Mention-some questions

1. What is mention-some?

1.1. Mention-some questions and mention-some answers

- **Mention-all (MA) questions**: questions that do not admit MS answers.

Most *wh*-questions admit only exhaustive answers. A non-exhaustive answer needs to be ignorance-marked, otherwise it gives rise to an undesired exclusive inference.

(1) Who went to the party?
   \( w: \) only John and Mary went to the party.
   
   a. John and Mary.
   b. John did .../ \[ \text{\textsuperscript{L}} \text{H*} \text{\textsuperscript{L-1}} \text{H}\% \]\( \Rightarrow \) I don’t know who else did.
   c. # John did.\[ \text{\textsuperscript{H*}} \text{\textsuperscript{L-1}} \text{H}\% \]\( \Rightarrow \) Only John did.

- **Mention-some (MS) questions**: questions that admit MS answers.

◊-questions (questions with a weak priority modal) admit also non-exhaustive answers (Gr&S 1984), as in (2a). Crucially, while being non-exhaustive, (2a) doesn’t need to be ignorance-marked, called a “MS answer.”

(2) Who can chair the committee?
   \( w: \) only John and Mary can chair; single-chair only.
   
   a. John can.\[ \Rightarrow \) Only John can chair.
   b. John and Mary.\[ \Rightarrow \) Only John or Mary.
   c. John or Mary.\[ \Rightarrow \)

1.2. Characteristics of mention-some

- **Embedded *wh*-constructions exhibit the same distributional pattern of MS**; MS/existential reading is available iff the form of the *wh*-construction resembles a ◊-question.

(3) Indirect questions
      \[ \Rightarrow \) For every individual \( x \), if \( x \) arrived, Jack knows that \( x \) arrived.
   b. Jack knows who can chair the committee.
      \[ \Rightarrow \) For some individual \( x \ s.t. \) \( x \) can chair the committee, Jack knows that \( x \) can chair.

(4) Free relatives
   a. John ate what Mary cooked for him.
      \[ \Rightarrow \) John ate everything that Mary cooked for him.
b. John went to where he could get help.
   \(\rightsquigarrow\) John went to some place where he could get help.

(5) **Mandarin wh-conditionals**

a. Ni qu-guo nar, wo jiu qu nar.
   you go-EXP where, I JIU go where
   ‘Where you have been to, I will go where.’
   Intended: ‘I will go to every place where you have been to.’

b. Nar neng mai-dao jiu, wo jiu qu nar.
   where can buy-reach liquor, I JIU go where
   ‘Where I can buy liquor, I will go where.’
   Intended: ‘I will go to some place where I can buy liquor.’

(6) **Question-Answer clauses in ASL** (Davidson et al. 2008, Caponigro & Davidson 2011)

a. \((w: \text{John bought a book, a CD, and a DVD.})\)
   
   i. Signer A: JOHN BUY WHAT?  
      Signer B: #BOOK.
      ‘John bought what?’  
      ‘Book.’
   
   ii. JOHN BUY WHAT, # BOOK.
       ‘What John bought is a book.’

b. \((w: \text{There are two coffee places nearby, Starbucks and Peet’s.})\)
   
   i. Signer A: CAN FIND COFFEE WHERE?  
      Signer B: STARBUCKS.
      ‘Where can you find coffee?’  
      ‘Starbucks.’
   
   ii. CAN FIND COFFEE WHERE, STARBUCKS.
       ‘You can find coffee at Starbucks.’

**• Mention-some = Mention-one: every MS answer specifies exactly one of the possible options.**
   
   – An answer that names multiple options yields an exclusive inference if it isn’t ignorance-marked.

(7) Who can chair the committee?

a. Andy. \(\downarrow\) Only John can chair.

b. Andy and Billy. \(\rightsquigarrow\) Only John and Billy can chair.

c. Andy or Billy. \(\rightsquigarrow\) Only John and Billy can chair.

– An indirect question cannot take, for instance, a mention-three reading.

(8) John knows who can chair the committee.

a. For some individual \(x\) s.t. \(x\) can chair, John knows that \(x\) can chair. (OK)

b. For every individual \(x\), if \(x\) can chair, John knows that \(x\) can chair. (OK)

c. For three individuals \(xyz\) s.t. \(xyz\) each can chair, John knows that \(xyz\) each can chair. (#)

(9) John knows who can form the committee.

a. For some group of individuals \(X\) s.t. \(X\) together can form the committee, John knows that \(X\) together can form the committee. (OK)

b. For every group of individuals \(X\), if \(X\) together can form the committee, John knows that \(X\) together can form the committee. (OK)

c. For three groups of individuals \(XYZ\) s.t. each group among \(XYZ\) can form the committee, John knows that each group among \(XYZ\) can form the committee. (#)
• MS readings can be blocked by exhaustive conversational goals and grammatical factors.
  – MS is blocked if the conversational goal requests an exhaustive answer.
  – MS is blocked if the wh-complement is singular or numeral-modified.

(10)  a. Which candidate can teach Morphology?
      ↞ Only one of the candidates can teach Morphology.
   b. Which two candidates can teach Morphology?
      ↞ Only two of the candidates can teach Morphology.

– MS is blocked when an exhaustivity marker appears above the existential modal.

(11)  English all (Texan English)
   a. Who all can teach Introduction to Linguistics?
   b. Where all can we get coffee around here?

(12)  German alles
   a. Wer kann alles Einführung in die Sprachwissenschaft unterrichten?
       who can all introduction into the linguistics teach
       ‘Who all can teach Introduction to Linguistics?’
   b. Wo kann ich hier überall Kaffee bekommen?
       where can I here everywhere coffee get
       ‘Where all can we get coffee around here?’

(13)  Mandarin dou
   a. Dou shui keyi jiao yuyanxue jichu?
       DOU who can teach linguistics introduction
       ‘Who all can teach Introduction to Linguistics?’
   b. Zai fujin women dou keyi zai nali mai dao kafei?
       at near we DOU can at where buy coffee
       ‘Where all can we get coffee around here?’

• Discussion: The following questions are also called MS questions in some literature, because they admit non-exhaustive answers. Do they have the characteristics of MS that we just saw?

(14)  Who came to the party, for example?  EX-question
(15)  Who did one of the professors vote for?  Ǝ-question
2. Approaches of mention-some

- Two competing views of mention-some
  - The pragmatic view: (pursued by pragmatic and post-structural approaches)
    The distribution of MS is mainly restricted by pragmatic factors.
  - The grammatical view: (pursued by structural approaches)
    The distribution of MS is primarily restricted by grammatical structures.

2.1. Approaches pursuing a pragmatic view

2.1.1 Pragmatic approaches (Gr&S 1984, van Rooij 2004, among others)

- Complete answers must be exhaustive. MS answers are partial answers that are sufficient for the conversational goal behind the question.

⇒ MS is available only if a non-exhaustive answer suffices for the question goal.

(16) Where can we get coffee?
    a. to find a place to get some coffee. MS
    b. to investigate the local coffee market. MA

(17) Who knows Python?
    a. to find someone to help with a Python problem. MS
    b. to know the programming skills of the candidates. MA

Discussions: What characteristics of MS can and cannot be predicted by pragmatic approaches?

2.1.2 Post-structural approaches (Beck & Rullmann 1999, George 2011: ch. 2)

- MS reading is semantically licensed. (Hence, they are traditionally called “semantic approaches.”)
  The distribution of MS is mainly restricted by pragmatic factors. MS and MA are two independent readings derived via different operations outside the question nucleus.

- Beck & Rullmann (1999): Lexical ambiguity of answerhood
  - The root denotation of a question is unambiguously the H-K intension Q (i.e., a function that maps a world to the Karttunen set in this world).
  - Q can be operated by different answerhood-operators, yielding different readings.

    (18) a. $\text{ANS}_{BR_1}(Q)(w) = \bigcap \{ p : Q(w)(p) \land p(w) \}$ (for MA)
    b. $\text{ANS}_{BR_3}(Q)(w) = \lambda P_{(s, att)} . \exists p[P(w)(p) \land Q(w)(p) \land p(w)]$ (for MS)

Since the operation for MS is always grammatically available, the distribution of MS can only be restricted by pragmatics.
John knows $Q_{MS}$.

\[
S: \ t \\
\exists p[\text{know}_w(j, p) \land Q(w)(p) \land p(w)] \\
\lambda p_{\langle s, stt \rangle}, \exists p[P(w)(p) \land Q(w)(p) \land p(w)] \\
\lambda w \lambda p \text{know}_w(j, p) \\
\text{ANS}_{BR_3}(Q)(w) \\
\langle s, stt \rangle \\
\lambda w \text{know}_w(j, p) \\
\text{John knows } p
\]

- **Discussion**: Which type of non-exhaustive readings is predicted by B&R (1999)?

  (20) a. Who can chair the committee?
  b. Who are in your committee, for example?
  c. Who did one of your students vote for?

What characteristics of MS can and cannot be captured by B&R (1999)?

2.2. Structural approaches

- The MS/MA ambiguity is a result of a structural variation within the question nucleus. (George 2011: ch. 6, Fox 2013, Xiang 2016)

2.2.1 Fox (2013): Scope ambiguity of distributivity

- A true answer is complete as long as it is maximally informative (\text{MaxI}), namely, not asymmetrically entailed by any of the true answers. A question takes a MS reading iff it can have multiple MaxI true answers.

  (21) \text{ANS}_{Fox}(Q)(w) = \{p: w \in Q \land \forall q[w \in Q \rightarrow q \nvdash p]\}

  (\{p: p \text{ is true answer of } Q \text{ in } w; \text{ and } p \text{ is not asymmetrically entailed by any of the true answers of } Q \text{ in } w.\})

**Discussion**: Assume that $f(a)$ and $f(b)$ are semantically independent. For each of the following answer space, consider: could it have multiple MaxI true members?

<table>
<thead>
<tr>
<th>$f(a) \land f(b)$</th>
<th>$\Box[f(a) \land f(b)]$</th>
<th>$O[f(a) \land f(b)]$</th>
<th>$\Diamond[f(a) \land f(b)]$</th>
</tr>
</thead>
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<td>$f(a)$</td>
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</tr>
<tr>
<td>$f(b)$</td>
<td>$\Box f(b)$</td>
<td>$O f(b)$</td>
<td>$\Diamond f(b)$</td>
</tr>
</tbody>
</table>
• The MS/MA ambiguity comes from the **scope ambiguity of distributivity**:
  
  – The *wh*-trace $X$ has a phrase mate EACH. EACH distributes over the atomic subparts of $X$.

  \[
  \frac{\lambda f_{(e,t)} \cdot \forall x [x \in A(T) \rightarrow f(x)]}{X \text{ EACH}}
  \]

  – In a $\Diamond$-question, the distributive phrase $[X \text{ EACH}]$ flexibly takes scope above or below the $\Diamond$-modal.

(23) **Who can chair the committee?**

  *(w: only A and B can chair the committee; single-chair only.)*

  a. **Global distributivity** (MA)

  \[
  \{\text{EACH}(X)(\lambda x. \Diamond \text{chair}(x)) : X \in \text{man}_a\}
  \]

  ![Diagram of Global Distributivity](image)

  b. **Local distributivity** (MS)

  \[
  \{\Diamond \text{EACH}(X)(\lambda x. \text{chair}(x)) : X \in \text{man}_a\}
  \]

  ![Diagram of Local Distributivity](image)

  When distributivity takes scope below a $\Diamond$-modal, the answer space is not closed under conjunction, and it is possible to have multiple max-informative true answers, yielding MS.

  – This approach is supported by observations with the particle *alles* in Austrian German: the presence of *alles* above the existential modal blocks MS.

  (24) a. *(alles > $\Diamond > \text{with} \ in \ 3$)*

  Was *alles* kann ich mit 3 Euro kaufen?

  What *alles* can I with 3 Euro buy

  ‘What are all the things that I can buy for €3.’ *(mention-all)*

  b. *( $\Diamond > \text{with} \ in \ 3 > \text{alles}$)*

  Was kann ich *alles* mit 3 Euro kaufen?

  What can I all with 3 Euro buy

  ‘What is a set of items s.t. with €3 I can buy them all?’ *(mention-some)*

• **Problems with Fox (2013)**

  1. In certain cases, good MS answers are predicted to be partial answers.

  (25) **Who can serve on the committee?**

  *(w: the committee can be made up of Andy and Billy; it also can be made of Andy, Billy, and Cindy.)*

  a. Andy and Billy. $\Diamond[\text{serve}(a) \land \text{serve}(b)]$ (predicted to be partial)

  b. Andy, Billy, and Cindy. $\Diamond[\text{serve}(a) \land \text{serve}(b) \land \text{serve}(c)]$ (predicted to be MA)
2. Cannot extend to questions with collective predicates.

(26) Who can form a team?

2.2.2 Xiang (2016)

- Two ways to capture the MS/MA ambiguity:
  - MS versus conjunctive MA: Scope ambiguity of higher-order wh-trace
  - MS versus disjunctive MA: Presence/absence of a covert $O_{\text{DOU}}$-operator (not discussed today)

- Deriving MS: local exhaustification + IP-internal QR

(27) Who can chair the committee?

$$Q = \{ \Diamond [\lambda x. O[\text{chair}(x)]] : \pi \text{ is a generalized conjunction/disjunction over people}_{\bar{a}} \}$$

<table>
<thead>
<tr>
<th>Conjunctive</th>
<th>(contradictory)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td>(independent)</td>
</tr>
<tr>
<td>Disjunctive</td>
<td>(partial)</td>
</tr>
</tbody>
</table>

Figure 1: Full answer space of (27)

Predictions:

1. Individual answers are all semantically independent.
   $\Rightarrow$ Every individual answer is potentially complete. (Problem 1 with Fox is solved)

2. Conjunctive answers are all contradictory, while disjunctive answers are all partial.
   $\Rightarrow$ Only individual answers can serve as MS answers. Hence, mention-some = mention-one.

3. Having $\Diamond$-modal above $O$ ensures the individual answers not to be mutually exclusive.
   $\Rightarrow$ The presence of a $\Diamond$-modal is mandatory for getting MS.
• MS versus conjunctive MA

Conjunctive MA arises iff the higher-order \( wh \)-trace scopes above the \( \Diamond \)-modal.

(28) Who can chair the committee?

(\( w \): only A and B can chair the committee; single-chair only.)

a. \( \pi > \Diamond \) (conjunctive MA)

\[
\ldots \quad \text{IP} \quad \pi_{(t,t)} \quad \lambda x \quad \text{can} \quad O \quad \text{chair}(x)
\]

\[
\Diamond O f(a) \land \Diamond O f(b) \\
\Diamond O f(a) \quad \land \quad \Diamond O f(b) \\
\Diamond O f(a) \lor \Diamond O f(b)
\]

b. \( \Diamond > \pi \) (MS)

\[
\ldots \quad \text{IP} \quad \pi_{(t,t)} \quad \lambda x \quad O \quad \text{chair}(x)
\]

\[
\Diamond [O f(a) \land O f(b)] \\
\Diamond O f(a) \quad \lor \quad \Diamond O f(b) \\
\Diamond [O f(a) \lor O f(b)]
\]