NASSLLI Workshop on
Indexicality, Expressives, and Self-Reference

- ► **Today:** Eric McCready and Stephen Wechsler
  Meaning as Use: Problems and Prospects

- ► **Tuesday:** Hans Kamp
  Mental Indexicals and Linguistic Indexicals

- ► **Wednesday:** Pranav Anand
  Remembering, Imagining, and De Se, Revisited

- ► **Thursday:** Sarah Murray
  The Indexical Component of Evidentiality

- ► **Friday:** Eric Acton and Christopher Potts
  The Latent Affective Meaning of Demonstratives

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Meaning as Use: Problems and Prospects

Eric McCready and Stephen Wechsler

Aoyama Gakuin University and The University of Texas

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Outline

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Indexicals

With indexicals, 'the referent is dependent on the context of use and the word provides a rule which determines the referent in terms of certain aspects of the context' (Kaplan 1977, 490)

examples: *I, me, my, you, your, that, this, here, now, tomorrow, yesterday, actual, present, local, . . .*

Reference *de se*

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The essential indexical (Perry, 1979)

1. I am making a mess.
2. The shopper with the torn sack is making a mess.
3. John Perry is making a mess.
4. He [*pointing to a reflection in the mirror*] is making a mess.

Dedicated de se

*Suppose the baseball player Ernie Banks gets beaned, develops
amnesia. . . He doesn't know his name. . . he reads in the
newspapers about a baseball player named Ernie Banks. He
decides he likes Ernie Banks, and would like him to leave Chicago
and go to New York to play for the Mets.*
    (Morgan 1970, 380)

1 & 2 have readings on which they are true; but 3 is false:

1. Ernie Banks$_i$ hopes Ernie Banks$_i$ will leave Chicago.
2. Ernie Banks$_i$ hopes he$_i$ will leave Chicago.
3. Ernie Banks$_i$ hopes PRO$_i$ to leave Chicago.

(Castañeda 1968; Morgan 1970; Mitchell 1986; Chierchia 1989;
Lewis 1979)

de se as de re: acquaintance relations

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- ▶ The acquaintance relation Ψ between agent and the *res*.
- ▶ Attitudes relate agents to tuples $\langle x, \Psi, P \rangle$ of properties (P), individuals (x), and descriptions (Ψ)
- ▶ In de se belief reports, Ψ is **direct self-acquaintance** (Lewis 1979)

1. Ernie Banks hopes he$_{read.about}$ will leave Chicago.
   $hope(b, \langle x, read.about(b, x), \lambda y[leave.Chicago(y)] \rangle)$

2. a. Ernie Banks$_i$ hopes to leave Chicago.
   b. Ernie Banks$_i$ hopes he* will leave Chicago.
   $hope(b, \langle x, self(b, x), \lambda y[leave.Chicago(y)] \rangle)$

But is *de se* special? If so, how and why?

Self-reference and self-identification

Self-identification by the addressee:

1. You are making a mess.
2. The shopper with the torn sack is making a mess.
3. John Perry is making a mess.
4. He [*pointing to a reflection in the mirror*] is making a mess.

Self-identification by overhearers:

1. Mary, this is Bill. He's a grad student here.

the *de se* component

Self-identification supplemented with further operations:

1. Deferred reference. (Nunberg 1993)
   Condemned prisoner: I am traditionally allowed to order whatever I like for my last meal.
   - index of *I*: the speaker (*de se* component)
   - interpretation of *I* is *instantiated* by the index: 'condemned prisoners'

2. Combinations with de re. (Kamp 2011, inter alia)
   (Not knowing it was my own voice on the recording,) I thought I_2 sounded drunk. (I_2: de re for thinker; de se for speaker)

Our focus for now: The de se component of 1st and 2nd person pronouns.

What is the Fregean sense of 'I'?

Now everyone is presented to himself in a particular and primitive way, in which he is presented to no one else. So, when Dr. Lauben thinks that he has been wounded, he will probably be basing it on this primitive way in which he is presented to himself. And only Dr. Lauben himself can grasp thoughts specified in this way. But now he may want to communicate with others. He cannot communicate a thought that he alone can grasp. Therefore, if he now says 'I was wounded', he must use the 'I' in a sense which can be grasped by others, perhaps in the sense of 'he who is speaking to you at this moment'; by doing this he makes the associated conditions of his utterance serve towards the expression of a thought.

Frege (1918) 'The Thought'

The descriptive meaning of 'I'

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A common answer, following Frege:

$$[[I]]^c = sp(c) \quad \text{'the current speaker'}$$

'I am not claiming. . . that indexicals lack anything that might be called 'descriptive meaning.' **Indexicals, in general, have a rather easily statable descriptive meaning.** But it is clear that this meaning is relevant only to determining a referent in a **context of use** and not to determining a relevant individual in a **circumstance of evaluation**.' (Kaplan 1977, 498)

Kaplanian utterance context

A tuple of various semantically relevant parameters:

$$c = \langle sp, ad, loc, t, \dots \rangle$$

indexicals have denotations which depend directly on such contexts in order for their meaning to be instantiated:

$$[[I]]^c = sp(c)$$
$$[[you]]^c = ad(c)$$
$$[[here]]^c = loc(c)$$
$$[[now]]^c = t(c)$$

Context of use vs. circumstances of evaluation

1. Necessarily, I am speaking now. (false!)

2. Necessarily, [the current speaker] is speaking now. (true!)

Character and content

Descriptive meaning of the indexical ('the current speaker') is
banished from the (intensional) content.

- ▶ Character: function from utterance contexts to contents
- ▶ Content: function from circumstances to extensions

Recent meaning-as-use approaches to the 1st/2nd person

- ► Kripke 2011
- ► Sainsbury 2011
- ► Folescu and Higginbotham 2011
- ► Wechsler 2010

Kripke on Frege

Surely, one must give an analysis of first person sentences where 'I' is univocal, whether used in talking to oneself (discouraged in our society, anyway), or in diary entries (not so discouraged), or in communicating with others. If it is the sense determined by its subject's first person acquaintance with herself, how can it be used to communicate to someone else? Here is one possibility. The hearer is aware that each person, including the hearer herself, uses 'I' to refer to herself by direct self-acquaintance. Hence, knowing what this is in one's own case and taking it to be the same way for others, one understands what the first person statement is, even though it has a sense that is, strictly speaking, incommunicable to the hearer.

Kripke (2011) 'The First Person'

Eliminating reference to the speaker

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Sainsbury 2011: *'I claim that* **there's no more** *to understanding a token of "I", whether as speaker or hearer, than being able to apply to the token the rule: English speakers should use "I" to refer to themselves as themselves'* (254).

- ► A rule of use, specifying that speakers should follow it.
- ► Explicitly exhausts the semantics (*there's no more*)
- ► Motivated by the *symmetry constraint*: 'What a person who has self-knowledge thereby knows can be expressed by another, third-personally.' (255)

Sainsbury, R. M. 2011. 'English speakers should use "I" to refer to themselves.' In Anthony Hatzimoyis (ed.) *Self-Knowledge*, Oxford University Press.

From context to utterance

Folescu and Higginbotham (2011): To explain de se, the
'somewhat bloodless conception of context-sensitivity' is
inadequate; we need a theory of utterances.

► '... when a speaker uses the first-person pronoun in an utterance *u* she
  knowingly and intentionally refers to herself as the speaker in the context,
  by deploying what we will call the *rule of use* for the pronoun; namely, that it
  is to be used with the intention of thereby referring to oneself. And we shall
  add: of referring to oneself as the speaker *s(u)* of *u*.'

► This *cross-reference* is responsible for Immunity to Error through
  Misidentification.

► 'The de se nature of the first-personal utterance is revealed, not in the
  content viewed as the modal spectrum of what is said, but rather in **how it
  is computed**. Such is the advantage of relativizing indexical reference to
  the act of utterance, rather than just to an abstract context.'

First person rule

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A radical meaning-as-use first person rule in terms of
acquaintance relations:

- **Rule for the production of** I : Use I to indicate that Ψ is
  instantiated to **self**.
- **Rule for interpreting** I: Assume the speaker is applying the
  rule above.

N.b. 'speaker' plays no role in the descriptive meaning.

Second person rule

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A radical meaning-as-use semantics of the second person:

- **Addressee's rule for interpreting** *you*: Interpret *you* by instantiating Ψ to **self**.
- **Rule for the production of** *you*: Assume the addressee will apply the rule above.

N.b. 'addressee' plays no role in the descriptive meaning.

Evidence

- Multiple addressees
- Person-number paradigms
- Autism

2nd singular with multiple addressees

1. And now that new doors have been opened for you, you've got an obligation to seize those opportunities. **You** need to do this not just for **yourself** but for those who don't yet enjoy the choices that you've had, the choices you will have. (Barack Obama, commencement address at Barnard College, May 14, 2012)

2. A teacher to her class: Write your name.

▶ 2nd person **singular** but multiple addressees

▶ In 2, each addressee writes his own name — not just some addressee's name

▶ Thus, 2nd Person induces self-identification by each addressee, not reference to addressees.

(Wechsler 2010)

2nd plural with multiple addressees

A question regarding y'all and y'all's mothers:

1. When did you last see each other?

Each addressee x interprets plural *you* as referring to a set that includes x (here, $\{x, x$'s mother$\}$)

- ► Thus *you* does NOT refer to (a superset of) the addressees.
- ► Instead, *you* induces each addressee to self-identify with the referent of the pronoun.

A strange prediction

Claims:

- The notion 'addressee' plays no role in the descriptive meaning of a 2nd person pronoun.
- The notion 'speaker' plays no role in the descriptive meaning of a 1st person pronoun.

Strange consequences for person/number paradigms:

- A 'true 2nd person plural', grammatically specified for reference to all and only the addressees, is impossible.
- A 'true 1st person plural', grammatically specified for reference to all and only the speakers, is impossible.

The Associative Plural Generalization

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	Possible	**Attested**
1+2	speaker(s), addressee(s)	inclusive
1+2+3	speaker(s), addressee(s), other(s)	
1	speaker(s) (true 1PL)	exclusive
1+3	speaker(s), other(s)	
2	addressee(s) (true 2PL)	second person
2+3	addressee(s), other(s)	
3	other(s)	third person

Table: Seven 'meta-persons'; only four attested pronoun types

The Associative Plural Generalization

Based on sample sizes ca 500 languages, studies spanning a half century, these are 'absolute universals rather than strong trends' (Bobaljik 2008, 209):

1. U1. No language distinguishes [1+1] from [1+3].
2. U2. No language distinguishes [2+2] from [2+3].
3. U3. No language distinguishes [1+2] from [1+2+3].

(Bobaljik, 2008; Cysouw, 2003; Greenberg, 1988; McGregor, 1989; Moravcsik, 1978; Noyer, 1992; Silverstein 1976)

Theory of mind

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This meaning-as-use theory of 1st and 2nd person crucially
appeals to the interlocutors' **theory of mind**:

*The hearer is aware that each person, including the hearer herself,
uses 'I' to refer to herself by direct self-acquaintance. Hence,
knowing what this is in one's own case and taking it to be the same
way for others, one understands what the first person statement is,
even though it has a sense that is, strictly speaking,
incommunicable to the hearer.*
        Kripke (2011) 'The First Person'

Prediction: People with a **theory of mind deficit** should
experience special difficulty with 1st and 2nd person pronouns.

Theory of Mind (ToM) Hypothesis of Autism

- ▶ Attributes childhood autism to a deficit or lack of a ToM.
- ▶ Evidence from false-belief tests.

(Baron-Cohen, Leslie, and Frith 1985; Tager-Flusberg 2001; Tager-Flusberg and Joseph 2005)

Linguistic symptoms of autism

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- ▶ Children with autism have a special difficulty with the use of 1st and 2nd person pronouns, 'to a degree that seems out of keeping with other aspects of their language development' (Lee et al., 1994: 156)

- ▶ Children with autism tend to reverse 1st and 2nd person: 16% reversed in one study (Tager-Flusberg 1994).

1. Thank-you for inviting you. (Lee et al., 1994)

(Kanner, 1943, Bettelheim, 1967; Fay, 1979; Lee et al., 1994: 156; Tager-Flusberg, 1994: 184).

Shifted indexical languages

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Amharic (Schlenker, 2003):

1. a. Situation: John says: 'I am a hero.'
   b. ǰon ǰəgna nəə-ññ   yɨl-all.
       John hero be.PF-1SO 3M.say-AUX.3M
       'John says that he is a hero.'
       (lit. 'John says that I am a hero.')

(Schlenker 2003, Anand and Nevins 2004, Anand 2006)

► Anand and Nevins (2004): Indexicals must 'shift together'
► Analyzed as overwriting of the context parameter
► Adjustment: overwrite utterance instead

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▶ The notion 'speaker' ('writer', 'user', etc.) plays no role in the grammatically specified descriptive meaning of *I*; it plays a role only in specifying who should follow the rule governing the use of *I*.

▶ The notion 'addressee' ('reader', 'hearer', etc.) plays no role in the grammatically specified descriptive meaning of *you*; it plays a role only in specifying who should follow the rule governing the use of *you*.

Conjunct/Disjunct systems

Declaratives in Kathmandu Newar (Hargreaves 2005)

1. jī: a:pwa twan-**a**.
   1.ERG much drink-PST.**CJ**
   'I drank a lot/too much.'

2. chā   a:pwa twan-a.
   2.ERG much drink-PST.DJ
   'You drank a lot/too much.'

3. wā   a:pwa twan-a.
   3.ERG much drink-PST.DJ
   'S/he drank a lot/too much.'

Conjunct/Disjunct systems

Interrogatives in Kathmandu Newar (Hargreaves 2005)

1. jī: a:pwa twan-a   lā?
   1.ERG much drink-PST.DJ Q
   'Did I drink a lot/too much?'

2. chā   a:pwa twan-**a**   lā?
   2.ERG much drink-PST.**CJ** Q
   'Did you drink a lot/too much?'

3. wā   a:pwa twan-a   lā?
   3.ERG much drink-PST.DJ
   'Did s/he drink a lot/too much?

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Reports

1. Syām-ā   a:pwa twan-**ā**   hā.
   Syam.ERG much drink-PST.**CJ** EVD
   'Syam$_i$ said that he$_i$ drank too much.'

Conjunct/Disjunct systems

	Declarative	**Interrogative**
1st	**CJ**	
2nd		**CJ**
3rd		

Syam$_i$ said that [he$_i$ . . . verb-**CJ**]

Some CJ/DJ systems:
Sino-Tibetan: Lhasa Tibetan (DeLancey 1992), Newar (Hale 1980;
Hargreaves 2005). **Nakh-Daghestanian**: Akhvakh (Creissels 2008),
Mehwb Dargwa (Bickel 2008). **Barbacoan**: Awa Pit (Curnow 2001),
Tsafiki (Dickinson 2000). **Trans New Guinea**: Oksapmin (Loughnane
2009), Duna and Kaluli (San Roque 2011). **Misc.**: Guambiano (Norcliffe
2011); Cha'palaa (Floyd 2011).

Conjunct/Disjunct systems

Hypothesis: A sentence with conjunct (CJ) verb form reports a **self-ascription by the verb's (subject) participant**.

- ▶ Declaratives: In a 1st person subject declarative the speaker declares a self-ascription: hence, CJ

- ▶ Interrogatives: The belief at issue is the addressee's belief; in 2nd person questions such beliefs are self-ascriptions: hence, CJ.
  - ▶ A similar *interrogative flip* with evidentials (Murray in press, inter alia).

- ▶ de se speech reports: reports of self-ascriptions: hence, CJ.

Annulment of self-ascription

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DJ can substitute for CJ, annulling self-ascription, for reporting:

- Unintentional action
- Surprise
- Ignorance
- Irony

Unintentional action

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DJ substitutes for CJ, to indicate unintentional action in Tsafiki
(Barbacoan; Dickinson 2000)

1. la   yaka   machitechi   poreyoe
   la   ya=ka   machite=chi   pore-yo-e
   1MASC 3=ACC machete=INSTR cut-CJ-DECL
   'I cut him (intentionally) with the machete.'

2. la   yaka   machitechi   poreie
   la   ya=ka   machite=chi   pore-i-e
   1MASC 3=ACC machete=INSTR cut-DJ-DECL
   'I cut him (unintentionally) with the machete.'

(Q: Did the agent think: *I am cutting him with the machete*?)

Surprise

DJ substitutes for CJ, to indicate surprise. Lhasa Tibetan (1) is a
simple neutral report by the speaker that she has money, in (2) the
speaker is surprised to discover, just now, that she has money
(Delancey 1992, 43-44).

1. ngar   dngul tog=tsam yod.
   I.DAT money some   exist.CJ
   'I have some money.'

2. ngar   dngul tog=tsam dug.
   I.DAT money some   exist.DJ
   'I have some money!' (DeLancey 1992: 43?44).

(Q: Did the agent think, during the period of having money, *'I have
some money'*?)

Surprise and evidentials

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Indirect evidentials often receive a special mirative (speaker
surprise) interpretation when direct evidence is present.

Gitksan (Peterson 2012):

1. ńakw=hl   witxw=s   Alvin.
   EVID=CND arrive=PND Alvin
   If Alvin is absent: 'Looks like Alvin is here.' (indirect evidence)
   If Alvin is present: 'Alvin's here!' (mirative)

Ignorance

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DJ substitutes for CJ, to indicate ignorance.

1. tsaboka   tedechi   mikuwayoe.
   tsabo=ka tede=chi   mi-kuwa-yo-e
   star=ACC hand=INSTR know-give-CJ-DECL
   'I pointed at the stars.'

2. seitonke   miitoto,   tsaboka   tedechi
   seiton=ke mi-ito-to   tsabo=ka   tede=chi
   bad=QT   know-not.be-SS   star=ACC   hand=INSTR
   mikuwaie.
   mi-kuwa-i-e
   know-give-DJ-DECL
   'Not knowing it was wrong, I pointed at the stars.'

(Q: Did the agent think, *'I don't know that pointing at the stars is wrong'*?)

Irony

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DJ substitutes for CJ, to indicate irony. A Tsachi woman was
complimented for her prowess in soccer: someone said she played
like a man. She uttered (2), 'ironically with a shrug of the
shoulders.' (Dickinson 2000, 388)

1. unila joyoe
   unila jo-yo-e
   man be-CJ-DECL
   'I am a man.'

2. unila joie
   unila jo-i-e
   man be-DJ-DECL
   'I'm a man!'

(Q: Did the agent think, *'I am a man'*?)

Summary: Conjunct/Disjunct systems

Conjunct morphology may be analyzed as grammatical indication of self-ascription by a participant in the eventuality portrayed in a sentence.

Expressives: data

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"A distinguished class of meanings." Some instances:

(1) a. Where's the <u>damn</u> pointer?
     b. ame-ga   fur-<u>imashi</u>-ta
         rain-Nom fall-HON-Pst
         'It rained.' (and I am behaving as if I feel socially distant)
     c. <u>Man</u> that was a stupid thing to say.
     d. Oops!

► Recently attracted a lot of attention in
  semantics/pragmatics/philosophy (Potts 2007; McCready
  2008; Richard 2008, etc):

► Expressive adjectives, pejoratives, honorifics, particles, . . .

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Intuitively: expressives are items which introduce meanings with
use-conditions rather than *truth-conditions* (cf. Gutzmann 2008).

- ▸ Expressives can be sincere, coherent, correct;
- ▸ they cannot be true or descriptively accurate.

Their meaning is not, properly speaking, truth-conditional.

- ▸ It rarely means to characterize external facts, but instead
  references internal states (though not always).
- ▸ Though e.g. (d): 'objective expressive', others 'subjective'
  (Kaplan)

In general, truth-conditionally independent, and with character of
side comments (though see McCready 2010).

Example

(2)   John bought a goddam baguette.

Roughly

- ▶ TC content = same as 'John bought a baguette'
- ▶ Expressive content: speaker is in an excited state wrt the baguette, the situation, or possibly something else.
- ▶ Potts (2005): discussion of objects of emotive attitudes. In a sense, global vs local interpretations.
- ▶ Which to select depends on hard-to-state factors in ways similar to e.g. ambiguity resolution.

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That question may connect closely to another: how to determine
content of attitudes.

- ▶ Positive or negative? Both possible in general.

(3) Your damn cousin is really something.

- ▶ Needed: a way of resolving underspecification wrt polarity.
- ▶ McCready (2011): proposal involving nonmonotonic
  reasoning about speaker intentions, with result used as input
  into signaling game model; yield: a preferred interpretation.
- ▶ Also close connections with e.g. affective demonstratives
  (Potts and Acton, Friday).

Perhaps: same kind of issue for guessing which interpretation
(global vs local) is intended by the speaker.

Characteristics of expressives

Potts (2007): list of 6 properties of expressive meanings.

- ▶ *Expressives* are items that satisfy . . .
    1. Independence: Expressive content contributes to a separate dimension of meaning
    2. Nondisplaceability: Expressives predicate something of the utterance situation
    3. Perspective dependence: Expressive content is evaluated from a particular perspective (often the speaker's)
    4. Descriptive ineffability: Speakers are never fully satisfied when they paraphrase expressive content using nonexpressive terms
    5. Immediacy: Expressives achieve their intended effect by being uttered
    6. Repeatability: Repeating an expressive strengthens its content; it is not redundant.

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Why these conditions? What are they?

► Independence: meanings do not interact with TC content.

(4)   John didn't buy the damn car after all.
      = John didn't buy the car + emotive
      ≠ John didn't buy the car + no emotive or polarity-switched
      emotive

Similarly for other embeddings.

► Consequence: no main predications, etc.

(5)   * John is damn.

Controversy: sometimes embedding possible (e.g. Amaral et al.
2008), some main predications (e.g. Hom 2008)

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- Nondisplaceability: The meanings expressed apply only to the speaker's feelings *at the time of use*.

  (6) Whenever I pour wine, the damn bottle drips. (Florian Schwarz)

  Suppose that *damn* could talk about situations other than the current one. Then this sentence could mean the following:

  - At all times *t* such that I pour wine at *t*, I feel negatively toward the wine bottle at *t* and the wine bottle drips at *t*.

  But it can't mean that. It can only mean the speaker is irritated right now (at the wine bottle, possibly).

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- Perspective dependence: relativized to perspective (usually speaker). Sometimes it does seem like we can get a change in the attitude holder.

  (7) My father screamed he would never allow me to marry that bastard Webster. (Angelika Kratzer)

  Here the speaker does not hold the attitude: 'Webster is a bastard.' Rather it is her father. What is going on? Potts claims that here we have a 'perspective shift'.

- Perspective dependence enables shiftability, but obviously does not guarantee it.

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Ineffability: Speakers do not have any satisfying way to paraphrase expressives.

- ▶ (Try it yourself: what is the meaning of your favorite expletive? Or a sentence particle?)
- ▶ This suggests that expressive content is not propositional in nature—ie., it is not truth-conditional at all.
- ▶ Note: this holds even for items like *oops*, which in principle seem to admit TC-type paraphrases.

Controversy: do speakers have good ways to paraphrase *anything*?

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Immediacy: It is enough to utter the expressive to 'make it true.'
This is like certain speech acts.

(8) I promise to mow the lawn.

    a.   # But I refuse to mow the lawn.

    b.   # But I do not promise that I will do it.

Similarly,

(9) That bastard Webster was late for work. # But he isn't a
bastard.

Difficulty? How is this different from other speech acts, e.g.
assertion?

(10) The good/red bike was already sold. # But it wasn't good/red.

Not easy to use this characteristic to distinguish meaning types.

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▶ Repeatability: Repeating an expressive makes it stronger.

(11)   a.   I left my damn keys in the car.
       b.   Damn, I left my damn keys in the car.
       c.   Damn, I left my damn keys in the damn car.

This is different from regular 'descriptive content.'

(12)   I'm annoyed. I forgot my keys. I'm angry. They're in the car.
       I'm angry!

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Some properties clearly not universal.

- ► Example: Repeatability: repeating an expressive item increases its effect.
- ► Clearly not universally true: gradability required.
- ► Not all expressives are intuitively gradable. Compare

(13) Ouch!

(14) Good morning!

Repeating the latter is only incoherent. In general 'objective' expressives don't seem to like repeating.

- ► For criticism: Amaral et al. (2008); Simons et al. (2010), a.o.

Expressives and the de se

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- ▶ Emotive expressives indicate some attitude.
- ▶ What preconditions on their (sincere) use? At least . . .
    - ▶ Having the relevant attitude
    - ▶ Intention to express that attitude
    - ▶ Important here: *awareness of having that attitude*
- ▶ Use of an expressive impossible if one doesn't recognize the relevant attitude in oneself.
- ▶ Upshot: requirement for self-ascription of emotive content.

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How close then is the relationship of expressives with indexicals?

- ▶ Claim: all expressive content is necessarily de se.

True? Can I use (15) without self-ascribing an emotive attitude?

(15) Where's my damn wallet?

Clearly, yes: I can come to know my excited state by my
(instinctive) use of *damn*.

- ▶ By using (15) I am able to come to self-ascribe that attitude.
- ▶ Something like (presupposition) accommodation of a de se
  ascription.

Can this kind of learning happen with indexicals? Probably not for
the 1P.

- ▶ Such learning just looks incoherent; but 2P case might well
  do.

Expressives and indexicality

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Kaplanian theory: in a sense, expressive.

- ▶ Meaning of indexicals *constituted* by contextual factors + use-conditions
  - ▶ Context *determines content*
- ▶ Meaning of expressives *constituted* by conditions of *use only*

Difference?

- ▶ Both introduce meanings, and are interpreted, in a similar way, but indexicals affect the truth conditions, expressives don't.

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Another difference: verifiability for correctness.

- ▶ Kaplanian view of 'I': 'I' refers to the contextual speaker.
- ▶ Misuse almost impossible: reference guaranteed by external factors.

Who is the speaker? Easy to check that.

- ▶ Compare *damn*: (self-ascription of an) expression of an emotive attitude.
- ▶ If you are not self-ascribing, you shouldn't use *damn*;
- ▶ though as previous one can come to learn one's attitudes by such use.
- ▶ 'Falsity' difficult emotives: issues closely related to 'immunity from error due to misidentification (IEM)'.
    - ▶ IEM: error due to mistakes about identity of referent/experiencer
    - ▶ 'Is it me who is an excited emotional state?'

It's difficult to tell whether a self-ascription is going on without reference to internal states: lack of external verifiability.

On to evidentiality

Evidentials: expressions indicating something about speaker's
basis for a speech act; surprising connections with expressives.

(16) a. Para-sha-n-mi
        rain-PROG-3-MI
        'It is raining. + speaker sees that it is raining' (Quechua)
     b. It must be raining.   (seeing a dripping umbrella)
     c. ame-ga futteiru soo   desu
        rain-Nom falling HEARSAY Cop
        'It is raining (I heard).'   (Japanese)

Extensive research by typologists (e.g. Chafe and Nichols 1986;
Mithun 1986; de Haan 1999; Aikhenvald 2003, 2004):

▶ interesting typological generalizations, etc.

But not totally clear from this literature:

▶ what evidentiality *is* or *does*.

What is an evidential?

Aikhenvald (2004) provides the following criteria for evidentials:

1. Evidentials indicate the source of justification for factual claims;

2. Indication of evidence source is the primary meaning of evidentials (i.e. it does not follow pragmatically);

3. Evidentials are usually not used when the fact in question is known directly to both speaker and hearer (and, if used, have a special pragmatic significance).

   ▶ Often, a mirative interpretation, as with conjunct/disjunct.

(3) might well be a special case of more usual restrictions on assertion.

▶ I think it can be disregarded.

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Thus evidentials indicate evidence source as their 'primary
meaning.'

- "Primary meaning" should be understood as: 'part of literal
  content'
    - not implicated, etc.
    - Seems fair to include presupposition, conventional
      implicature, etc., under this rubric.
    - Possibly nontrivial to determine what counts as literal content
      (eg. Cappelen and Lepore 2005);
    - basically rely on intuitive understanding here.
    - Perhaps more is intended but difficult to make this precise . . .
- intuitively it should be at least as 'important' as any other part
  of the content of the expression.

Evidence itself

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There are more foundational epistemology-sem/prag interactions
here.

- ▶ The literature leaves some fundamental concepts undefined.

Chung (2005, 2007): the 'v-trace' function, a la τ of Krifka (1992).

(17) $v\text{-}trace(e) = \{\langle t, l \rangle | \exists v[\text{EVIDENCE.FOR}(v, e) \wedge AT(v, t, l)]\}$,
where $AT(v, t, l)$ is true iff the evidence v for the occurrence
of the eventuality e appears at a location l at time t.

What happens with inferential evidence on this definition?

- ▶ Premises: (1) you are home, (2) you only stay home if it is
  raining
- ▶ Conclusion: it is raining

What is the v-trace of premise (2)? Should all evidence have
spatiotemporal location?

- ▶ We NEED to define evidence, else we get into weird territory.

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A difficult question: **what is evidence in natural language?**

► Without an answer, theories of evidentials partly undefined

But can we just ignore the question as linguists?

► 'Leave it to the philosophers'

► But: why should NL evidence be identical to e.g evidence in philosophy of science?

Investigation called for. McCready (2011) carries this out.

► Interestingly, we turn out to need something like de se ascription as a component.

Murray (2012, here) finds other correspondences with indexicality.

As it turns out

Requirements: evidence must be . . .

- ► sensitive to the awareness and perspectives of agents
- ► able to track the external environment as well;
- ► or, at least, to track individuals' beliefs about their relation to the external environment.
- ► (and how those beliefs also relate to the external environment.)

Evidence from Gettier cases, various other standard epistemological scenarios.

Japanese: background

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Japanese evidentials: inferential *mitai, yoo, rashii, (Inf-)soo*, and hearsay *(S) soo, rashii* (McCready and Ogata, 2007).

(18)

   a.   Jon-wa   konya-no   paatii ni kuru rashii/mitai/yoo
       John-Top tonight-Gen party to come RASHII
       'It seems that John will come to the party tonight.'

   b.   Jon-wa   konya-no   paatii ni kuru soo-da
       John-Top tonight-Gen party to come SOO-Cop.pres
       'I heard that John will come to the party tonight.'

   c.   . . . ki-soo-da
       . . . come-SOO-Cop

Some differences exist between the inferentials in . . .

- evidence source possibilities

- aspect (infinitive/inferential *soo* induces immediacy with nonstatives

McCready and Ogata 2007

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Inferential evidentials modeled via operator $\triangle_a^i$, where i indexes an evidence source and a is an agent. Informally:

(19) $\triangle_a^i \phi$ is true given a world w, time s, and probability function μ iff:

  a. ϕ was less likely according to a at some time preceding s (before introduction of some piece of evidence i);
  b. ϕ is still not completely certain for a at s (given i);
  c. the probability of ϕ for a never decreased between the time a became aware of the evidence i and s as a result of the same piece of evidence i (convexity).

Existence of piece of evidence is effectively a presupposition (cf. pronouns; Geurts 1999).

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Evidence itself was modeled with a predicate E. This predicate also serves a complex function. Informally, it works as follows:

(20) $E_a^i \varphi$ ...

a.   changes the probabilities assigned to every proposition ψ (excluding φ itself) in the current information state σ by replacing them with the conditional probability of ψ given φ, if defined

b.   replaces the modal accessibility relation with one restricted to worlds in which φ holds.

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This account is meant as a treatment of what evidence does in a context;

- ► it changes the probability of other propositions that are related to it conditionally (20a),
- ► and revises the set of accessible possibilities to one containing only those possibilities that make the content of the evidence true (20b).

The latter just amounts to learning new information.

Gettier cases

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Gettier cases: scenarios where conditions for knowledge are met,
but intuitively no knowledge.

- ▶ How to tell knowledge from belief?
- ▶ Here is a traditional answer from epistemology: knowledge is
  justified true belief.
- ▶ I can be said to know *p* if I believe *p*, *p* is true, and I have
  good reason to believe *p*

This answer looks reasonable. But Gettier showed it wrong.

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Gettier (1963): cases in which all the conditions above are met, but
still there is no knowledge. Here is a scenario in the Gettier style.

► Johnny is traveling in the country when he sees what looks to
  him like a horse on top of a hill and hear a horse neigh.

► However, what he sees is a horse-shaped rock, and the neigh
  is just the wind whistling through that pipe over there.

► But there is—coincidentally—a horse standing behind the
  rock.

(21) Johnny knows there is a horse on top of the hill.

This statement seems false–though the conditions listed are
satisfied.

► How do evidentials behave in such situations?

Evidentials in Gettier scenarios

A characteristic of Gettier cases:

► The Gettiered individual is Gettiered because of non-general facts about the world.

► So while the justification the Gettiered individual has for his beliefs is not well-founded,

► this lack of justification can be apparent to other individuals in the Gettier case.

Thus we see that being Gettiered is a perspective-dependent problem: only the Gettiered individual is necessarily Gettiered.

► We might anticipate that we find complex patterns wrt evidential usage in GSs.

Indeed we do

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Unsurprisingly, the Gettiered individual can sincerely assert an
evidential with respect to his putative knowledge:

(22)

    ano oka-no ue-ni uma-ga iru mitai da
    that hill-Gen top-Dat horse-Nom exists EVID Cop

    'There appears to be a horse on top of that hill.'   (said by the
    Johnny of (21))

For the outside observer the situation is a bit more complex. We
can distinguish two cases.

1. The observer knows that Johnny's warrant for belief is no
   good, but does not know whether there is actually a horse.
2. The observer knows both that Johnny's warrant is no good
   and that there is a horse.

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In both of these cases, (22) is wrong. But it is bad for different reasons.

- In Case 1, it is bad because of clause (2a) of the definition of the inferential evidential.
    - The outside observer has no piece of evidence that increased the probability that there is a horse on the hill to the necessary level.
- This makes the observer judge the evidential inappropriate or false.

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► In Case 2, the observer runs afoul of clause (2b).
  ► Since the observer *knows* that there is a horse, the probability of there being a horse is 1; she is completely certain that there is a horse, and the evidential sentence cannot be used.

This situation involves something closer to a Gricean violation, modeled in the theory of McCready and Ogata (2007) as something akin to Veltman's (1996) examples with epistemic modalities:

(23) # It is sunny . . . It might be sunny.

If we know that it is sunny, it is not helpful to assert the possibility. The evidential case is analogous.

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A question wrt evidentials in Gettier scenarios arises concerning the distinction between assertability and truth evaluation.

- Is (22) assertable?
  - By Johnny, yes; in his Gettiered state, he believes that he has evidence enough to make it true, so he can utter it sincerely.
  - By a non-Gettiered observer, however, it is not assertable, as we just saw: for the observer, the sentence is either false or out for Gricean reasons.
- So we see that the perspective taken matters for assertability in Gettier contexts.

A related question: Is (22) true?

- Johnny himself will take (22) to be true—as will anyone Gettiered along with Johnny.
- But the outside, omniscient observer will take it to be false.

So perspective matters for truth evaluation as well.

Awareness

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A further condition on evidence: agents must recognize evidence as so.

- ▶ A piece of evidence cannot count as evidence for an agent unless that agent is aware that the evidence is indeed evidence.
- ▶ Note: purely objective notions of evidence won't work for this application.

Two roots for failure to recognize evidence as evidence.

- ▶ One might fail to recognize the relationship between evidence and evidenced.
    - ▶ E.g. over politeness as evidence for lack of respect, when conventions unfamiliar
- ▶ One might also lack a relevant concept.
    - ▶ Audi (2002): insurance adjustor case.
- ▶ In linguistic contexts, only the first will practically arise.
- ▶ People do not use evidentials if they do not take themselves to have evidence!

Proposal

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Basic idea:

- ▶ evidence induces increase in probability via conditionalization (cf. E),
- ▶ and self-ascription of the property of being in a world in which the required increase occurs.
- ▶ The proposal thus comes in two parts:
  - ▶ the change in probabilities, and
  - ▶ the self-ascription of that change.

Proposal successfully captures . . .

- ▶ difference in assertability and truth judgement (Gettier cases)
- ▶ awareness requirement

Internalist view: basically implementation of knowledge-level justification (Fantl and McGrath, 2009), + de se-ness.

A connection

Note the similarity between expressives and evidentials.

- ▶ Both require **self-ascription** of an internal state;
- ▶ not externally verifiable, and
- ▶ IEM wrt the self-ascription, though perhaps externally wrong.
    - ▶ Note: indexicals are the same wrt this last.

Then: Gettier cases with expressives?

- ▶ Seems difficult with e.g. emotives:
    - ▶ hard to be Gettiered about my own emotional state?
    - ▶ and note that emotives can shift polarity: too much flexibility!
- ▶ But pretty easy with other expressives

Oops, Gettiered

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We can construct cases using 'objective expressives' a la Kaplan.

- ▶ Suppose following K: 'oops' is appropriate if you observe or make a small mistake.

- ▶ K's scenario: you're in a shop in Hollywood and you see someone knock over a display of glasses. You say 'oops'. But they're filming a movie, and they did it on purpose.

- ▶ Your utterance is misplaced.

- ▶ Extension: But the cameraman forgot to take the lens cap off before starting filming.

- ▶ Now your utterance is appropriate: conditions satisfied.

But intuitively you aren't entitled to use 'oops' here.

- ▶ Intuitions pattern closely with (other) Gettier cases.

- ▶ As there, the justification is essentially just not the right one.

So expressives can be Gettiered after all under the right circumstances.

- ► A whole series of unexplored issues:
    - ► connection between de se and expressivity? (started here, but far to go)
    - ► justification for use of expressives? Gettierization possible!!!! knowledge? or . . . ?
- ► Further puzzles about intentionality and interaction with other expressives:

    a. Ouch.
    b. Ouch, man.

- ► The latter appropriate only if one takes the cause of the (minor) pain to be the addressee (roughly; 3 Stooges scenario).

Connections, then

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Clearly:

- ► Meaning as use: indexicals, expressives
- ► Self-ascription: (indexicals), expressives, evidentials

A possibly fraught, unexamined issue: IEM vs expressivity.

- ► One main test for expressivity is denial. [e.g. 25)]
- ► IEM $\Longrightarrow$ denial incoherent [e.g. (26)]
- ► Result: denial test not applicable to IEM-type expressions

Then: failure of denials result of IEMness of (subjective)
expressives? (Though 'oops' etc clearly not so.)

(25) A: I lost my damn wallet. B: # That's not true. (aimed at
      'damn')

(26) A: I am myself. B: # That's not true.

Final question: is the above problematic for denial test, or might it
give some insight into the meaning of (subjective) expressives?

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Thanks for listening!

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