Deriving Social Meanings in an Extended Lewisian Model

The Case of English Rising Declaratives

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https://github.com/sunwooj/risingdec
The Discourse Context

• **Declaratives**
  
  *Lenny went to Yemen.*

• **Interrogatives**
  
  *Did Lenny go to Yemen?*

• **Imperatives**
  
  *(Lenny!) Go to Yemen!*

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Conventional updates to core elements of the discourse context

- **Assertion**
- **Accusation**
- **Question**
- **Command**
- **Request**
The Discourse Context

- **Declaratives**
  - Lenny went to Yemen.

- **Interrogatives**
  - Did Lenny go to Yemen?

- **Imperatives**
  - (Lenny!) Go to Yemen!

Additional secondary inferences:
- esp. illocutionary inferences

Conventional updates to core elements of the discourse context
The Extended Lewisian Model

**Context**

- **CG** (common ground)  
  Stalnaker (1978)

- **Table** (stack of issues)  
  Farkas & Bruce (2010)  
  cf. Roberts (1996)

- **DC_x** (discourse commitment set of X)  
  Hamblin (1971)  
  Gunlogson (2003)

- ...  
  (Krifka 2015, Malamud & Stephenson 2015, a.o.)

**Speech acts, follow-up responses, etc.**

- Context and the conversational scoreboard

- Modeling the discourse effects of diverse marked and unmarked sentence types

- Predicting felicitous response patterns
Deriving Social Meanings

**Context**

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  - Stalnaker (1978)

- **Table** (stack of issues)
  - Farkas & Bruce (2010)

- **DC_x** (discourse commitment set of X)
  - Hamblin (1971)
  - Gunlogson (2003)

- ... (Lauer 2013, Krifka 2015, Malamud & Stephenson 2015, a.o.)

- Can **social effects** such as **politeness** be derived from this as well?

- Problematizing the notion of **politeness**
  - systematic and predictable (Jeong & Potts 2016)
  - volatile, highly context-dependent
Refining the Question about Politeness

• Is it a monolithic, first-order inference, or is it rather derived from a combination of other more primitive pragmatic inferences?

• Do linguistic conventions directly prescribe it, or do they rather prescribe more abstract contextual updates that come to have close bearings on politeness inferences?

• In sum, what are the basic units on which politeness effects operate?
English rising declaratives

• A case study: English rising declaratives

• Previous work on politeness effects of English rising declaratives: have focused on a particular subset of the data (assertive uses)

• Expanding the data and establishing a core distinction
  – Inquisitive Rising Declaratives (IRDs)
  – Assertive Rising Declaratives (ARDs)
English rising declaratives

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Assertive vs. inquisitive rising declaratives

• **Assertive rising declaratives (ARDs):** often function as *tentative assertions*

• **Inquisitive rising declaratives (IRDs):** often function as *biased questions*

• Expected to compete with different canonical alternatives, falling declaratives and polar interrogatives
Assertive rising declaratives (ARDs)

(B is introducing herself to her new classmates)
B: Hello! My name is Lena? *I’m from Yemen?*  
assertive rising declarative (ARD)
B: Hello! My name is Lena. *I’m from Yemen.*  
falling declarative (FD)

*cf.* B: Hello! My name is Lena. *#Am I from Yemen?*

A: Did Laura meet a lot of celebrities?
B: (Um...) *Laura met President Obama?*  
assertive rising declarative (ARD)
B: (Um...) *Laura met President Obama.*  
falling declarative (FD)

*cf.* B: *#Did Laura meet president Obama?*

- Intuition: generally sound *more polite* than their canonical alternatives (falling declaratives)

Hirschberg & Ward (1992)  
Malamud & Stevenson (2015)

Levon (2016),  
Podesva (2011), a.o.
Inquisitive rising declaratives (IRDs)

(An actor talking to a stage director)
B: (So,) *I’m from Yemen?*
B: (So,) *Am I from Yemen?*
cf. #I’m from Yemen.

A: I heard that Laura recently interviewed the president.
B: (What?) *Laura met President Obama?*
B: (What?) *Did Laura meet President Obama?*
cf. #Laura met president Obama.

- Intuition: generally sound *less polite* than their canonical alternatives (polar interrogatives)

Inquisitive Rising Declarative (IRD)
Polar Interrogative (PQ)
Poschmann (2008), Gunlogson (2008)

Inquisitive Rising Declarative (IRD)
Polar Interrogative (PQ)
Pierrehumbert & Hirschberg (1990)
Gunlogson (2003), Farkas & Roelofson (2017)
ARDs vs. IRDs and their politeness effects

• Analysis to come:
  – ARDs and IRDs are associated with two distinct sets of context-updating conventions
  – These context-updating conventions can generate a wide range of observed patterns, one of which is the perceived difference in their politeness effects

  An analysis couched in an extended Lewisian framework

• Before that: strengthening the empirical generalizations
ARDs vs. IRDs: motivating an experimental study

• No experimental or systematic distinction between ARDs and IRDs established so far

• Can our intuitions about the difference in politeness effects between ARDs vs. IRDs be captured more systematically?

An experimental study!

A more comprehensive account of the experimental results as well as additional analyses can be found in Jeong (2017)
Experimental hypotheses

• Different politeness effects
  – Other things being equal (content, speaker), **assertive rising declaratives (ARDs)** will be associated with significantly **higher politeness** ratings than its potential alternative, **falling declaratives**
  – Other things being equal (content, speaker), **inquisitive rising declaratives (IRDs)** will be associated with significantly **lower politeness** ratings than its potential alternative, **polar interrogatives**
Experiment Design

• An experimental study
  – Contingent on whether a given rising declarative is construed as an ARD vs. an IRD, do different politeness effects arise?

• But first: how to probe the core distinction (ARD vs. IRD) experimentally?
  – participants’ illocutionary inferences
  – participants’ inferences on the more likely follow-up response
Probe 1: illocutionary inferences

Assertive rising declaratives (ARDs)

A: Did Laura meet a lot of celebrities?
B: (Um...) *Laura met president Obama?*

Information-giving (assertion)
Information-seeking (question)

Inquisitive rising declaratives (ARDs)

A: I heard that Laura recently interviewed the president.
B: (What?) *Laura met president Obama?*

Information-giving (assertion)
Information-seeking (question)
Probe 2: Likely follow-up response
(Gunlogson 2008)

• **Oh**: dependently commits the speaker to the addressee’s commitment (i.e. the speaker is not a source);

• **Yes**: independently commits the speaker as a separate source.

A: The printer is broken.   A: The printer is broken.
B: Oh.                    B: Yes.

Gunlogson (2008)
Probe 2: likely follow-up response

Assertive rising declaratives (ARDs)

A: Did Laura meet a lot of celebrities?
B: (Um...) *Laura met president Obama?*
   A: *Oh*, that’s exciting.
   A: *#Yes*, she did.

Inquisitive rising declaratives (IRDs)

A: I heard that Laura recently interviewed the president.
B: (What?) *Laura met president Obama?*
   A: *Yes*, didn’t you know?
   A: *#Oh*, I see.
An experimental study

• A perception study that controlled for a variety of factors (content, speaker, etc.) and systematically tested for the difference between ARDs, IRDs, FDs, and PQs
  – Using prosodically manipulated auditory stimuli

• Participants heard a range of auditory stimuli, and judged:
  – More likely illocution / follow-up response
  – A variety of other contextual inferences (e.g., politeness)
Sample stimuli

• Recordings from 6 native speakers of AE (3 males, 3 females)

• e.g. “Lenny is from Yemen”
  – Falling declarative (NPA - 10 st.)
  – Rising declarative 1 (NPA + 6 st.)
  – Rising declarative 2 (NPA + 8 st.)
  – Rising declarative 3 (NPA + 10 st.)
  – Polar interrogative (NPA + 10 st.)

NPA: Nuclear pitch accent
st: semitone
Sample trial: experiment 1

• **Q0:** Please type in what you just heard.

• **Q1:** What is the most likely interpretation of the utterance? (experiment 1 & 2)
  
  – The speaker is *seeking information*.
  
  – The speaker is *giving out information*.
  
  – (The speaker is inviting.)
  
  – (The speaker is requesting.)

Illocutionary inference
Sample trial: experiment II & III

• **Q0:** Please type in what you just heard.

• **Q1:** Which of the following is the more likely response from the listener (addressee)? (experiment 3)
  
  – **Oh,** I didn’t know that.
  – **Yes,** didn’t you know?

**Likely follow-up response**
*(constraints on future discourse)*
Sample trial: experiment I, II, III

- Q2-Q3

- **Q4**: How polite did the speaker sound? (ratings from 0 to 100)

  Perceived speaker politeness

- Q5-Q6
Procedure

• Three experiments (1, 2, 3) conducted: 5 trials in each experiment

• Experiment 1, 2 & 3 were nearly identical in design; they only differed in the range / number of sentences tested

• 1200 native speakers of American English recruited as participants (400 for each experiment)
Speaker politeness

Speaker politeness

Assertion Question

OH YES

politeness rating

politeness rating

ARD IRD ARD IRD

falling declarative rising 1 decl. rising 2 decl. rising 3 decl. polar interrogative
Summary of the results

• In absolute terms, the politeness markings of ARDs and IRDs are about the same

• However, the contrast with their respective alternatives (FDs and PQs) show that their politeness effects are different pragmatically

  – **Assertive rising declaratives**: sound significantly *more polite* than standard way of asserting (FDs)

  – **Inquisitive rising declaratives**: sound significantly *less polite* than standard way of questioning (PQs)
The analysis

• Two distinct marked sentence types
  – **ARDs** (assertive)
  – **IRDs** (inquisitive)

• Two distinct sets of context-updating conventions

• Each set partially overlaps with the conventions for FDs and PQs, respectively

Jeong (2017)  
The analysis

- **Basic elements of the discourse context**
  - **CG** (common ground): set of propositions mutually agreed upon by the participants (Stalnaker 1978)
  - **Table**: stack of issues raised (Farkas and Bruce 2010)
  - **DC<sub>\(X\)** (commitment set): set of propositions that the participant \(X\) has publicly committed to during the conversation up to the relevant time (Gunlogson 2003)
  - **CG*** (projected set): set of possible future CGs, i.e., common grounds (Farkas and Bruce 2010)
  - **DC<sub>\(X\)*** (projected commitment set): set of propositions that interlocutor \(X\) is expected to become committed to in the normal course of conversation (Malamud and Stevenson 2015)

Farkas and Bruce (2010), Malamud & Stephenson (2015)
Assertive rising declaratives

• **Assertive rising declaratives** (content: \( p \))
  – Add \( p \) to the Table.
  – Add \( p \) to the speaker’s current commitment set, \( DC_{Sp} \)
  – Add \( MLI^p \) (a metalinguistic issue about \( p \)) to the Table

  Is \( p \) a relevant enough answer?  
  Am I in the right social context to utter \( p \)?

• **cf. Falling declaratives** (content: \( p \))
  – Add \( p \) to the Table
  – Add \( p \) to the speaker’s current commitment set, \( DC_{Sp} \)

Jeong(2017)  
Predictions for ARDs

• Felicity of *Oh*, assertion interpretations, substitutions with falling declaratives
  – ARDs incur full speaker commitment to the proposition $p$
  – ARDs share the same basic conventions as FDs

• Higher politeness ratings than falling declaratives (given experimentally controlled content/context)
  – ARDs raise an (inquisitive) $MLI^p$, whereas FDs do not raise any $MLI^p$
  – The former thus signals that the speaker wants to explicitly check in with the addressee about the validity, relevance, etc., of her contribution to the discourse
Inquisitive rising declaratives

• **Inquisitive rising declaratives** (content: \{p, ¬p\})
  
  – Add \{p, ¬p\} to the Table.
  
  – Add \(p\) to the projected commitment set of the addressee
  
  – NB. [[Rise-I]] = \(\lambda p \lambda q [q = p \lor q = ¬p]\)

• **cf. Polar interrogatives** (content: \{p, ¬p\})
  
  – Add \{p, ¬p\} to the Table
  
  – NB. [[INT]] = \(\lambda p \lambda q [q = p \lor q = ¬p]\)

Jeong(2017)


Predictions for IRDs

• Infelicity of *Oh*, question interpretations, substitutions with polar interrogatives
  – IRDs do not give rise to any speaker commitment (its main function is to add an inquisitive issue to the Table)
  – IRDs share the same basic conventions as PQs

• Lower politeness ratings than polar interrogatives (given experimentally controlled content/context)
  – IRDs add the positive answer *p* to the addressee’s projected commitment set, whereas PQs don’t
  – The former thus signals that the speaker is less neutral with respect to the answer she expects from the addressee
Advantages of an extended Lewisian approach to politeness

• Since politeness effects are analyzed as second order inferences that are derived from more primitive conventions interacting with a variety of contexts, they are expected to be cancellable in certain contexts

A: Why do you hate him so much?
B: Um... *He is a racist idiot?*

MLIP: *Is p a good enough answer for you? (or) Isn’t p a good enough answer for you already?*
Conclusion

• There exists two different types of English rising declaratives that differ systematically in a variety of inferences that they generate (one of which is *politeness*)

• These can be captured by positing appropriate conventions for each within an extended Lewisian model of discourse
Conclusion

• Politeness effects are better analyzed as being derived from more primitive, context-updating conventions, rather than being directly stipulated.

• Implications and some remaining issues
  – Discourse moves as alternatives
  – Ultimate link to indexical meaning (cf. Beltrama 2016, Burnett 2017)

Thank you!

https://github.com/sunwooj/risingdec

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References


