

Workshop *Teleosemantics Today*

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Singular representation and teleosemantics

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Millikan's complaint:

„Context-free informational semantics is debarred in principle from explaining how there can be representations of individuals. ... informational semanticists have invariably confined themselves to a discussion of predicative representations. ... The subject of the intentional representation that *s* is *F* is not represented.“

(Millikan, *VoM*, 2004, p. 35)

Overview

- 1 Singular representation in language
- 2 Singular thought
- 3 A teleological approach to singular representation
- 4 Information
 - Dretske
 - Millikan
 - Neander singular causation
- 5 The proposal: singular representation

1 Singular representation in language

A hint from philosophy of language:

distinguish

direct reference

reference by satisfaction
(of descriptive content)

- on the level of semantic meaning vs.
on the level of speaker's meaning

1 Singular representation in language

considering speaker's meaning

Ex.: Donnellan's case of the description

,The man with the champagne in his glass ...'

- reference of ,referential' uses of expressions is fixed by the speaker's intention (in contrast to ,attributive' uses)
- presupposes: the speaker can refer mentally to the relevant object/person!

1 Singular representation in language

I.e., a plausible lesson from philosophy of language

There is an interesting distinction to be made
between different ways of referring to things/objects

Explaining linguistic direct reference
requires mental direct reference.

1 Singular representation in language

hypothesis

what is called ‚direct reference‘ here
is singular representation

[wrong!]

so

‚singular representation_1‘ (SR1)

:= reference to an individual which is not establish entirely by
satisfaction of a descriptive content

- call it ‚*de-re* representation‘ (Dretske, Burge)

2 Singular representation in thought

problem Singular representation without reference: singular thought

Crane Even if one thinks about a non-existent object
(=> no referent), one has a singular thought.

Ex. 1 Le Verrier thinking about Vulcan

Ex. 2 thinking about Mickey Mouse (Azzouni)

having a ‚singular thought‘ means something like
having a specific object in mind; aboutness.

2 Singular representation in thought

so,

,singular representation_2' (SR2)

- := representation about an object, with a specific object in mind
- need not refer: not the same as object-dependent representation
- therefore, does not require acquaintance

question

how is SR1 (*de-re* reference) related to SR2 ?!?
no easy, nice match, it seems.

3 A teleological approach to singular representation

K. Taylor

An attempt to shape a notion of *de-re* representation which satisfies SR2:

de-re representation as representation which is ‚fit for reference’

- need not refer
- ‚fit’: syntactic; internal

problems

P1 internalism is false

P2 ‚fit for reference’ must be understood ***teleologically***:
a state with a certain function

3 A teleological approach to singular representation

idea

- SR is representation which is supposed to refer to an object (has the function to refer to an object)
- SR can fail → non-referring SR

,normativity from teleo-functions!'

side issue

the bearers of functions:

(sub-)systems or states? (cf. Neander ...)

→ let's talk either way, whichever is more convenient!

3 A teleological approach to singular representation

problem(s)

P1 Not good enough!?

If the SR fails to refer, it is not ,directed at an object' or ,about an object' at all.

P2 How is such a function (,supposed to') to be explained?

How can there be directedness at an object

(= function to refer to an object) without reference to it?

→ we need further explication and explanation!

4 Information

idea bring in the notion of information!
 explain reference in terms of information!

→

4 Information

1 start from the ,basic link'

(L) representation = function to carry information

2 then, we need a suitable notion of information:

constraint on information:

(I) Singular information, i.e., information about an individual, is possible (and not too unlikely).

4 Information

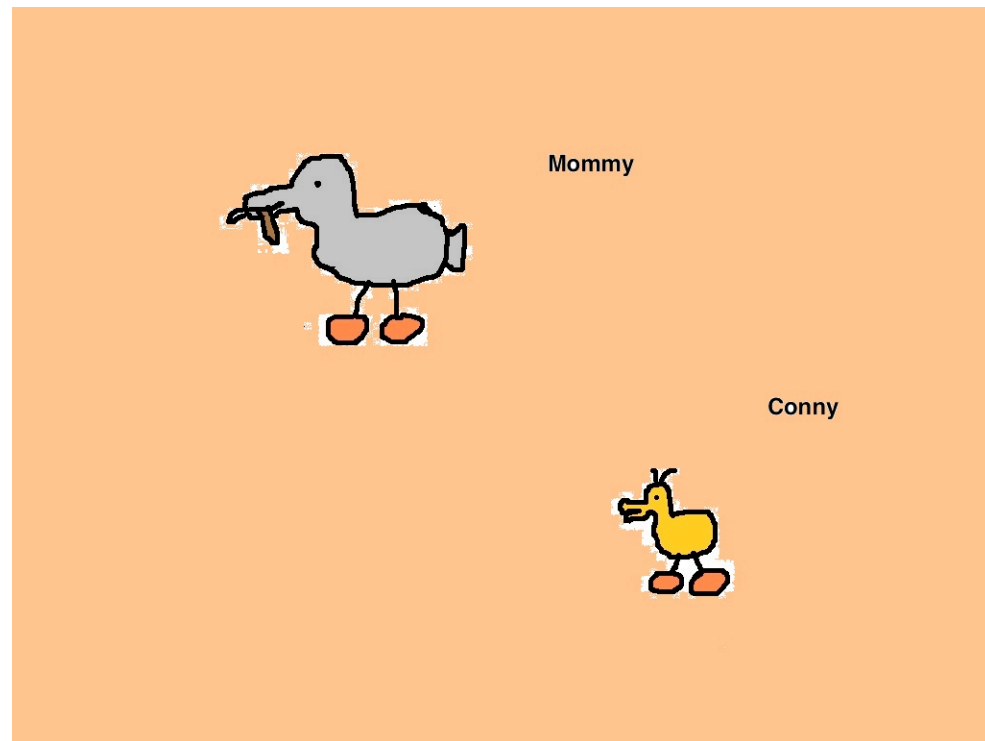
3 putting the two together, we get:

(S) A singular representation is a representation which has the function of carrying singular information.

4 Information

example: Ex. 1 baby goose Conny

Conny can spot her Mommy, m, and ,think' that Mommy is here.



4 Information

example: Ex. 1 baby goose Conny

Conny has a singular representation, M, of her mommy, m,

- an M sometimes carries information about m
then it is true
- an M sometimes does not carry information about m
(but about something else or nothing at all)
then it is false

Similar examples: ant's representation of its home nest (?)

4 Information

problems:

- P1 What is it to ,carry information about an individual’?
- P2 How is singular representation related to de-re representation?

In the following,

Dretske	info as correlation	no
Millikan	info as grounded local signs + epistemic account	no
Neander	info by singular causation	yes

result

SR is representation which is supposed to carry singular information, and singular information is explained in terms of singular causation.

4 Information

Dretske and Millikan

In Ch. 3, „Local natural signs and information“, of *VoM*,
Millikan criticizes Dretske:

...

- C4 **„Millikan’s complaint’** concerning the representation of individuals (35):
Dretske’s information as correlation does not allow for the
representation of individuals; it is ***restricted to predicative representation***
no information concerning individuals,
since based on correlation between types
(like a photograph: does not represent that it is of Johnny)
the subject term of the information that s is F is not represented

4 Information

problem:

what is ,representation of individuals'?

why does reference to individuals (*de-re* representations)

not count as representation of individuals?

Dretske: causal-contextual relation fixes reference

what is the distinction between

,predicative representation' and

,representation of the subject term'?

→ need further explication and explanation!

4 Information

Millikan's alternative proposal

odd!

Millikan starts with a causal intuition, then she throws away the ladder!

initial ideas about 'natural signs'

(1) a real causal connection is the basis of information

Ex. indistinguishable traces (spots on the skin)

wait and see! they mean whatever was their actual cause

spots caused by measles mean measles

spots caused by allergy mean allergy

(2) knowledge of one thing + prior knowledge or experience leads to knowledge of another thing

4 Information

but then:

Millikan, in effect, opts for (2) and throws away (1)

→ epistemic account of information

„The notion of a natural sign is at root
an epistemic notion.“ (*VoM*, p. 37)

4 Information

Comment/criticism:

This is unclear!

Why should we throw away the causal intuition – that signs mean what caused them – and go for the epistemic account?

The causal intuition form which Millikan starts is promising:

- causal connections provide a solid ground/foundation for the acquisition of knowledge!
- (more or less) stable causal patterns make signs useful ...
(,consumer friendly')

so, let's take a look at the causal account of information,
with an eye on the question of singularity!

4 Information

Neander

Stampe: „representation is an essentially causal phenomenon“ (1977, 81)

A causal account of information, by KN:

- (1) Sometimes, a (token) representation carries information about its cause.
- (2) The causal relata are particulars
(facts, not properties as types but instantiations).
(In contrast, a correlation account of information relates types.)
- (3) Ex. RED carries the info that there is red.

4 Information

problem:

- P0 Prima facie, this is *general* information: ,*there is* red’.
→ no singular information, no information about an object!

I.e., we do not get an answer to Millikan’s complaint.

4 Information

try again, modify:

(1)

(2)

(3') Ex. RED carries the information ***that a is red,***

For, the fact that a is red causes the occurrence of RED.

then

okay, this looks like singular information.

→

5 The proposal: singular representation

singular (indicative) representation

(i) **basic link:**

A SR has the function to carry singular information.

(ii) **information by singular causation:**

Singular information is explained in terms of singular causation: a representation R carries the singular information that a is F iff the fact that a is F is a cause of R.

5 The proposal: singular representation

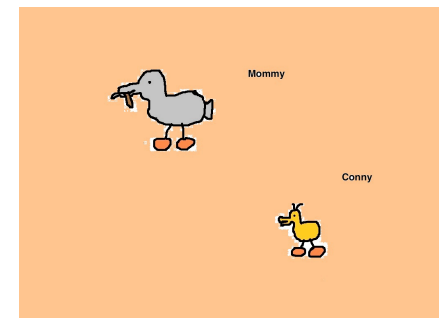
singular (indicative) representation

(iii) **response function:**

A SR with the content that a is F has the function to respond to the fact that a is F.

(iv) **Ex.** MOMMY carries the information that m is present/here.

RED carries the information that a is red. [?]



5 The proposal: singular representation

problem:

P1 ,function problem'

by the basic link between representation and information,
the function of RED would have to be

to carry the information that a is red

But this cannot be. The system (producing RED) does not have the function to produce a RED in response to a's being red, but just in response to something's being red.

5 The proposal: singular representation

reply

Really? Always, necessarily?

Why not have a special system whose function it is to produce MR tokens in response to the fact that a certain, specific particular (say, a) has a certain property (say, F)?

→ two kinds of representations:

General repr.

... response to ***sth.'s*** being F

= ‚*de-re* representation‘

general repr. content

Singular repr.

... response to ***a's*** being F

singular repr. content

5 The proposal: singular representation

- In other words, a singular representation is supposed to track a specific, particular object.
- complication ,egocentric contents'
 - ...
 - F: being located at a certain spatio-temporal region, e.g., ,one meter in front of system s' .

5 The proposal: singular representation

problem

P2 selection-for problem

Assume that function requires selection-for.

How could a system have been selected for producing such sing. representations?

- not phylogenetically, it seems.
- => arguably/plausibly, not in perception!

I.e., singular representation only occurs at the level of **concepts!**

But don't we want to say that there are (could be) non-conceptual singular representations?

5 The proposal: singular representation

answer

1. deny the (implicit) assumption
(*) learned/acquired representation => conceptual
I.e., we can allow for learned/acquired content in perception.

→ How do we then characterize ,conceptual’?
In terms of division of semantic functions (see below)!

(2. bite the bullet.)

5 The proposal: singular representation

problem

P3 indistinguishable objects

If the system cannot distinguish between two qualitatively identical twins, could it represent just one of them? How so?

5 The proposal: singular representation

answer:

Why not!

- selection for singular information (response to a certain object's being F) does not require perfect reliability in distinguishing the object from any other object.
Sufficient reliability is good enough, and that depends on the importance.
- selection for singular information does not require anything like an 'identifying description' or 'fundamental idea' (Evans) of the relevant object
- In general, be wary of verificationism!
Content transcends evidence.

5 The proposal: singular representation

problem

P4 ,non-existence‘

No real singular representation,
since the object must exist, at least!
Singular thoughts are about things
which need ***not exist at all*** (Crane).

In contrast,

Conny’s representation M entails the existence of Mommy.

5 The proposal: singular representation

answer:

Okay, that's true.

But what's the problem?

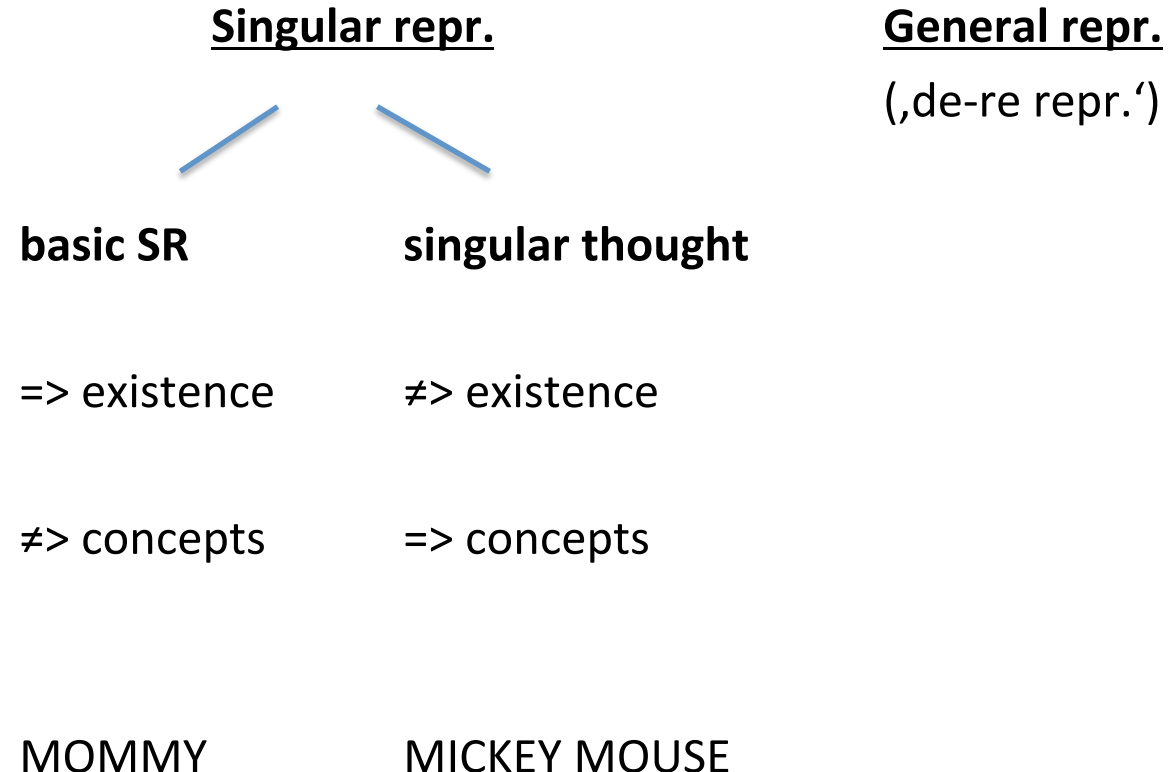
Perhaps, singular *thought* is special in this respect, but singular representation is not restricted to thought.

To allow for the possibility of mis-representation of individuals is good enough. And we can get this by singular representation without corresponding singular information.



5 The proposal: singular representation

three kinds of representations:



5 The proposal: singular representation

last problem

P5 predicate vs. singular semantic function – back to Millikan's complaint!

Following Millikan, we can distinguish between two semantic functions/roles:

predicative function

role of the predicate in a sentence

singular function

role of the subject term

So far, this distinction has not shown up in the proposal.
Can the distinction be vindicated?

5 The proposal: singular representation

answer:

The distinction predicative/singular role is not rejected.
Some representations perform ***both roles at once***,
others ***divide*** the semantic labor: conceptual representations.

Proposal:

- In basic, non-conceptual representations (perception), one state/MR performs both semantic roles.
- In **conceptual** representations, there are elements (parts) devoted to one specific semantic role each: a concept in the subject role – a concept in the predicative role.

(In addition, conceptual representation might bring in various other semantic roles, such as quantification, logical devices etc.)

5 The proposal: singular representation

- Examples

E1 Conny's state M represents Mommy (m) as being here.

E2 The thought that the Moon is made of cheese.

separate repr. elements:

the concept MOON represents the Moon: subject role

the concept IS MADE OF CHEESE: predicate role

5 The proposal: singular representation

- This is not to say that non-conceptual representation is never complex. It is: perceptual representations are complex, in general. But their parts do not divide semantic labor.
- Cf. Fodor, „The revenge of the given“.
- Cf. Burge: ‚all perceptual representation is both singular and general.‘ (2005)

5 The proposal: singular representation

Summary

representation by teleofunctions: response functions
singular information in terms of singular causation

singular representation = representation with the function to carry
singular information

,de-re representation'

general representational content only
(singular information, possibly!)

singular thoughts

special SRs
(conceptual + not existence entailing)

END