the speaker's uncertainty on the relevance (Roberts, 1996, 2012) to the current QUD and their expectation of the information becoming relevant to it. The discourse effects of ARDs are presented in (9).

(9) a. Discourse Effect of EU ARDs
   (i) Table' = Table' \cup \{p\}
   (ii) DC_{sp,o}' = DC_{sp,i}' \cup p

b. Discourse Effect of MU ARDs
   (i) Table' = Table' \cup \{p\}
   (ii) DC_{sp,o}' = DC_{sp,i}' \cup p

The proposed account also provides an explanation for the politeness effect observed in both types of ARDs within a unified discourse process (c.f., Jeong, 2021). This process involves moving an item from projected components to present ones. Projected components require
the addressee’s ratification for the progression of discourse, and this process leads to the enhancement of the addressee’s face by being indirect, contributing to politeness.

5.2 Inquisitive Rising Declaratives

In my model of IRDs, Confirmative IRDs involve adding \( p \) to the \( DC_{sp}^* \), while Contradictory IRDs involve adding \( p \) to the \( DC_{ad}^* \). Additionally, for mirativity, I propose that the prosodic mirativity of Mirative IRDs adds flavored commitments (Rett, 2021).

(10)a. Discourse Effect of Confirmative IRDs
   (i) \( Table_o^* = Table_i \cup \{p, \neg p\} \)
   (ii) \( DC_{sp}^*o = DC_{sp}^*i \cup p \)

b. Discourse Effect of Contradictory IRDs
   (i) \( Table_o^* = Table_i \cup \{p, \neg p\} \)
   (ii) \( DC_{ad}^*o = DC_{ad}^*i \cup p \)

c. Discourse Effect of Mirative IRDs
   (i) \( Table_o^* = Table_i \cup \{p, \neg p\} \)
   (ii) \( DC_{ad}^*o = DC_{ad}^*i \cup p \)
   (iii) \( DC_{sp}^*o = DC_{sp}^*i \cup \text{is-surprised}(p) \)

Confirmative IRDs exhibit a positive bias by adding \( p \) to the \( DC_{sp}^* \), indicating the speaker’s ‘weaker’ doxastic commitment. In contrast, Contradictory IRDs convey a negative bias by lacking speaker’s commitments. Speech acts are generally considered a means to increase mutual information among discourse participants, with agreement being the plausible act for cooperative participants. When a speaker overrides this basic assumption (i.e., not fully or tentatively committed \( p \)), they may be conveying ignorance or a negative bias, leading to a delay in reaching mutual agreement. However, RDs do not necessarily imply ignorance, given that polar interrogatives are more useful to gain information in an unbiased context (Goodhue, 2022). The use of IRDs that update the \( DC_{ad}^* \) thus signals a negative bias. Additionally, Mirative IRDs are analyzed alongside emotive markers as illocutionary not-at-issue content (Rett, 2021), since they exhibit the same patterns in terms of Moore’s Paradox. To indicate the speaker’s unexpectedness regarding the expressed proposition, the flavored commitment \( \text{is-surprised}(p) \) is updated to the \( DC_{sp} \) (Rett & Sturman, 2021).

6 Conclusion

To recapitulate, the interpretation of RDs involves a complex process that combines semantic convention and pragmatic reasoning. The analysis I proposed is summarized in Table 1, which provides a concise overview of the key elements and their interactions.

<table>
<thead>
<tr>
<th>Semantics</th>
<th>ARDs</th>
<th>IRDs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise</td>
<td>Weak (H* H-H%)</td>
<td>Steep (L* H-H%)</td>
</tr>
<tr>
<td>Pragmatics</td>
<td>Subset of the QUD</td>
<td>YES</td>
</tr>
<tr>
<td>Contextual Information</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Semantic Content</td>
<td>( (p) )</td>
<td>( (p, \neg p) )</td>
</tr>
<tr>
<td>Projection</td>
<td>( DC_{sp}^* )</td>
<td>( Table^* )</td>
</tr>
</tbody>
</table>
References


Goodhue, Daniel. 2022. Isn’t there more than one way to bias a polar question? *Natural Language Semantics* 30.4. 379-413.


