

## 1 Indexicals & Demonstratives

The referents of indexicals and demonstratives depend on the *context of utterance*.

### 1.1 Indexicals

(1) Indexicals: I, here, now, two days ago

There's a *reference rule* associated with indexicals, according to which the referent must get fixed. For example:

(2) *Reference rule for »I«:* An utterance of »I« refers to the speaker of the utterance.

### 1.2 Demonstratives

(3) Demonstratives: there, this, that

As opposed to pure indexicals, demonstratives require an accompanying pointing gesture. The pointing gesture fulfills the same role as a reference rule (cf. ()].

## 2 The Problem of the Essential Indexical

### 2.1 Irreducibility Thesis (IR)

**Essential Indexical:** An indexical is *essential* iff it cannot be replaced by another, co-referential expression without losing its explicative power for explaining a person's behavior.

**Irreducibility Thesis:** If an indexical is essential, it cannot be replaced by another expression  $\phi$ , because to explain a person's behavior, this person would have to additionally believe:

(4) I am the  $\phi$ -er.

### 2.2 Supermarket Example

Sugar pours out of a bag in John Perrys shopping cart. He is looking for the one who is making a mess, and then he suddenly he realizes that it's himself who is doing so ()).

(5) I am making a mess!  
(6) The one who is pouring sugar on the floor is making a mess.  
(7) The only bearded philosopher in a Safeway store west of Mississippi is making a mess.  
(8) John Perry is making a mess.

### 2.3 Meeting at 12 O'Clock Example

A professor is waiting for the meeting that starts at 12 o'clock. Suddenly, he jumps up and goes to the meeting.

(9) It is now 12 o'clock.  
(10) The meeting starts at 12 o'clock.

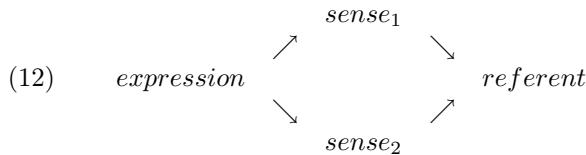
### 3 Belief Content

How can we model the content of what a person believes in a way that allows us to explain changes in behavior?

#### 3.1 Fregean Senses

**Senses:** Expressions have a sense. The senses of partial expressions combine to the sense of the whole expression. The sense of a referential expression “picks out” its referent. (In another view, the sense of a referential expression is the way a referent is given to someone.) The sense of a sentence can be grasped in thinking as a thought. A thought can either be true or false, hence it represents the truth-conditions of a sentence. Different senses can make the same contribution to the truth-conditions of an utterance.()

(11)  $expression \rightarrow sense \rightarrow referent$



(13)  $evening\ star = morning\ star$

Different sense explains informativity of a statement, e.g. when someone is astonished to hear that *the evening star = the morning star*.

**Propositions:** Propositions are Fregean thoughts in disguise, but the notion is often used in a technical sense, e.g. propositions as sets of possible worlds or variants thereof. They are usually thought of as language-independent, meaning constituting bearers and determiners of truth or falsity of sentences, i.e. propositions encode truth-conditional content.

#### 3.2 Problem of Sense-Completion

A sentence with an indexical doesn’t express a complete proposition or complete Fregean thought. As a *sentence* it is incomplete. So an additional Fregean sense would have to complete the proposition / partial sense.

**Ad:** The sense of indexicals like »now« would change all the time. For example, the sense of »today« in

(14) Today is a nice day.

would change at midnight, but the sense of a linguistic expression doesn’t change at midnight.

#### 3.3 Individual Concepts

Perry’s tentative substitute for individual senses are *individual concepts* that do not represent linguistic meaning. They only fit the respective believer, and the believer “picks out” himself by means of such a concept.

**Ad:** First, it doesn’t seem to be plausible that a speaker has an individual concept each time he uses an indexical like »I«. Second, if we can describe

a concept  $\phi$  by a definite description, the believer would have to additionally believe that he's the  $\phi$ -er.

### 3.4 Russellian Propositions

**Russellian Singular Proposition:** ordered pair of an object and the property ascribed to it. Belief as a relation of a believer to such a proposition is a *de re* belief.

(15)  $\langle$ John Perry, MAKING-A-MESS $\rangle$

**Ad:** *De re* belief might represent both John Perry's belief state *before* as well as *after* he has realized that he himself is making a mess.

(16)  $\underline{\text{He}}$  [the guy in the mirror] is making a mess.

### 3.5 Kaplan's *Logic of Demonstratives*

(17) a. character + context of utterance = content  
b. content + circumstances of evaluation = truth-value

The character is a function from contexts to contents. A content is a function from circumstances of evaluation to truth values. Omitting modality, the content can be alternatively regarded as a Russellian singular proposition. The content represents the truth-conditions of an utterance, whereas the character represents the linguistic meaning of the sentence uttered.

So a person might stand in a belief-relation with the character and the relevant feature of the context:

(18)  $\langle$ THE CHARACTER OF »I AM MAKING A MESS«, John Perry $\rangle$

Likewise, the professor's content of belief at 12 o'clock would be:

(19)  $\langle$ THE CHARACTER OF »IT IS NOW 12 O'CLOCK«, 12 o'clock $\rangle$

**Ad:** When discussing relativized propositions, Perry argues that the professor could stand in a belief-relation to a content like (19) at 11:30, 11:49, 12:00, 12:05 without any change in behavior.

### 3.6 Truth-conditional Content Versus Cognitive Role

**Truth-Conditional Role.** Truth-conditional role of an expression ought to be specified, because if a speaker knows the truth-conditions of the whole utterance, he understands it.

**Cognitive Role.** We want to explain differences in behavior as is exemplified by the supermarket example. Perry has labelled this aspect of a meaning theory as the »cognitive role« of an expression.

**Dual-Aspect Theories.** Separate truth-conditional content from some individual representation of cognitive role for a speaker.

**Hidden Indexical Theories.** The cognitive role of expressions is not directly represented by an expression.

Some suggestions for further reading: Boér & Lycan (), John Perry (), François Recanati (), Mark Richard (), Salmon & Soams (eds.) (), Stephen Schiffer ().

## 4 Arguments against IR

### 4.1 Russellian Propositions Revised

**Argument:** If John Perry does not recognize himself in the mirror, he does not hold a belief about himself, he just holds a belief about *someone*.

- (20) John Perry believes of someone<sub>i</sub> that he<sub>i</sub> is making a mess.
- (21) John Perry believes of John Perry<sub>i</sub> that he<sub>i</sub> is making a mess.
- (22)  $\exists x(BELIEVE_{\langle \text{John Perry}, t \rangle}(\text{MAKING-A-MESS}(x)))$
- (23)  $BELIEVE_{\langle \text{John Perry}, t \rangle}(\langle \text{John Perry}, \text{MAKING-A-MESS} \rangle)$

For discussion: Does this work with the 12 o'clock example?

- (24)  $\exists x(BELIEVE_{\langle \text{the professor}, t \rangle}(12\text{-O'CLOCK}(x)))$
- (25)  $BELIEVE_{\langle \text{the professor}, t \rangle}(\langle t, 12\text{-O'CLOCK} \rangle)$

### 4.2 Propositional Attitude Ascriptions

**Argument:** The problem of the essential indexical is not about indexicals in general but about certain referentially-opaque readings of expressions in attitude ascriptions.

#### 4.2.1 Disquotation Principle

Utterances only *indicate* that the speaker believes what is said. There is a Disquotation Principle (a term introduced by()):

- (26) If a competent speaker *S* sincerely utters »*p*« in a language *L*, then *S* believes that *p'*, whereas *p'* is the result of translating *p* from *L* to English.

Disquotation is a pragmatic process and presumes an honest and competent speaker, but utterances have the same meaning if being uttered dishonestly as if being uttered honestly. So we have to talk explicitly about beliefs themselves.

- (27) John Perry<sub>i</sub> believes that he<sub>i</sub> is making a mess.

#### 4.2.2 Referential Opacity and *De Re* Belief

**Thesis:** A *de se* reading of (27) adds an additional claim to the *de re* reading of the belief in question.

This kind of *de se* reading presupposes that John Perry would utter his belief using the indexical »*I*« if he were to utter it. So in addition to the singular proposition (15), John Perry believes after he has realized that he is making a mess:

- (28)  $\langle \text{I}, \text{John Perry}, x\text{-REFERS-TO-}y \rangle$

#### 4.2.3 Summary

According to the proposed rough sketch of a solution, John Perry's change in behavior would coincide with a disposition to use »I« to refer to himself. As such, this proposal is quite similar to the one by Perry, but the difference is that I claim that *de re* readings of belief ascriptions suffice to describe those dispositions. The speaker does implicitly believe of certain expressions that they refer to himself, while he might not believe of other expressions that they refer to himself in the same context.

### Conclusions:

1. Indexicals themselves are not essential, i.e. there is no distinguished class of indexicals that semantically is irreducible.
2. There are special kinds of referentially-opaque readings of certain personal pronouns like »he« (and indexicals like »now« alike) inside the scope of certain attitude verbs.
3. Referentially-opaque readings are non-compositional abbreviations that in addition to the *de re* belief ascribe to the speaker some disposition to use or reject certain referential expressions, which in turn can be analysed *de re*.

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