Mind and Language Seminar:
Theories of Content

Ned Block and David Chalmers
Meetings

- Main meeting: Tuesdays 4-7pm over Zoom [4-6pm in weeks without a visitor]
- Student meeting: Mondays 5-6pm hybrid
  - Starting Feb 22 [only weeks with a visitor]
  - Enrolled students and NYU philosophy graduate students only.
• Feb 2: Background: Theories of Content
• Feb 9: Background: Causal/Teleological Theories
• Feb 16: Background: Interpretivism
• Feb 23: Nick Shea
• March 2: Robbie Williams
• March 9: Frances Egan
• March 16: Adam Pautz
• March 23: Veronica Gómez Sánchez
• March 30: Background: Phenomenal Intentionality
• April 6: Imogen Dickie
• April 13: Angela Mendelovici
• April 20: Background: Conceptual-Role Semantics
• April 27: Christopher Peacocke
• May 4: David Chalmers
Assessment

• Draft paper due April 19
• Term paper due May 17
Attendance Policy

• Monday meetings: Enrolled students and NYU philosophy graduate students only.

• Tuesday meetings: NYU and NYC Consortium students and faculty only

• Very limited exceptions

• Email us to sign up on email list if you haven’t already.
Introductions
Short History of the 20th Century

• 1900-1970: Reduce philosophical questions to issues about language and meaning.

• 1970s: Theories of meaning (philosophy of language as first philosophy)

• 1980s: Theories of mental content (philosophy of mind as first philosophy).

• 1990s: Brick wall.
Theories of Content

- What is content?
- What is a theory of content?
Content

• Content (in the broadest sense?) is *intentionality* or *aboutness*

• Something has content when it is about something.
Contents

• Content = truth-conditions
• Content = satisfaction-conditions
• Content = propositions
• Content = objects of intentional states
• Content = …
What Has Content?

• What sort of thing has content?
What Has Content?

• What sort of thing has content?
  • language (esp. utterances?)
  • mental states
  • pictures and other images
  • databases and computational states
  • …
Mental Content

- We’ll focus on mental content.
- Brentano: intentionality is the mark of the mental. I.e. all mental states have content?
Contentful Mental States

- Beliefs
- Desires
- Imagination
- Perception
- Emotion?
- Bodily sensations?
- ...

•
Attitude-Content Structure

• Common view: mental states involve attitudes to contents
  • Believing that p
  • Desiring that p, desiring x, desiring \( \Phi \)
  • Imagining that p, imagining x, imagining \( \Phi \)
  • Perceiving \( \ldots \)
  • Feeling \( \ldots \)
Theories of Content

• What are contents?
• What grounds content?
What Are Contents?

- Objects?
- Properties?
- Truth-conditions?
- Satisfaction-conditions?
- Propositions?
Propositions

• Dominant view: contents are propositions and other contents derive from propositional content

• E.g. desiring an apple = desiring that I have an apple

• Although see Alex Grzankowski & Michelle Montague, *Non-Propositional Intentionality* (2019)
Different Contents for Different Attitudes?

- Are there different contents for different attitudes?
  - Desire, imagination: property contents? (Lewis)
  - Perception: nonconceptual content? (Evans, Peacocke)
  - Perception: just objects as contents? (Travis, Brewer)
What are Propositional Contents?

- Russellian propositions (Russell, Salmon, …)
- Fregean thoughts (Frege, Dummett)
- Sets of possible worlds (Stalnaker, Lewis)
- Sets of centered worlds (Lewis, Jackson)
- Two-dimensional intensional structures (Chalmers)
- Sets of probability spaces (Moss)
- Simple entities (Bealer)
- Pleonastic entities (Schiffer)
- Cognitive act-types? (Hanks, Soames)
- Attitudinal objects (Moltmann)
What Grounds Content?

• In virtue of what do mental states have content?

• Or: in virtue of what does a subject bear a relation to a content?

• E.g. in virtue of what John believe that apples are red?
Constitutive Explanation

• We’re not looking for a causal explanation: what caused John to believe this?

• We’re looking for a constitutive explanation: what is it for John to believe this? what grounds John’s believing this?
Grounding Reference

- Related project in philosophy of language: grounding the *reference* of words and the *meaning* of sentences.
  - E.g. descriptive theory of reference (Russell)
  - causal theory of reference (Kripke)
  - intention-based theories (Grice)
- Many think that linguistic meaning is grounded in mental content — so grounding the latter is crucial.
Fodor on Intentionality

• “I suppose that sooner or later the physicists will complete the catalogue they've been compiling of the ultimate and irreducible properties of things. When they do, the likes of spin, charm, and charge will perhaps appear upon their list. But aboutness surely won't; intentionality simply doesn't go that deep.... If aboutness is real, it must be really something else.” (Psychosemantics, 1987)
Naturalizing Intentionality

• Naturalizing intentionality: the project of grounding/explaining intentionality in naturalistic terms, usually physical terms.

• A huge project in the 1980s (first philosophy?).
Key Works

• Causal/informational theories (Dretske, Fodor, …)
• Teleological theories (Millikan, Papineau, Neander, …)
• Interpretivist/pragmatic theories (Davidson, Lewis, Dennett, Stalnaker)
• Conceptual-role/inferential theories (Peacocke, Brandom, Block, Field, …)
• Phenomenal theories (Searle, Horgan/Tienson, …)
Causal/Informational Theories

• Descendant of causal theories of reference.

• Central idea: X refers to whatever normally causes X.

• Content of a belief is the state of the world that normally triggers it.
Problems

• Misrepresentation: How can X misrepresent? How can we have false beliefs?

• Normality: What are normal conditions?

• Abstract concepts: How to make this plausible for abstract and complex concepts like democracy?
Teleological Theories

- Rough idea: $X$ represents what it is the function of $X$ to represent. Usually, the etiological/evolutionary function.
Problems

- Swamp creatures (no representation without history?)
- Abstract concepts
- ...
Interpretivism/Pragmatism

- Rough idea: $X$ means what it needs to mean in order to rationalize action.
- People have those beliefs and desires that make their action rational.
Problems

- Indeterminacy: Too many content assignments.
- Circularity: Need contents to get contents.
Conceptual-Role Theories

• Rough idea: the content of $X$ is given by the role $X$ plays in the cognitive system and its connection to other concepts and action.
Problems

• What is the meaning-constitutive role?
• Isn’t all this blank and circular without mind-world relations?
Phenomenal Theories

• Contents of perception/thought are grounded in the conscious experience of perception/thought.
Problems

• Is this a reductive theory or just taking some intentionality as primitive?

• What about unconscious states and states without much associated phenomenology?
Due to all these problems, progress seemed to come to a halt in the 1990s.

No major advances in causal, teleological, pragmatic, conceptual-role theories for 20 years.

Some development of phenomenal and naturalness theories, but niche industries.
2010: Grounds of Intentionality

- In 2010, Ted Sider and I taught Mind and Language on the Grounds of Intentionality.
- Interesting, but not huge progress.
In the last five years or so, progress on theories of content has picked up in a big way.
Key Works

- Karen Neander, *A Mark of the Mental*
- Nick Shea, *Representation in Cognitive Science*
- Angela Mendelovici, *The Phenomenal Basis of Intentionality*
- Imogen Dickie, *Fixing Reference*
- Robbie Williams, *The Metaphysics of Representation*
Key to Progress?

- What’s responsible for the progress?
- One key idea: two-stage theories of content (Neander, Shea, Williams, Pautz, Chalmers, Mendelovici?).
Two-Stage Theories

• One theory of content for e.g. perceptual or nonconceptual states
  • e.g. teleological (Neander, Shea, Williams) or phenomenal (Chalmers, Pautz, Mendelovici)

• Another for thought/conceptual states
  • e.g. interpretivist (Pautz, Williams) or inferentialist (Chalmers, Mendelovici?)
The New Frontier

• As a result, we’re in an exciting era once more for theories of content.

• Time to take a closer look!
Next Week

• Ned on causal and teleological theories of content.
Propositional Attitudes

• Arguably the central loci of intentionality are propositional attitudes.

• Belief and desire seem to be attitudes to propositions: I believe *Trump is president* and desire that *Someone eats pizza for dinner*.

• The proposition here is the *content* of a mental state.
Selection-Based Function

• Roughly: the function of system S is F when S exists because past tokens of S were selected in virtue of being F.

• Can apply to design or learning, but applies best to evolution by natural selection.
Teleological Account of Content

• The content of fly is whatever causes fly when the system is functioning properly.

• I.e. when functioning the way it was selected for.

• Idea: the system is functioning properly when flies cause fly, because this is why the system was selected.
Millikan: Consumer-Based Theory

- Ruth Millikan (Biosemantics, 1989): The function of a system is always an effect of the system.

- The function of the fly system is to have certain effects on consumer systems.

- The content of fly is that X such that X causing fly is a normal condition for the operation of the consumer system (required for selected effects?)

- Idea: flies causing fly goes with the consuming system having selected effects (e.g. eating flies).
Problems

1. Swampthing
2. Abstract concepts (*democracy*, *tomorrow*)
3. Consciousness
4. Narrow/Fregean content
5. What are consuming systems?
6. Content indeterminacy.
Neander

- Two key departures from Millikan:
  1. Account limited to nonconceptual representations
  2. Functions are response functions, not effects.
Nonconceptual Representations

• Content of mental states that don’t involve concepts: not beliefs and desires, but sensory/perceptual representations?

• Doesn’t apply to concepts like democracy or tomorrow, just nonconceptual representation of e.g. space, color, and so on.

• Pro: Avoids many problems. Con: Conceptual content needs a separate account!
Two-Stage Theory

• Can lead to a two-stage theory of content: 1. perception, 2. concepts. E.g.
  • Williams: teleosemantics then interpretivism
  • Pautz: phenomenal intentionality then interpretivism
  • Chalmers: acquaintance then inferentialism
Response Functions

• The function of the red system isn’t an effect.

• It’s function is instead to respond to red things by tokening red.
Starter Theory

• A sensory-perceptual representation refers to what is supposed to cause it.

• I.e. X refers to Y in system S iff S has the function of producing X-type events in response to Y-type events.

• I.e. iff S was selected in virtue of producing X-type events in response to Y-type events.
Speedometer Analogy

• Compare: The function of a speedometer is to respond to speed (e.g. to token 50mph when going 50mph).

• This is useful because it causes people (consuming system) to know how fast they’re going, drive safely, etc.

• Function: knowledge of speed, or response, or both?
Kimu Example

• Pietroski: Kim’s with mechanism M have brain state B in response to red things. They like these states so climb a hill each morning to see red things. This happens to protect them from snorfs so M is selected.

• Millikan: B represents absence of snorfs (condition for success of B-consuming system)

• Neander: B represents red (what it’s selected for responding to)
Locally Co-Instantiated Properties

• Why does fly represent flies and not SDMs (small dark moving things) and not flies?
• Neander: It doesn’t: the perceptual representation represents SDM.
• Perceptual system was selected for responding to SDM-like properties and not flyhood (better counterfactual sensitivity to SDM?).
• But then why not: patterns of light?
Green/Grue

• Goodman/Kripke problem: why is the content of green green and not grue?

• Neander: The green system is causally sensitive to greenness and not grueness; so it is selected for responding to greenness and not grueness.

• Q: Why? (Different dispositions? What about mistake-prone systems that are causally sensitive to disjunctive properties?)
Further Development

• Chapter 8: Second-order similarity of analog properties in quality spaces (e.g. to handle missing shade of blue)

• Chapter 9: Further tweaks to handle representation of distal object in causal chain.
Residual Problems

• 1. Content determinacy
• 2. Swampthing?
• 3. Connection to conceptual content
Other Recent Teleosemantics

• Nick Shea, *Representation in Cognitive Science* (open access book)

• Varitel semantics: a variety of relations between representations and world exploited for teleological purposes.

• A descended of Shea’s infotel semantics, in which informational/correlational relations are exploited.