



EGG 2018: Perspective sensitivity (week 1)

Session 2: Perspective sensitivity vs. other types of context dependence

Sarah Zobel

July 31, 2018



Yesterday's class

We introduced the class of **perspective-sensitive items** and their **characteristic properties** according to Bylinina et al. 2015.

- ▶ Default speaker-orientation
- ▶ Shiftability

Today: compare perspective-sensitive expressions to other classes of context-dependent expressions we know

⇒ locatives vs. indexicals and pronouns

Underlying question: Can perspective sensitivity be reduced to the type of context dependence of either expression?



Why indexicals and pronouns?

Plausible analysis of locative expressions:



Why indexicals and pronouns?

Plausible analysis of locative expressions:

- ▶ Locative expressions, like *left*, contain as part of their semantic contribution an element that is responsible for their perspective sensitivity – the “**perspectival center**” (x_{PC}).
- ▶ This element x_{PC} is a variable that interacts with context.
- ▶ Its possible values are entities; the chosen value fixes whose perspective is considered.

⇒ *left* ≈ left (of something) from x_{PC} 's point of view (see Partee 1989)

Question: Is x_{PC} indexical? Is it pronominal? Or does it behave completely differently?



Roadmap

Introduction

Background on pronouns and indexicals

Is x_{PC} indexical?

Is x_{PC} pronominal?

Summary



Pronouns = 3rd person singular personal pronouns

Pronouns have (at least) three possible uses that are distinguished in the semantic literature:



Pronouns = 3rd person singular personal pronouns

Pronouns have (at least) three possible uses that are distinguished in the semantic literature:

▶ **deictic use**

- (1) [Assume: Mary is particularly prominent in the context.]
She knows the answer.



Pronouns = 3rd person singular personal pronouns

Pronouns have (at least) three possible uses that are distinguished in the semantic literature:

▶ **deictic use**

- (1) [Assume: Mary is particularly prominent in the context.]
She knows the answer.

▶ **co-referential use**

- (2) Let's ask Mary. She knows the answer.



Pronouns = 3rd person singular personal pronouns

Pronouns have (at least) three possible uses that are distinguished in the semantic literature:

▶ **deictic use**

- (1) [Assume: Mary is particularly prominent in the context.]
She knows the answer.

▶ **co-referential use**

- (2) Let's ask Mary. She knows the answer.

▶ **bound use**

- (3) Every occupant of this dorm will tell you what she knows.



Context dependence of pronouns

Co-reference across sentence boundaries:

reference to an individual previously introduced in the discourse

- (4) Let's ask Mary_i. She_i knows the answer.
- (5) Mary_i called Susan_j yesterday. She_j had not been in class.



Context dependence of pronouns

Co-reference across sentence boundaries:

reference to an individual previously introduced in the discourse

- (4) Let's ask Mary_{*i*}. She_{*i*} knows the answer.
 (5) Mary_{*i*} called Susan_{*j*} yesterday. She_{*j*} had not been in class.

Basic analysis of pronouns: *Pronouns Rule* (Heim & Kratzer 1998: Ch 5)

Pronouns are interpreted via the **current variable assignment** g . This assignment returns the individual stored at the relevant address i provided by the pronoun.

$$(6) \quad \llbracket \text{she}_i \rrbracket^g = g(i)$$

⇒ the variable assignment g stores the contextually available individuals under numerical addresses (= indices)



Accounting for the behavior of pronouns

The *Pronouns Rule* is successfully used in accounts for the deictic, co-referential, and bound uses.

- ▶ **co-referential use:** direct result of the rule and independent co-indexation between pronoun and antecedent
⇒ mention of the antecedent leads to a change in *g*



Accounting for the behavior of pronouns

The *Pronouns Rule* is successfully used in accounts for the deictic, co-referential, and bound uses.

- ▶ **co-referential use:** direct result of the rule and independent co-indexation between pronoun and antecedent
⇒ mention of the antecedent leads to a change in g
- ▶ **deictic use:** assume that the identifying gesture can fix the value of g for the relevant index



Accounting for the behavior of pronouns

The *Pronouns Rule* is successfully used in accounts for the deictic, co-referential, and bound uses.

- ▶ **co-referential use:** direct result of the rule and independent co-indexation between pronoun and antecedent
⇒ mention of the antecedent leads to a change in g
- ▶ **deictic use:** assume that the identifying gesture can fix the value of g for the relevant index
- ▶ **bound use:** make g available to interpretational rules to be able to model co-variation between a quantifier and a pronoun that is bound by that quantifier
⇒ introduction of *Predicate Abstraction*



Accounting for the behavior of pronouns

The *Pronouns Rule* is successfully used in accounts for the deictic, co-referential, and bound uses.

- ▶ **co-referential use:** direct result of the rule and independent co-indexation between pronoun and antecedent
⇒ mention of the antecedent leads to a change in g
- ▶ **deictic use:** assume that the identifying gesture can fix the value of g for the relevant index
- ▶ **bound use:** make g available to interpretational rules to be able to model co-variation between a quantifier and a pronoun that is bound by that quantifier
⇒ introduction of *Predicate Abstraction*

Note: Further uses (e.g. e-type) pose problems for this analysis!

(Heim & Kratzer 1998: Ch 11, Elbourne 2005)



Pronouns vs. indexicals – I

Behavior across turns in a discourse:

- (7) A: I saw Mary_i yesterday.
B: How is she_i doing?
A: She_i went to the movies with her_i boyfriend.
B: Really? I thought she_i was sick.



Pronouns vs. indexicals – I

Behavior across turns in a discourse:

- (7) A: I saw Mary_i yesterday.
 B: How is she_i doing?
 A: She_i went to the movies with her_i boyfriend.
 B: Really? I thought she_i was sick.
- (8) B: How are you doing?
 A: You went to the movies with your boyfriend.
 B: Really, I thought you were sick?
- (9) A: I went to the movies with my boyfriend.
 B: Really? I thought I was sick.

- ⇒ *she* can be used to refer to the same individual across utterances
- ⇒ *I* is always the speaker of the utterance, *you* the addressee
- ⇒ context dependence of pronouns ≠ context dependence of indexicals



Context dependence of indexicals

Basic analysis of indexicals:

(Kaplan 1989)

Indexicals are interpreted via the **context parameter c** . This parameter provides the speaker (c_s), addressee (c_a), location (c_ℓ), time (c_t), and world (c_w) of the current utterance.

- (10)
- a. $\llbracket I \rrbracket^g = c_s$
 - b. $\llbracket \text{you} \rrbracket^g = c_a$
 - c. $\llbracket \text{here} \rrbracket^g = c_\ell$
 - d. $\llbracket \text{now} \rrbracket^g = c_t$

Question: Can c and its values be manipulated similarly to g ?



Can *c* be manipulated?

Kaplan (1989): NO! → But!!

- ▶ Fake indexicals (see Partee 1989, Heim 2005, Kratzer 2009)

- (11)
- a. Only I did my homework.
 - b. Only you eat what you cook.

⇒ analyzed via feature transmission/deletion; not context manipulation



Can *c* be manipulated?

Kaplan (1989): NO! → But!!

- ▶ Fake indexicals (see Partee 1989, Heim 2005, Kratzer 2009)

- (11) a. Only I did my homework.
b. Only you eat what you cook.

⇒ analyzed via feature transmission/deletion; not context manipulation

- ▶ Shifted indexicals in Amharic, Slave, Zazaki, and other languages (see Schlenker 2003, Anand & Nevins 2004, and much subsequent work)

- (12) Heseni_j (mi_k-ra) va ke ez_{j/k} dewletia
Hesen.OBL (I.OBL-to) said that I rich.be-PRES
'Hesen said that {I am, Hesen is} rich.' (Zazaki)

⇒ analyzed via context manipulation

⇒ not found in English, though



Interim summary: pronouns vs. indexicals

Pronouns

- ▶ Pronouns have variable denotation.
- ▶ The relevant value is assigned by the variable assignment g based on the index carried by the pronoun.
- ▶ The assignment g can be manipulated by semantics.

Indexicals

- ▶ Indexicals have variable denotation.
- ▶ The relevant value is assigned via the context parameter c ; it's one of the elements in c .
- ▶ The context parameter c cannot be manipulated by semantics (in all languages).

⇒ different types of context dependence



Roadmap

Introduction

Background on pronouns and indexicals

Is x_{PC} indexical?

Is x_{PC} pronominal?

Summary



Why is it not implausible that x_{PC} could be indexical?



Why is it not implausible that x_{PC} could be indexical?

- ▶ We observed speaker-orientation for perspective-sensitive expressions.
- ▶ The speaker is a component in c : c_S .
- ▶ Indexicals depend on c .

⇒ the x_{PC} of perspective-sensitive expressions could be indexical

What are arguments against x_{PC} being indexical?



Differences between indexicality and perspective sensitivity

- ▶ Perspective-sensitive expressions are speaker-oriented by default only – not necessarily.

(13) *D to E*: A said that the left box was prettier. ($X_{PC} = A$)

(14) *A to D*: Is the left box prettier? ($X_{PC} = D$)



Differences between indexicality and perspective sensitivity

- ▶ Perspective-sensitive expressions are speaker-oriented by default only – not necessarily.

(13) *D to E*: A said that the left box was prettier. ($x_{PC} = A$)

(14) *A to D*: Is the left box prettier? ($x_{PC} = D$)

- ▶ A characteristic property of perspective-sensitive expressions is Shiftability, see also (13) & (14). English indexicals cannot shift.

⇒ the values for x_{PC} are more flexible than the values for c_s

⇒ **an analysis of perspective sensitivity via c is highly implausible**

(see also Lasersohn 2017 for further arguments)



Why is it not implausible that x_{PC} could be pronominal?

Partee 1989: x_{PC} seems to show the same range of possible uses as pronouns (Partee 1989: ex. (9))

- (15) a. John visited a local bar.
b. Every sports fan was at a local bar watching the playoffs.

⇒ *local* ≈ “in the vicinity of x_{PC} ”

Can be recreated with *left*:

- (16) a. A chose the left box.
b. Every contestant chose the left box.

⇒ *left* ≈ “left (of something) from x_{PC} ’s point of view”



A further syntactic parallel

Partee (1989) also tentatively observes that bound instances of locative expressions are subject to the same syntactic constraints regulating viable binder-bindee-configurations: (Partee 1989: ex. (17)& (19))

- (17) a. Only his_i top aide got a good picture of Reagan_i.
 b. #?Only his_i top aide got a good picture of [every senator]_i.
 c. [Every senator]_i directed a smile at his_i top aide.
- (18) a. #?The leader of the local union wrote a letter to every untenured professor.
 b. Every untenured professor received a letter from the leader of the local union.



A further syntactic parallel

Partee (1989) also tentatively observes that bound instances of locative expressions are subject to the same syntactic constraints regulating viable binder-bindee-configurations: (Partee 1989: ex. (17)& (19))

- (17) a. Only his_i top aide got a good picture of Reagan_i.
 b. #?Only his_i top aide got a good picture of [every senator]_i.
 c. [Every senator]_i directed a smile at his_i top aide.
- (18) a. #?The leader of the local union wrote a letter to every untenured professor.
 b. Every untenured professor received a letter from the leader of the local union.

Are these judgments also recreated with *left*?

- (19) a. The left box pleased every contestant.
 b. Every contestant liked the left box.



Problems for assuming that x_{PC} is pronominal – I

Partee 1989:

- ▶ it is not always possible/grammatical to make x_{PC} overt
- ▶ if we assume that x_{PC} is pronominal, we might expect this pronominal element to be generally available for overt realization

- (20) John had a black spot on his forehead. (Partee 1989: ex. (20))
- a. To the left of it was a green “A”.
 - b. *?To the left of it for/from him was a green “A”.
- (21) In all my travels. . . (Bylinina et al. 2015: ex. (13))
- a. whenever I have called a doctor, one has arrived (*there) within an hour.
 - b. whenever I have called a doctor from any place, one has arrived there within an hour.



Problems for assuming that X_{PC} is pronominal – II

Bylinina et al. (2015:72–73) add **three more reasons to be doubtful** that X_{PC} is pronominal (in the sense of 3rd person pronouns).

- ▶ **Default speaker-orientation:** speaker-reference is unusual for pronouns



Problems for assuming that x_{PC} is pronominal – II

Bylinina et al. (2015:72–73) add **three more reasons to be doubtful** that x_{PC} is pronominal (in the sense of 3rd person pronouns).

- ▶ **Default speaker-orientation:** speaker-reference is unusual for pronouns
- ▶ Pronouns are more flexible in their reference than x_{PC}
 ⇒ x_{PC} can be the speaker, the addressee, or a subject (see Session 1)

- (22)
- a. Yasu is talking with Vera_{*i*} about her_{*i*} mother.
 - b. Yasu is talking with Vera about a foreigner.
 - c. A is talking with B about the left box.



Problems for assuming that x_{PC} is pronominal – II

Bylinina et al. (2015:72–73) add **three more reasons to be doubtful** that x_{PC} is pronominal (in the sense of 3rd person pronouns).

- ▶ **Default speaker-orientation:** speaker-reference is unusual for pronouns
- ▶ Pronouns are more flexible in their reference than x_{PC}
 ⇒ x_{PC} can be the speaker, the addressee, or a subject (see Session 1)

- (22)
- a. Yasu is talking with Vera_{*i*} about her_{*i*} mother.
 - b. Yasu is talking with Vera about a foreigner.
 - c. A is talking with B about the left box.

- ▶ **Shift-together locally:** “two perspective-sensitive items in the same ‘domain’ must refer to the same perspectival centre” (Bylinina et al. 2015: 73)

- (23)
- a. Eric_{*i*} said that Wei_{*j*} broke his_{*i,j*} computer in his_{*i,j*} office.
 - b. A said that Wei talked to a foreigner on the left.



Summary

- ▶ Pronouns and indexicals have different brands of context dependence.
- ▶ Perspective-sensitive items cannot plausibly be grouped with either type of expression.
 - ▶ The default speaker-orientation is a problem for both potential unifications.
 - ▶ The special brand of shiftability of perspective-sensitive items is also a problem for both potential unifications.

⇒ x_{PC} is plausibly neither indexical nor pronominal

⇒ third type of context dependence



Literatur

- Anand, Pranav & Andrew Nevins. 2004. Shifty Operators in Changing Contexts. In: Robert B. Young (ed.) *Proceedings of SALT 14*, 20–37.
- Bylinina, Lisa, Eric McCready & Yasutada Sudo. 2015. Notes on perspective-sensitivity. In: Arkadiev, Peter et al. (eds.) *Donum Semanticum*. 67–79.
- Elbourne, Paul. 2005. *Situations and Individuals*. Cambridge, MA: MIT Press.
- Heim, Irene. 2005. *Features on bound pronouns*. Ms., MIT, Cambridge, MA.
- Heim, Irene & Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Blackwell.
- Kratzer, Angelika. 2009. Making a Pronoun: Fake Indexicals as Windows into the Properties of Pronouns. *Linguistic Inquiry* 40: 187–237.
- Lasersohn, Peter. 2017. *Subjectivity and Perspective in Truth-Theoretic Semantics*. OUP.
- Partee, Barbara. 1989. Binding implicit variables in quantified contexts. *Proceedings of CLS 25*: 342–356.



Literatur (contd.)

Schlenker, Philippe. 2003. A Plea for Monsters. *Linguistics & Philosophy* 26:29–120.