Pragmatics, Intonation and WH-in-situ¹,²
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I. Introduction

(1) English is classified as a WH-raising language – if a WH-phrase is present in a sentence, at least one WH-phrase must raise.

a. Who, did you say you talked to who, ? standard question
b. What, did you give what, to who, ? multiple WH question
c. I talked to the man who, I met who, yesterday relative clause

(2) Exceptions? Echo questions

a. For breakfast we had liver and onions
b. For breakfast you had WHAT↑ echo question

(3) A new exception: There are examples of wh-in-situ in English that, to my knowledge, have not been discussed previously in the literature.³ I’ll call them “AND”-questions (AND-Qs)

A: I was born in Miami
B: And you were born when?

(4) AND-Qs contrast with standard questions and echo questions, and this contrast needs to be accounted for in formal theory.

¹ Throughout this handout, I use the following notation: BOLD = intonational stress, ↑ = rising intonation, ↓ = falling intonation, ↑↓ rise-fall intonation
² Thank you to Ivano Caponigro, Christine Gunlagson, Howard Lasnik, Chris Potts, and Daniel Seely for discussion of this data and phenomenon. All errors herein are, of course, my own.
³ Ginzburg & Sag (2001) describe Ref(ERENCE) questions. Ref Qs are described as requiring an immediate referent of the WH-phrase. AND-Qs do not allow an overt referent in the discourse. At this point, it is unclear whether these should be classified as a type of echo question, or as a subclass of AND-Qs.
(5) Where this talk is going:

- Describe the data by giving various discourse usages of AND-Qs, and showing that AND-Qs (a) have WH-in-situ, (b) cannot be uttered “out of the blue” (i.e., discourse initially), (c) must contain a WH-phrase that refers to something contextually salient (but not necessarily overt), (d) request new information, (e) permit higher than 2nd order questions, and (f) have an intonational pattern distinct from other types of questions.
- Show that AND-Qs are distinct from standard questions and echo question
- Discuss the possible contribution to interpretation of WH-in-situ in English
- Show that formal syntactic and compositional semantic theory alone cannot account for the complete interpretation of AND-Qs.
- Suggest that AND-Qs are best handled formally by including pragmatic theory in deriving their interpretation.

II. Describing AND-Qs

§2.1 Some usages

1. Questioning when questioning is expected

(6) an interview (i.e., a credit application, or similar information gathering task)

- a. Interviewer: Date of birth?
- b. Applicant: January 1, 1965
- c. Interviewer: And you were born where?
- d. Applicant: Pleasant Valley
- e. Interviewer: Pleasant Valley is in what state?
- f. Applicant: Ohio
- g. Interviewer: Where do you live now?
- h. Applicant: Toledo, Ohio
- i. Interviewer: And you have lived there for how long?

(7) a deposition or court testimony

An attorney and defendant can have the following dialogue:

- a. Attorney: Tell me what happened on January 1, 2005 at 4 pm
- b. Defendant: I was driving along Andrews Avenue.
- c. Attorney: And you were driving which direction?
- d. Defendant: I was headed south, towards the library.
- e. Attorney: And you were traveling about how fast would you say?
- f. Defendant: 35 miles per hour
- g. Attorney: OK, and then what happened?
- h. Defendant: I came upon a stop sign and stopped quickly.
- i. Attorney: (writing this down) OK, you came to a stop sign and stopped quickly why?
- j. Defendant: Because I saw someone crossing in the crosswalk.
(8) habitual interactions

a. Susan, a 7th grader, comes to her mother every morning asking for money before school. Without opening her mouth, she comes to her mother on Tuesday morning and holds out her hand. Her mother replies,

b. And you need how much money today?

2. Signal a presupposition mismatch between interlocutors

Imagine in (9) that Speaker B doesn’t know Speaker A is a student:

(9) A: You are not going to believe what happened! I got an “A” on my paper!
     B: You got an “A” on what paper?

3. Sarcasm (may be a combination of the above two)

(10) A typical dialogue from the ongoing Saturday Night Live sketch in which David Spade plays the part of Dick Clark’s secretary:

a. Celebrity: Hi. I have an appointment to see Mr. Clark
b. Secretary: And you are who?
c. Celebrity: I’m [put big huge celebrity’s name here]
d. Secretary: And he would want to see you why?

§2.2 Characteristics of AND-Qs

1. AND-Qs have a WH-phrase in-situ
2. AND-Qs can’t occur out of the blue

(11) a. #/* Your name is what? “out of the blue” AND-Q
     b. What is your name? “out of the blue” standard Q

(12) AND-Qs require a relevant context – they cannot be uttered out of the blue.
   • In many contexts, beginning an AND-Q with “and” makes its use more felicitous (thus, the coined name I’ve given to this data).

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4 I will treat rise-fall intonation here as a subclass of falling intonation.
5 What about questions not involving WH-phrase? Declarative questions (yes/no questions uttered without aux inversion) are described and discussed extensively by Gunlagson (2003):
   (i) It’s raining outside?
Gunlagson (2003) does not deal with data involving WH-phrases, though the relevance of her data to AND-Qs is obvious.
(13) AND-Qs readily occur in contexts in a discourse consisting mostly of questions and answers:
  - Interview
  - Deposition, court examination
  - Application procedure

(14) But the distribution of AND-Qs is by no means limited to these types of discourses!

3. **AND-Qs contain a WH-phrase that must refer to something contextually salient, yet that referent may not be overt.**

(15) The WH-phrase in a AND-Q must refer to something contextually salient, but not necessarily referent to something immediately preceding, or something overtly mentioned in the discourse (7) repeated here as (16).

(16)
  a. Attorney: Tell me what happened on January 1, 2005 at 4 pm
  b. Defendant: I was driving along Andrews Avenue.
  c. Attorney: And you were driving which direction? AND-Q
  d. Defendant: I was headed south, towards the library.
  e. Attorney: And you were traveling about how fast would you say? AND-Q
  f. Defendant: 35 miles per hour
  g. Attorney: OK, and then what happened? AND-Q
  h. Defendant: I came upon a stop sign and stopped quickly.
  i. Attorney: (writing this down) OK, you came to a stop sign and stopped quickly why? AND-Q
  j. Defendant: Because I saw someone crossing in the crosswalk.

(17) In fact, the WH-phrase in AND-Qs may refer to something non-linguistic even something overt or linguistic (i.e., Susan and her mother in (8)).

(18) Unlike echo Qs though, AND-Qs do not require or even allow an immediate discourse referent. It is sufficient that the referent of the wh-phrase be contextually relevant in the discourse.

4. **AND-Qs request new information**

(19) Both the standard Q and the AND-Q in (7) require an answer. This contrasts with echo Qs:

(20) ...I need money for school today
  a. A: How much do you need? Standard Q
     B: #Ø / six dollars
  b. A: You need how much? AND-Q
     B: #Ø / six dollars
c. A: You need WHAT for school today!?  
   B: ø / six dollars / money

(21) Note – in every situation in which an AND-Q occurred in §2.1, a standard Q in which the WH-phrase was in sentence-initial position would have been licit and just as acceptable.

5. **AND-Qs permit higher than 2nd order questions**

(22) 2nd order questions are characterized by questioning more than two constituents at once.

(23) **Who gave what to who?**  
   Standard Q

(24) AND-Qs, like standard Qs, permit 2nd order questions and higher. Echo Qs do not (Comorovski, 1996).

(25) Scenario: A robbery occurred at 10:03 am. Two yet unidentified women stole cash from a bank. The DA is taking a deposition statement from female defendant #1 charged of robbing the bank. Defendant #1’s alibi is that she was running errands the morning of the crime and could not have been in the vicinity of the bank in question. She tells her story: 

   Defendant #1: “I woke up about 9:40 a.m. I took a shower and quickly threw on clothes because I had an appointment to get my hair cut at 10 a.m. So, I ran out the door at about 10 o’clock and drove as fast as I could to the salon.”

   DA: “And you drove which route with who to get to which salon?”

6. **Intonation pattern of AND-Qs**

The intonation patterns of AND-Qs, are similar to standard questions, and distinct from echo questions.

(26) A: I gave my bike away  
   B: Who did you give your bike/it away to↓ ?  
   B: You gave your bike away to who↓ ?  
   Standard Q  
   AND-Q

(27) A: I gave my bike away to my sworn enemy  
   B: You gave your bike away to WHO↑ ?

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6 Note that this is as close of a minimal pair between the AND-Q and the echo Q in this context as can be created. (27)B could not be “You need HOW MUCH money for school today!?” because the WH-phrase has no immediate antecedent – a requirement for the WH-phrase in echo Qs.
§2.3 Summary of the data:

<table>
<thead>
<tr>
<th>Wh-in-situ option</th>
<th>Standard Q</th>
<th>Echo Q</th>
<th>AND-Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can be uttered “out of the blue”</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>reference required in immediately prior utterance</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Answer required/expected</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Higher than 2nd order questions permitted</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Intonation</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
</tr>
</tbody>
</table>

(29) From this chart, it is clear that AND-Qs are distinct from both standard Qs and echo Qs.

III. What is the contribution of WH-in-situ?

(30) Both AND-Qs and echo Qs are characterized by WH-in-situ

(31) Both AND-Qs and echo Qs require that the referent of the WH-phrase be contextually salient.

(32) It is possible that a WH-phrase remaining in-situ is a cue to listener that its referent must be salient in the discourse.

IV. Can the observable behaviors of AND-Qs be explained via syntactic or semantic theory?

(33) Syntax: No. Presumably the syntax of echo Qs and AND-Qs is identical. They are distinct from one another in what PRECEDES the question, and in intonation. Syntactic theory has no way of accounting for this.

(34) Semantics: No. The meaning of an AND-Q must consider the discourse in order to derive its meaning. No current formalization of compositional semantics can derive meaning on the discourse, rather than sentence, level.

(35) What is left? Pragmatics.
(36) Is there any independent reason to believe that deriving the meaning of AND-Qs formally must include pragmatic components? Yes.

(37) One of the uses of AND-Qs is to signal to one’s interlocutor that a mismatch of presupposition has occurred ((9) repeated here as (38)):

Imagine in (38) that Speaker B doesn’t know Speaker A is a student:

(38)  A: You are not going to believe what happened! I got an “A” on my paper!
      B: You got an “A” on what↑↓ paper?

V. Conclusion

• AND-Qs have not been described or discussed previously
• It is clear that formal syntactic and semantic theory cannot account for the full range of an AND-Q’s meaning.
• AND-Qs require a formal pragmatic treatment that accounted for the contribution of WH-in-situ, the discourse salience of the WH-phrase’s antecedent, and the intonation pattern.

VI. References

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