

# Exclamatives have a question semantics!

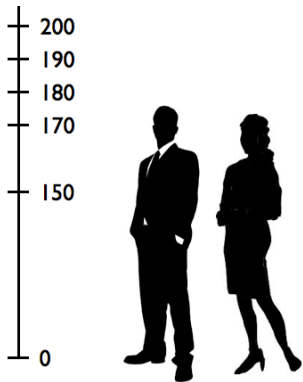
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Formal Semantics and Pragmatics:  
Discourse, Context, and Models  
November 19-21, 2010



Data



*How tall John is!*



## Wh-exclamatives (Es)

(1) *How tall John is!*

### Observations:

- ▶ Es are used to express speaker's emotions (surprise):  
(1): at the amazing degree to which John is tall
- ▶ Wh-exclamatives are similar to wh-questions (Qs)
- ▶ The answer is known to the speaker
- ▶ In what other kinds of Qs does the speaker know the answer?
- ▶ **Rhetorical questions (RQs):**  
*I think we should sack John from the team. **After all, how tall is he?** He is only 1m50 tall!*
- ▶ There are other points of comparison



## Es and RQs: examples

▶ Es:

(2) a. *How tall John is!*

(when the speaker expected Jan to invite only Maria, but not Peter)

▶ *Wie Jan nu weer uitgenodigd heeft!*

Who Jan now again invited has!

▶ RQs:

(3) a. I think we should sack John from the team. *After all, how tall is he?* He is only 1m50 tall!

b. Jan was alone at his birthday party. *After all, who did he invite?* No one!



## Observation 1 (about degrees)

How-Es and RQs containing a gradable predicate impose special conditions on the degree to which the predicate holds:

► **RQs:**

*I think we should sack John from the team. After all, how tall is he?  
He is only 1m50!*

*We should definitely take John to our team! After all, how tall is he?  
He is 2m30 tall!*

*We're looking for average people, I mean something between 1m70 and  
1m80 tall. So lets take John! #After all, how tall is he? (1m75)*

### **The degree of height is at an extreme end of the scale**

[Rohde(2006)] made a similar observation

- **Es:** *How tall John is!* (2m)  
*#How tall John is!* (1m50)

### **The degree of height is at the high end of the scale**

cf. factivity/widening in [Zanuttini&Portner(2003)]



## Observation 2 (about $\emptyset$ )

Who-Es and RQs have different use in a situation when “*who*” denotes the empty set: If Jan didn’t invite anyone. . .

**RQ:** one of its most natural uses

(4) *Jan was alone at his birthday party. After all, who did he invite?*

**E:**

(5)# *Wie Jan nu weer uitgenodigd heeft!*

Who Jan now again invited has!

[d’Avis(2002)] has the same observation, but for embedded Es only



# Goals

- ▶ Build theories for Es and RQs based on question semantics
- ▶ Derive the two observations
  
- ▶ Theories for Es and RQs
- ▶ Observation 2
- ▶ Observation 1
- ▶ Further issues



## Theory of Es

- (6) a. The speaker expected Jan to invite only Marie and Kees, but she also invited Peter.
- b. *Wie Jan nu weer uitgenodigd heeft!*  
Who Jan now again invited has!

**Semantics of Es:** e.g. [d'Avis(2002), Zanuttini&Portner(2003)]

- ▶  $[[wh - clause]] = \{ \text{Jan invited Marie, Jan invited Kees, Jan invited Peter, ...} \}$   
[Karttunen(1977), Groenendijk&Stokhof(1982)]
- ▶ [Heim(1994)]: **the true answer:** Jan invited Marie, Kees, and Peter (and possibly someone else)
- ▶ **the true exhaustive answer:** Jan invited *only* Marie, Kees, and Peter

**Pragmatic conditions for Es:** [d'Avis(2002)]

- ▶ The speaker knows the true exhaustive answer to the question
- ▶ The speaker is surprised at the true answer
- ▶ The wh-variable is instantiated





## Observation 2 for Es

- (7) a. The speaker expected Jan to invite only Marie and Kees, but she also invited Peter.
- b. *Wie Jan nu weer uitgenodigd heeft!*  
Who Jan now again invited has!

### Pragmatic conditions:

- ▶ The speaker knows the true exhaustive answer to the question: that Jan invited Maria, Kees and Peter, and only them
- ▶ The speaker is surprised at the true answer: that Jan invited Maria, Kees and Peter (because he expected only Maria and Kees)
- ▶ The wh-variable is instantiated: someone is invited

### Observation 2:

- (8) a. The speaker expected Jan to invite Marie. However, Jan didn't invite anyone.
- b. *#Wie Jan nu weer uitgenodigd heeft!*  
Who Jan now again invited has!

Condition 3 is violated!



# Theory of RQs

- (9) a. Jan definitely likes Marie!  
 b. *After all, who did he invite to the movie?* (Marie)

## Semantics of RQs:

- ▶  $[[wh - clause]] = \{\text{Jan invited Marie}\}$
- ▶ **the true answer:** Jan invited Marie (and possibly someone else)
- ▶ **the true exhaustive answer:** Jan invited *only* Marie

## Pragmatic conditions for RQs:

- ▶ The speaker and the hearer know the true exhaustive answer to the question: that Jan invited Marie to the movie
- ▶ The speaker uses the true answer or its complement to argue for the salient issue:  
 the true answer: Jan invited Marie  
 issue: Jan likes Marie



## Observation 2 for RQs

### Observation 2:

- (10) a. Jan was alone at his birthday party.  
 b. *After all, who did he invite?* (no one)

### Pragmatic conditions:

- ▶ The speaker and the hearer know the true exhaustive answer to the question:  
that Jan invited no one to his birthday party
- ▶ The speaker uses the true answer or its complement to argue for the salient issue:  
the true answer: Jan invited no one  
issue: Jan was alone at his birthday party



# Theory of Es

- (11) a. John's parents are not particularly tall.  
 b. *How tall John is!* (1m90)

## Semantics of Es:

- ▶  $[[wh - clause]] = \{John \text{ is tall to the degree } 1m90\}$
- ▶ **the true answer:** John is *at least* 1m90 tall
- ▶ **the true exhaustive answer:** John is *exactly* 1m90 tall

## Pragmatic conditions for Es:

- ▶ The speaker knows the true exhaustive answer to the question: that John is 1m90 tall
- ▶ The speaker is surprised at the true answer: that John is at least 1m90 tall (because he expected John to have "normal" height, thus to be shorter than 1m90)
- ▶ The wh-variable is instantiated

**Remark:** For how-Es condition 3 always holds



## Deriving observation 1 for Es

**Observation:** *How tall John is!* (ok: 1m90, #: 1m50)

- ▶ **Key assumption: monotonicity of gradable adjectives**  
 “John is tall to the degree 1m90” entails “John is tall to the degree 1m80” [Cresswell1976, von Stechow1984, Heim(2000), Nouwen(2010)]
- ▶ Many people are tall to average and low degrees  
 (e.g. everyone is tall to the degree 1cm)
- ▶ Therefore, being tall to an average or low degree is not surprising
- ▶ Only being tall to a high degree is surprising
- ▶ **Pragmatic condition 2 for Es:** The speaker is surprised at the true answer
- ▶ ok: 1m90, #: 1m50

### Summary:

Surprise is connected to the distribution of degrees of tallness

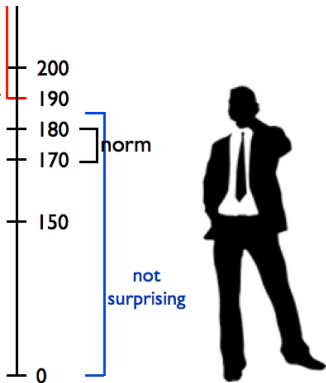


## Deriving observation 1 for Es (contd.)

1m90:

surprising

answer



1m50:

answer

200

190

180

170

150

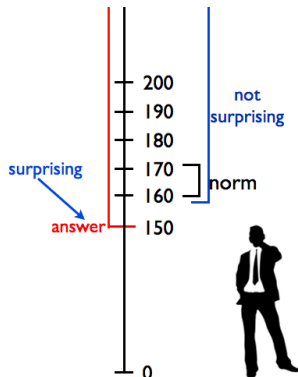
0

norm

not surprising



## Observation 1 for Es: “short”



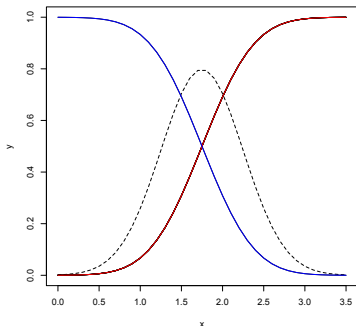
### Observation 1:

*How short John is!* (ok: 1m50, #: 1m90)

- ▶ Scale for “short”: the same as for “tall” but opposite orientation
- ▶ **Monotonicity:** “John is short to the degree 1m50” entails “John is short to the degree 1m60”
- ▶ Many people are short to average and low degrees **of shortness** (e.g. everyone is short to the degree 3m)
- ▶ Therefore, being short to the degree 1m90 is not surprising
- ▶ Being short to the degree 1m50 is surprising



## Observation 1 for Es: conclusion



dotted line: distribution of heights  
 blue line: distribution of degrees of tallness  
 red line: distribution of degrees of shortness

### Conclusion:

High degrees in Es come from the interaction between surprise and monotonicity of gradable adjectives





# Theory of RQs

- (12) a. We should definitely take John to our team!  
 b. *After all, how tall is he?* (2m30)

## Semantics of RQs:

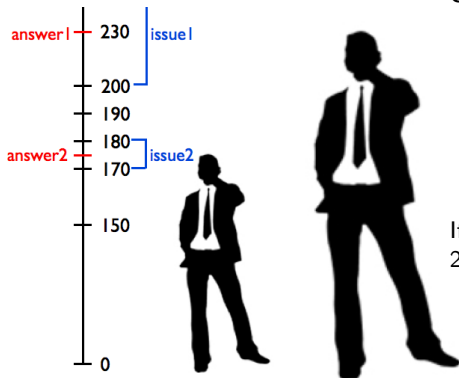
- ▶  $[[wh - clause]] = \{ \text{John is tall to the degree 2m30} \}$
- ▶ **the true answer:** John is *at least* 2m30 tall
- ▶ **the true exhaustive answer:** John is *exactly* 2m30 tall

## Pragmatic conditions for RQs:

- ▶ The speaker and the hearer know the true exhaustive answer to the question:  
that John is 2m30 tall
- ▶ The speaker uses the true answer or its complement to argue for the salient issue:  
the true answer: John is at least 2m30 tall  
issue: John is a very tall basketball player (taller than 2m)



# Observation 1: problem with the true exhaustive answer



## Observation:

- ▶ We should definitely take John to our team! *After all, how tall is he?* (2m30)
- ▶ We're looking for average people, I mean something between 1m70 and 1m80 tall. So lets take John! *#After all, how tall is he?* (1m75)

If the true exhaustive answer is used:  
2m30 predicted ok:

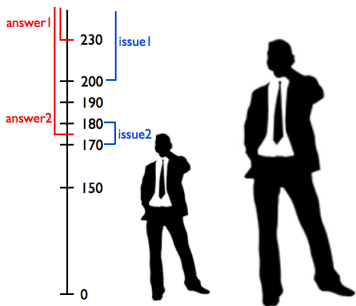
- ▶ answer: John is 2m30 tall
- ▶ issue: John is a very tall basketball player (taller than 2m)

1m75 predicted ok:

- ▶ answers: John is 1m75 tall
- ▶ issue: John has "normal" height ([1m70, 1m80])



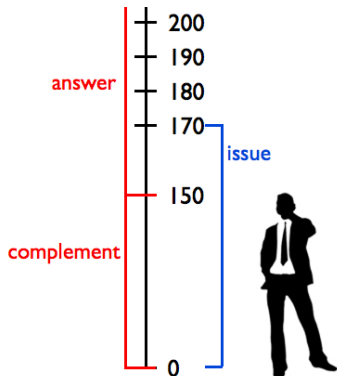
## Arguing with the true answer



- ▶ *After all, how tall is he?* (2m30)
- ▶ **The true answer:** John is **at least** 2m30 tall
- ▶ issue: John is a very tall basketball player (taller than 2m)
- ▶ answer1 is used to argue for issue1
- ▶ Were John 2m31, the speaker would also be able to argue with it
  
- ▶ *#After all, how tall is he?* (1m75)
- ▶ **The true answer:** John is **at least** 1m75 tall
- ▶ issue: John has a “normal” height ([1m70, 1m80])
- ▶ **Wrong:** Were John 2m, the speaker would also be able to argue with it
- ▶ the true answer cannot be used to argue for the issue



## Arguing with the complement



- ▶ I think we should sack John from the team.  
*After all, how tall is he?* (1m50)
- ▶ **The true answer:**  
John is **at least** 1m50 tall
- ▶ issue: John is very short for a basketball player  
(shorter than 1m70)
- ▶ answer cannot be used to argue for the issue
- ▶ complement: John is **less than** 1m50 tall
- ▶ complement is used to argue for the issue

Dutch:

*Immers, hoe groot is Jan niet?*  
After all, how tall is Jan not?



## Observation 1 for RQs: conclusion

### Conclusion:

High/low degrees in RQs come from arguing with the true (non-exhaustive) answer (or its complement)



# Summary














- ▶ Question semantics is used for Es and RQs
- ▶ Es and RQs: the speaker knows the true exhaustive answer
- ▶ Es: the true answer is surprising
- ▶ RQs: the true answer is used for arguing
- ▶ High degrees in Es:  
surprise + monotonicity of gradable adjectives
- ▶ Extreme degrees in RQs:  
argumentation with the true answer or its complement



- ▶ It matters what Q semantics we choose because:
- ▶ [Karttunen(1977)]:  $[[who\ did\ Jan\ invite?]] = \emptyset$  if Jan invited no one
- ▶ [Groenendijk&Stokhof(1982)]: only the notion of the **true exhaustive answer** is definable
- ▶ What are the speech acts used for Es and RQs?
- ▶ How do embedded Es and RQs achieve similar effects?



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