1 Introduction

General theoretical goals

1. Understand what makes a question ‘canonical’, and what makes it ‘non-canonical’; understand how this difference affects the form of interrogatives across languages

Pre-theoretical intuition:

- unmarked interrogatives: (i) no special formal marking; (ii) used to ask canonical questions
  
  (1) a. Has Amanda arrived already?
      b. Who took the keys?

- marked interrogatives: (i) special formal marking; (ii) used to ask non-canonical questions
  
  (2) Amanda has arrived already, hasn’t she?

Question: Why is this type of form-function pattern cross-linguistically stable?

2. Work towards a typology of non-canonical questions, and of interrogative forms used to ask them

Question: What is the possibility space of non-canonical questions associated to marked forms?

Theoretical ingredients I assume:

- *compositional semantics* – associates a semantic object to particular sentences and sentence forms

- *conventional discourse effects* (CDEs) – functions from input to output context structures determined by a particular sentence form – see Condoravdi and Lauer (2012a), Condoravdi and Lauer (2012b), Farkas and Roelofsen (2017)
Key assumption – see Farkas and Roelofsen (2017)
- there are linguistic forms whose conventional contribution targets the CDEs of the sentence in which they occur
- such forms will be called \textit{d(iscourse)} markers; sentences that involve them are called \textit{d(iscourse)}-marked; those that don’t are called \textit{d-unmarked}

Particular goal
- Account of a special type of marked interrogative in Romanian, namely interrogatives involving the morpheme \textit{oare}, treated here as a \textit{d}-marker

(3) \textit{Oare Rodica e aici?}
\textit{oare} Rodica is here
‘Is Rodica here, I wonder.’

- In the process, introduce a special type of non-canonical question I christen \textit{non-intrusive}

\section*{Roadmap}
\textbf{Section 2: Theoretical assumptions}
\textbf{Section 3: Canonical questions}
\textbf{Section 4: Non-intrusive questions: \textit{oare} interrogatives in Romanian}
\textbf{Section 5: Conclusion}

\section*{2 Theoretical assumptions}

COMPOSITIONAL SEMANTICS

Inquisitive Semantics notions and notation used below – for details, see Ciardelli \textit{et al.} (2013) and Ciardelli \textit{et al.} (2015)

- a \textit{state} is a set of worlds
- the denotation of a sentence (whether interrogative or declarative) is a \textit{proposition}
- a proposition \( p \) is a downward closed set of states; (downward closure is not relevant for present purposes and will be ignored below)
- the maximal states in a proposition \( p \) are called the \textit{possibilities} in \( p \)
- if \( p \) is a proposition expressed by a sentence \( S \), and \( s \) is a possibility in \( p \) that is contributed by an overt component of \( S \), \( s \) is said to be \textit{highlighted} (notated below by boldfacing)
- if \( p \) is a proposition, \( \cup p \) is the \textit{informative content} of \( p \), noted as \text{info}(p)
- a proposition \( p \) containing a single possibility \( s \) is \textit{purely informative}
- a proposition \( p \) containing more than one possibility such that \text{info}(p) = W is \textit{purely inquisitive}
Declarative and interrogative sentences—see Farkas and Roelofsen (2017) for details

- declaratives involve a \texttt{dec} operator that results in a purely informative denotation; such a sentence denotes a proposition containing a single highlighted possibility contributed by its sentence radical

(4) a. Mona arrived.
    b. \{$w$: Mona arrived in \(w\}\}

- interrogatives involve an \texttt{int} operator that results in a purely inquisitive denotation

(5) a. Did Mona arrive?
    b. \{$w$: Mona arrived in \(w\), \{w: Mona did not arrive in \(w\}\}\}

(6) a. Who arrived?
    b. \{$w$: only Mona arrived in \(w\), \{w: only Gail arrived in \(w\), \{w: Mona and Gail arrived in \(w\}\}\}\)

3 I assume an exhaustive interpretation of the interrogative, and a context that reduces the relevant domain to just Mona and Gail. I assume that constituent interrogatives have an existential presupposition. This assumption plays no role in what follows.

CONSTEX STRUCTURES

A structure \(K\) with at least the following components:

1. A set of discourse participants \textit{Part}

2. For every discourse participant \(X \in \text{Part}\), \(\text{DC}_X\) is a set of states, called the \textit{discourse commitments of} \(X\); if a state \(s\) is in \(\text{DC}_X\), \(X\) is publicly committed to \(w_a \in s\) – see Gunlogson (2001)

3. A stack of propositions called the Table – component where matters that are at issue are entered; this is the locus of QUDs and as such further structure should be added

4. The projected set (ps): set of \(\text{DC}_{Ad}\) – see Meriçli (2016); these specify the set of canonical future Addressee reactions

Derived components:

- the Stalnakerean notion of \(\text{cg}\): set of states containing background assumptions as well all the states \(s\) such that for every \(X \in \text{Part}\), \(s \in \text{DC}_X\)

- the Stalnakerean notion of \(\text{cs}\): \(\cap \text{cg}\)

CONVENTIONAL DISCOURSE EFFECTS (CDEs)

- Specify how a sentence of a particular form affects the input context structure relative to which it is uttered

- Formally, functions from \(<S, \ p, \ K_i\>\) to \(K_o\) where

- \(S\) is a sentence
p is the proposition expressed by S
K_i is the input context structure, and K_o is the output context structure

• cde s are characterized here by listing the changes from K_i to K_o

Distinction between basic and special cde s (Farkas and Roelofsen, 2017)

• basic cde s: determined solely by the compositional semantics of a sentence
• special cde s: added by d-markers

Merging the Assertion and Question speech act operators

• interrogative and declarative sentences have different semantics
• their basic cde is determined by applying the same basic cde function to their differing semantic content

Basic cde of uttering a sentence S with propositional content p:

(7) Basic cde: K_i + S
1. DC_{Sp,o} = DC_{Sp,i} ⊕ \text{info}(p) − \text{info}(p) is added to DC_{Sp}; the Speaker is committed to \text{w_a} \in \text{info}(p)
2. Table_o = Table_i \circ p − p is pushed on the top of the stack on the Table; the Speaker raises the issue of which s \in p is such that \text{w_a} \in s
3. ps_o = ps_i \oplus p − ps_o is created by adding each possibility s \in p to each DC_Ad in the input ps_i; the elements of ps_o; future Addressee commitment lists computed by adding each s \in p to each element of ps_i

The symbol \oplus is a function

• from a set of states D and a state s to D ⊕ s = D \cup \{s\} (s is added as an element to D)
• from a list of sets of states Π and a proposition p to a new set of states Π ⊕ p = \{P \oplus s | P \in Π, s \in p\}, where s is a possibility in p (each possibility s \in p is added to each element of Π)

3 Canonical questions

A canonical question act: uttering a d-unmarked interrogative sentence S_{INT} expressing a proposition p

D-unmarked interrogatives:

• have purely inquisitive semantics
• are associated with the basic cde s determined by their semantics alone

(8) K_i + S_{INT}
1. DC_{Sp,o} = DC_{Sp,i} ⊕ \text{info}(p) − the Speaker makes a trivial commitment
2. Table_o = Table_i \circ p
3. \( \text{ps}_o = \text{ps}_i \oplus p \) – since \( p \) contains more than one possibility, a set of future \( DC_{Ad} \) are projected, one for each possibility \( s \in p \)

A simple example:

(9)  
\begin{align*}
  a. & \quad \text{Did Mona arrive?} \\
  b. & \quad p = \{s, \bar{s}\}
\end{align*}

\text{CDES of (9)}:

(10) \quad K_i + (9)

1. \( DC_{Sp,o} = DC_{Sp,i} \oplus \text{info}(p) \)
2. \( \text{Table}_o = \text{Table}_i \circ p \)
3. \( \text{ps}_o = \{DC_{Ad,i} \oplus s, DC_{Ad,i} \oplus \bar{s}\} \)

By uttering a d-unmarked interrogative, the Speaker

- makes a trivial commitment
- steers the conversation towards multiple futures, one for each possibility \( s \in p \)
- the elements of the \( \text{ps}_o \): those future \( DC_{Ad} \) that result after the Addressee commits to each possibility in the denotation of the interrogative

Default pragmatic assumptions characterizing canonical questions

Question: Why would a rational agent perform a speech act with the effects in (10)?

Answer: Assuming that conversational information gain is the default engine driving the conversational exchange:

(11) \textit{Some of the default pragmatic assumptions accompanying a canonical question}

1. \textit{Speaker ignorance}: the Speaker doesn’t know which \( s \in p \) is such that \( w_a \in s \); this is so because if she did, the most efficient way of achieving information increase would be for her to provide this information
2. \textit{Addressee competence}: the Speaker assumes the Addressee knows the answer to the question (the Addressee’s information state allows her to commit to that \( s \in p \) which is such that \( w_a \in s \)); this is so because the Speaker steers the conversation towards canonical futures in which the Addressee resolves the issue
3. \textit{Addressee compliance}: the Speaker assumes that the Addressee will resolve the question (she will commit to the ‘true’ possibility in \( p \)); this is so because the Speaker presents herself as assuming that one of the canonical conversation futures her move projects will in fact be reached

Canonical question

- ignorant Speaker requests information from an Addressee assumed to be knowledgeable and cooperative – follows from the basic CDE of interrogatives

Canonical questions put the Addressee on the spot:
to comply with a canonical question, the Addressee has to provide information that is typically novel

the Speaker makes a non-trivial assumption about the doxastic state of the Addressee; she assumes the Addressee has more information than the Speaker has relative to which possibility \( s \in p \) is such that \( w_a \in s \)

Predictions made by the general approach adopted

- D-unmarked interrogatives
  - other things being equal, they can be used to ask canonical questions because they are associated only with the basic CDEs
  - their use is not limited to canonical questions: default pragmatic assumptions can be overridden

- D-marked interrogatives
  - mark further CDEs that may signal departures from default pragmatic assumptions accompanying canonical questions

In particular, d-marked interrogatives may signal

- the weakening of the Addressee compliance effect of canonical questions (non-intrusive questions)
- the weakening of the Speaker ignorance assumption (biased questions)
- the weakening of the Addressee competence assumption (tentative questions)

4 Non-intrusive questions: oare-interrogatives in Romanian

Basic relevant facts of Romanian

- polar interrogatives: presence of INT marked primarily by intonation - ↑
- constituent interrogatives: presence of INT marked by fronted interrogative pronoun
- presence of DEC marked by falling intonation - ↓

(12) a. Rodica e aici. ↓
   ‘Rodica is here.’

b. Rodica e aici? ↑
   ‘Is Rodica here?’

c. Cine e aici?
   ‘Who is here?’

The morpheme oare

- found in polar and constituent interrogatives, but not in declaratives; closest English equivalent: interrogatives with postposed/preposed I wonder\(^4\)

\(^4\) Oare cannot occur in imperatives either, an issue that is beyond the scope of this talk.
(13)  a. *Oare Rodica e aici.
     oare Rodica is here
b. Oare Rodica e aici?
     oare Rodica is here’
     ‘Is Rodica here, I wonder.’
c. Oare pe cine a invitat Rodica?
     oare who.Acc has invited Rodica
     ‘Who has Rodica invited, I wonder.’

Syntactic variation:\n
(14)  a. Cine il va ajuta pe Petru oare?
     who him will help Ac. Peter oare
b. Cine il va ajuta oare pe Petru?
     who him will help oare Ac. Petru
     ‘Who will help Peter, I wonder.’

• *oare* (sometimes in its abbreviate form *or*): used elsewhere to signal some version of free choice:

(15)  a. oare-care
     oare - what
     ‘any’ in pejorative use (any old)
b. oricine/orice
     or-who/what
     ‘anybody/anything’

The contribution of *oare* in interrogatives

• *oare*-interrogatives are **like** simple interrogatives in that the Speaker raises an issue and thereby signals she wishes to have it resolved

• *oare*-interrogatives are **unlike** simple interrogatives in that the Speaker signals that she does not wish to put the Addressee on the spot for providing the answer

*Oare* interrogatives are infelicitous in contexts in which the Addressee is assumed to answer the question:

(16)  

**Context: Policeman to driver he stopped**

#Oare cu ce viteză a i mers?

*oare* with what speed have.II gone

‘What was your speed, I wonder.’

(17)  

**Context: Teacher to pupil**

#Oare ce ai avut pentru azi?

*oare* what you-have for today

‘What is your lesson for today, I wonder.’

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\(^5\)See Hill (2002) for the claim that *oare* is a complementizer. Whether there are subtle interpretive differences between the examples in (14) needs further investigation.
Suggestion in Farkas and Bruce (2010): *oare* interrogatives allow for canonical futures in which the Addressee does not resolve the issue.\(^6\)

Implementation under current assumptions:

- *oare* is a d-marker: contributes a special CDE over and above the basic effect contributed by the semantics of the interrogative:

\[(18) \text{Contribution of } \text{oare} \]  
When computing \(p_{so}\), add \(\text{DC}_{Ad,i} \oplus \text{info}(p)\) to \(p_i\)

The addition to \(p_{so}\) triggered by the presence of \(oare\): the weakest possible commitment relative to \(p\)

- given the inquisitive nature of \(p\), the commitment is trivial

**Oare-interrogatives vs. unmarked interrogatives**

- unmarked interrogatives and *oare* interrogatives have the same semantics; therefore
- their CDEs overlap in that both involve the same basic CDE
- *oare*-interrogatives have an extra element in \(p_{so}\), namely \(\text{DC}_{Ad,i} \oplus \text{info}(p)\), which in this case adds a trivial commitment to \(\text{DC}_{Ad,i}\)

Connection with free choice captured

- *oare*-interrogatives widen the range of projected futures, leaving the Addressee more choice

Example: unmarked PI vs. *oare* PI

- Unmarked polar interrogative:

\[(19) \text{ Rodica e aici?} \]

‘Is Rodica here?’

\(s\): state in which Rodica is here; \(\overline{s}\): its complement

\[(20) \text{ Semantics and CDEs of (19)}\]

a. Semantics: \(p = \{s, \overline{s}\}\)

b. CDE: basic

1. \(\text{DC}_{Sp,o} = \text{DC}_{Sp,i} \oplus \text{info}(p)\) — \(s \cup \overline{s}\) is added to \(\text{DC}_{Sp,i}\)

2. \(\text{Table}_o = \text{Table}_i \circ p\) — \(\{s, \overline{s}\}\) is added to the top of the Table stack

3. \(p_{so} = \{\text{DC}_{Ad,i} \oplus s, \text{DC}_{Ad,i} \oplus \overline{s}\}\) — set of Addressee commitments computed by adding each possibility in \(p\) to \(\text{DC}_{Ad,i}\)

- Polar interrogative marked by *oare*:

\[(21) \text{ Oare Rodica e aici?} \]

‘Is Rodica here, I wonder.’

\(^6\)See Giurgea (2018) for a view in which *oare* contributes the presupposition that the Addressee is not in a position to know the answer for sure.
(22) Semantics and cDES of (21)

a. Semantics: \( p = \{ s, \overline{s} \} \)

b. CDE: basic augmented by the contribution of \textit{oire}

1. \( \text{DC}_{Sp,o} = \text{DC}_{Sp,i} \oplus \text{info}(p) \) — \( s \cup \overline{s} \) is added to \( \text{DC}_{Sp,i} \)

2. \( \text{Table}_o = \text{Table}_i \circ p = \{ s, \overline{s} \} \) is added to the top of the Table stack

3. \( \text{ps}_o = \{ \text{DC}_{Ad,i} \oplus s, \text{DC}_{Ad,i} \oplus \overline{s}, \text{DC}_{Ad,i} \oplus \text{info}(p) \} \) — \( \text{ps}_i \) is as before except \( \text{DC}_{Ad,i} \oplus \text{info}(p) \) is added to it

Non-canonical nature of \textit{oire}-interrogatives

- Contribution of \textit{oire} (addition of \( \text{DC}_{Ad,i} \oplus \text{info}(p) \) to \( \text{ps}_o \)): weakens the effect of the Addressee compliance assumption of canonical questions

- Canonical futures now include not only ones in which the Addressee resolves the issue just raised, but also a future in which she chooses not to

- The Addressee therefore can comply with an \textit{oire}-interrogative without resolving the issue whether \( p \), though futures in which she does would be preferable since those involve information increase

(23) Non-intrusive questions

A question is non-intrusive iff its cDES result in \( \text{DC}_{Ad,i} \oplus \text{info}(p) \) being a member of \( \text{ps}_o \).

As a result of this special cDE, Addressee compliance no longer requires the Addressee to resolve the issue raised.

Why would the Speaker weaken Addressee compliance in this way?

- because the Speaker does not assume Addressee competence OR

- because the Speaker assumes that the competent Addressee may have reasons not to settle the issue, despite her competence

Possible non-intrusive question markers elsewhere: \textit{vajon} in Hungarian, \textit{acep} or \textit{acaba} in Turkish, pre- or post-posed \textit{I wonder} in English

Consequences and predictions

- If a language has an interrogative sentence form that must be interpreted as non-intrusive, it will be d-marked

- Non-intrusive interrogatives will be infelicitous in contexts in which it is assumed that Addressee compliance entails resolving the issue, as in (16) - (17)

- They raise an issue and therefore the Speaker is seen as wishing to have it resolved; if she didn’t, she could have remained silent.

- They are predicted to be appropriate in contexts in which Addressee competence is presupposed

  – In such contexts, they signal that the Speaker does not assume that the Addressee will resolve the issue, despite her competence
Therefore, the context should be such as to explain the Speaker’s non-intrusiveness (written communications signaling no immediate answer is expected; Speaker signaling that the Addressee may have reason to withhold the answer)

(24) *Oare*-interrogatives in contexts where Addressee competence is presupposed
a. *Oare* te mai gândești la mine?
   ‘Are you still thinking of me, I wonder.’
b. *Oare* unde ești? (overheard in Romania as someone was speaking on the phone)
   ‘Where are you, I wonder.’
c. *Oare* mai ai migrene?
   ‘Do you still have migraines, I wonder.’

• They are predicted to be appropriate as ‘engaging’ questions – in contexts where the Speaker signals that she does not assume that resolution will occur in the immediate future of the conversation

(25) **Context: mathematician to a colleague with whom she is working**
*Oare* ecuația asta are o soluție?
‘Does this equation have a solution, I wonder?’

• They are predicted to be questions addressed to the Addressee, rather than mere expressions of a wish to know the answer

(26) **Context: Maria and Paul are cooking together**
Maria: *Oare* e gata supa? ‘Is the soup ready, I wonder.’
Paul: De ce mă întrebi pe mine? ‘Why are you asking me?’

(27) **Context: Maria and Paul are cooking together**
Maria: Mă întreb dacă e gata supa. ‘I wonder whether the soup is ready.’
Paul: #De ce mă întrebi pe mine? ‘Why are you asking me?’

• An answer that settles the question raised by a non-intrusive interrogative is predicted to be felicitous

(28) **Context: Maria and Paul are cooking together**
Maria: *Oare* e gata supa? ‘Is the soup ready, I wonder.’
Paul: Da, tocmai am gustat-o. ‘Yes, I’ve just tasted it.

• They are predicted not to be felicitous in contexts where Addressee competence is assumed but there are no grounds to suppose that the Addressee would have any reason not to provide the answer:

(29) **Context: Paul has just tasted the soup**
Maria to Paul: #*Oare* e gata supa? ‘Is the soup ready, I wonder.’

**Upshot on oare:**
• *oare* marks an interrogative for being non-intrusive
its role is to widen \( ps_o \) to include, besides context states in which the Addressee resolves the issue, a context state in which she does not

**Question:** Why is *oare* roguative, i.e., found only in interrogatives?

**Answer:** The reason lies in the difference between the basic cde of interrogatives vs. that of declaratives:

**Interrogatives:**

- place an inquisitive proposition on the Table and project canonical states in which the Addressee volunteers information that settles the issue
- adding a non-intrusive marker: allows the Addressee to comply without volunteering such information, either because she doesn’t have it or because she doesn’t wish to provide it

**Declaratives:**

- place a non-inquisitive proposition on the Table and commit the Speaker to the unique possibility, \( s \), in this proposition
- in the case of declaratives, \( \text{info}(p) = s \)
- steer the conversation towards a state in which the Addressee adds \( s \) to \( DC_{Ad,i} \); in the case of declaratives, this is the same as committing to \( \text{info}(p) \)

The basic cde of a declarative sentence \( S \) expressing a proposition \( p \) containing the possibility \( s \)

\[
(30) \ K_i + S_{DEC}
1. DC_{Sp,o} = DC_{Sp,i} \oplus \text{info}(p) — \text{since} \ \text{info}(p) = s, \ s \ \text{is added to} \ DC_{Sp,i} \ \text{adding a typically}\non-trivial \ \text{commitment}
2. Table_o = Table_i \circ p — p \ \text{is pushed on the top of the Table stack}
3. \ps_o = \ps_i \oplus p — \text{since} \ p \ \text{contains a single possibility, the conversation projects a future} \\
\text{state in which the Addressee shares the Speaker’s commitment by adding} \ s \ \text{to} \ DC_{Ad,i} \)

Adding a non-intrusive d-marker to a declarative would be redundant:

- \( \ps_o \) of a d-unmarked declarative: \( \{DC_{Ad,i} \oplus s\} \)
- \( \ps_o \) of a *oare*-marked declarative: \( \{DC_{Ad,i} \oplus s, DC_{Ad,i} \oplus \text{info}(p)\} \)
- the contribution of *oare* is redundant in the case of declaratives because for a declarative sentence \( p \) containing the possibility \( s \), \( \text{info}(p) = s \)

**Question:** Why are non-intrusive markers good with both polar and constituent interrogatives?

**Answer:** Because their cde\(s \) do not manipulate a unique possibility in the proposition they express

- if the cde\(s \) of a marked form have to manipulate a unique possibility in an interrogative form, such a marker will not be appropriate in a constituent interrogative

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\(^7\)I am grateful to Floris Roelofsen and Scott AnderBois for help with this point.
Classification of some basic sentence types relevant to CDEs (among others)

- highlight a unique possibility:
  - declaratives and polar interrogatives ✓
  - constituent interrogatives *

- inquisitiveness:
  - declaratives *
  - interrogatives ✓

To sum up:
- The special CDEs of interrogatives marked for being non-intrusive:
  - the addition to the ps of a canonical discourse future in which the Addressee does not resolve the issue raised by the interrogative
- As a result, non-intrusive questions signal the weakening of the Addressee compliance assumption of canonical questions

*Question:* Should this account be recast in semantic terms? Should we give oare a semantics that interacts with the compositional semantics of the rest of the sentence to give us the right result?  
*Answer:* While such an account is possible, it would amount to a paraphrase of what has been proposed above

Separating this contribution as a CDE
- captures the non-at issue nature of the contribution of non-intrusive markers
- captures the narrow contextual nature of the contribution of non-intrusive markers: information concerning what the Speaker takes canonical responses to her question to be
- captures the fact that oare-interrogatives don’t embed freely

(31) *Paul nu știe dacă oare Rodica e aici.*  
‘Paul doesn’t know whether oare Rodica is here.’

Other non-canonical questions
- biased questions: d-marked interrogatives whose effect is to weaken the Speaker ignorance assumption by adding a special CDE which signals the Speaker’s epistemic partiality towards the highlighted alternative; subtypes of biased questions involve subtypes of epistemic partiality
- tentative questions: weaken Addressee competence assumption; signal the absence of the assumption that the doxastic state of the Addressee permits her to resolve the issue categorically

Tentative questions vs. non-intrusive questions
- tentative questions signal weakening of Addressee competence – not appropriate in contexts that presuppose it
- non-intrusive questions signal weakening of Addressee compliance – may be used in contexts that presuppose Addressee competence
5 Conclusions

Questions: (i) Why are formally simple interrogatives used to ask canonical questions? (ii) Why do special interrogative forms mark non-canonical questions?

Answers: (i) Simple forms are associated with the basic cde s determined by their compositional semantics. These effects are associated with the default pragmatic assumptions characterizing canonical questions. (ii) Additional cde s are triggered by d-markers.

Question: What may we expect d-marked forms to signal and why?
Answer: D-marked forms signal the presence of additional cde s that may result in the weakening of default pragmatic assumptions associated with canonical questions.

Question: Is it possible and desirable to extend this approach to other speech acts and other sentence forms?
Answer: I hope so.

References


