

# Two-Dimensionalism and Inferentialism

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# Agenda

- Aim: Explore the relation between two-dimensional semantics and an inferential-role approach to meaning and content.
- Argue that an (epistemic) 2D view supports an inferentialist view.
- Explore the details of such a view.

# Plan

- \*1. Two-Dimensionalism and Descriptivism
- 2. Two-Dimensional Inferentialism
- 3. Problems for Inferentialism
- 4. Naturalization and Primitive Concepts
- 5. Inferentialism and Conceptual Analysis

# Epistemic Two-Dimensionalism

- Epistemic two-dimensionalism.
  - All expressions associated with
    - 1-intension (scenarios  $\rightarrow$  extensions)
    - 2-intension (worlds  $\rightarrow$  extensions)
  - S is necessary iff necessary 2-intension.
  - S is a priori iff necessary 1-intension.

# Frege Cases

- ‘Hesperus is Phosphorus’ is necessary and a posteriori, so has necessary 2-intension, contingent 1-intension.
- 2-intensions of ‘Hesperus’ and ‘Phosphorus’ pick out Venus at all worlds.
- 1-intensions pick out morning star and evening star (respectively) in all scenarios.

# 2D and Descriptivism

- 2D coheres with a descriptivist approach to meaning/content.
- All names associated a priori with descriptions:
  - e.g. apriori(Hesperus=evening star).
- Descriptions determine 1-intensions.
- Rigidification determines 2-intensions

# Conceptual Descriptivism

- Generalized descriptivism: all expressions equivalent to complexes composed from (a few) primitive expressions.
- Conceptual descriptivism: all concepts composed from (a few) primitive concepts.
- Conceptual analysis articulates this structure.

# Against Descriptivism

- But: For most expressions, any descriptive analysis is subject to counterexamples.
  - Gettier literature on 'knowledge'
  - Kripke on names
  - Wierzbicka on everything
- Suggests: most expressions/concepts aren't equivalent to descriptions/complexes.



# Inferentialism

- Idea: Explore inferentialism as a successor to descriptivism here.

# Primary intensions

- Primary intension of  $S$ 
  - Mapping from scenarios to truth-values
  - True at scenario  $w$  iff ' $D \rightarrow S$ ' is a priori, where  $D$  is canonical specification of  $w$ .
  - Scenarios = centered worlds or epistemically constructed scenarios.
- Canonical specifications of scenarios: complete specifications in basic vocabulary.

# Scrutability Thesis

- Scrutability thesis: There is a compact vocabulary  $V$  such that all truths are a priori entailed by a conjunction of  $V$ -truths.
- E.g. for all truths  $M$ ,  $\text{apriori}(PQTI \rightarrow M)$ .
- $PQTI = \text{scrutability base}$ .

# Generalized Scrutability

- There exists a compact vocabulary  $V$  such that if  $S$  is epistemically possible,  $S$  is a priori entailed by some epistemically complete conjunction of  $V$ -sentences.
- $S$  is e-possible iff  $\sim S$  is not a priori.
- $S$  is e-complete iff  $S$  is e-possible and there's no  $T$  such that  $S \& T$  and  $S \& \sim T$  are e-possible.

# Basic Vocabulary

- Basic Vocabulary: PQTI?
  - physics, phenomenal, that's-all, indexical?
- Refine to
  - phenomenal, nomic, spatiotemporal, logic/math, fundamentality, indexicals, ...?

# Inferential Role

- The primary intension of  $S$  is defined via its a priori inferential relation to  $V$ -truths.
- $S$ 's I-intension true at  $w$  iff  $\text{apriori}(D \rightarrow S)$ .
- Similarly for subsentential expressions.
- Similarly for concepts.

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# Inferential Role Semantics

- IRS: An expression's meaning is given by its entry and exit rules:
  - E.g. "and":
    - $A, B \vdash A \& B$
    - $A \& B \vdash A$
    - $A \& B \vdash B$



# 2D Inferentialism

- Likewise on 2D account. Meaning (primary intension) of  $S$  given by
  - $D_1 \dashv S$
  - $D_2 \dashv \sim S$
  - ...

# Entry and Exit Rules

- What about exit rules?
- Entry rules determine exit rules.
  - $S \blacktriangleright \sim D_2$
  - $\sim S \blacktriangleright \sim D_1$
  - ...
- Harmony, conservativeness guaranteed.

# Normative Roles

- On this picture: meaning is constituted by normative inferential role.
- inferences S ideally should enter into, not those it does enter into.
- Relation of normative role to descriptive roles remains to be determined.

# Generalizing

- Something similar applies for subsentential expressions
  - individuated by normative entry rules
- And for concepts/thoughts
  - individuated by normative entry rules in thought

# Pure and Impure Inferentialism

- Pure inferentialism: the meaning of every expression and content of every concept is determined by inferential role.
- Anchored inferentialism: the meaning of most expressions/concepts is determined by inferential role with respect to basic expressions (anchors). The meaning of anchors is determined some other way.

# Anchored Inferentialism

- Epistemic 2D picture
  - Anchors are the primitive concepts/expressions in a generalized scrutability base.
  - All other concepts characterized by inferential role with respect to these.

# Theses

- Contents of expressions (tokens? in contexts?) determined by inferential role
- Contents of concepts (qua representations) determined by inferential role.
- Concepts (qua abstract objects) individuated by inferential role?

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# I. Inferential Role and Truth-Conditions

- Problem I for inferentialism: how does inferential role relate to truth-conditions?
- Answer: Entry rules determine truth-conditions corresponding to primary intension.

# 2. Narrow and Wide Content

- Problem 2: How does inferential role relate to wide content?
- Answer:
  - Inferential role determines I- intension;
  - I-intension plus environment determines extension.
  - extension plus inferential role determines 2-intension

# 3. Inferential Role and Public Meaning

- Problem 3: Is inferential role subjective meaning rather than public meaning?
- Answer: Yes, to an extent. Different users of a name will have different roles and I-intensions. But I-intensions will still be sharable and not entirely holistic.
- Semantic pluralism: There remain other notions of meaning and of content.

# 4. Defective Roles

- Problem 4: What about defective inferential roles such as
  - $A, B \dashv\dashv A \text{ tonk } B \dashv\dashv A \& B$
  - $x \text{ is German} \dashv\dashv X \text{ is boche} \dashv\dashv X \text{ is cruel}$
- Answer: meaning determined by entry rules alone. Exit rules will correspond.

# 5. Coarse-Grained Roles

- Problem 5: Aren't a priori inferential roles too coarse grained?
- E.g. if a priori (right iff  $\phi$ ), concepts *right* and  *$\phi$*  will have same inferential role
- Math/logic sentences will have same a priori inferential role.
- Answer: Yes. One can invoke less idealized roles, larger basic vocabulary.

# Analytic Scrutability

- Analytic Scrutability: There is a compact vocabulary  $V$  such that all truths are analytically entailed by a conjunction of  $V$ -truths.
- Translucency: There is a compact class  $V$  of bedrock concepts such that  $V$ -truths translucently settle all disputes
- Bases will include previous base plus normative, mathematical, ... concepts?

# Fine-Grained Roles

- Fine-grained scenario descriptions:
  - e.g. PQTI plus normative plus math...
- Fine-grained roles:
  - e.g. basic inferences from fine-grained descriptions to S.
- Then concepts/contents individuated by fine-grained roles with respect to primitive concepts?

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# Naturalizing Content

- So far this is a nonreductive project: characterizing contents while presupposing content.
- Might this be turned into a naturalization project: content determined by inferential role?

# Obstacles to Naturalization

- We've characterized contents in terms of (1) apriority of inferences/conditionals, (2) contents of primitive concepts.
- A naturalization would need to naturalize (1) and (2).

# Obstacle I: Norms

- Q1: Naturalizing normative inferential role: what is it for inference to be one that one ought to perform?
  - A1: Ground in descriptive role?
  - A2: Ground in naturalization of rationality?
  - A3: Ground in phenomenology?
  - A4: Norms as primitive.

# Obstacle 2: Primitive Concepts

- Primitive concepts grounded in
  - Causal connections?
  - Acquaintance?
  - Perceptual experience?
  - Structural inferential role?

# Carnap vs Russell

- The Carnap/Lewis view of primitives:
  - primitives are structural concepts
  - logic plus fundamental (plus spacetime?)
- The Russell view of primitives
  - primitives are acquaintance concepts
  - sense-data plus universals plus self

# Speculation

- My speculation: Primitives include both structural and acquaintance concepts
- Structural concepts: grounded in structural inferential role
  - logic, math, law, fundamental?
- Acquaintance concepts: grounded in acquaintance with referent
  - indexicals, phenomenal, observational?

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# Inferentialism and Conceptual Analysis

- This inferentialism is compatible with different models of conceptual analysis
- Corresponding to different conceptions of inferential roles
  - descriptivist
  - particularist
  - defeasible



# Descriptivist Conceptual Analysis

- Descriptivist conceptual analysis: simple descriptive inferential roles
  - $X$  is justified true belief  $\blacktriangleright$   $X$  is knowledge
  - $X$  is knowledge  $\blacktriangleright$   $X$  is justified true belief

# Particularist Conceptual Analysis

- Particularist conceptual analysis: scenario-by-scenario inferential roles
  - $x$  is D1  $\blacktriangleright$   $x$  is knowledge
  - $x$  is D2  $\blacktriangleright$   $x$  is not knowledge
  - ...

# Defeasible Conceptual Analysis

- Hierarchical defeasible conceptual roles
  1.  $\sim\text{true}(x) \blacktriangleright \sim K(x)$
  2.  $\sim\text{belief}(x) \blacktriangleright \sim K(x)$
  3.  $\text{justified}(x) \blacktriangleright^* K(x)$
  4.  $\text{grounded-in-falsehood}(x) \blacktriangleright \sim K(x)$
  5.  $\text{lucky}(x) \blacktriangleright^* \sim K(x)$
  6. ...

# Dynamic Analysis

- Given hierarchical defeasible inferential roles, we should expect conceptual analysis to be a dynamic process
  - conjectures, refutations, refinements
  - a quasi-scientific process yielding increasingly refined approximate analyses
  - results more like biology (defeasible principles) than physics (strict laws).

# Optimistic Conclusion

- From the 2D/inferentialist perspective, conceptual analysis is not a failed quest for analyses.
- It's a successful ongoing attempt to better characterize concepts, their intensions, and their inferential roles.