Truthmaking, Content and Same-Saying

1 Roles for Propositions
- Semantic contents ✓
- Primary bearers of truth & falsity ✓
- Primary bearers of contingency & necessity ??
- Objects of attitudes × (Jago 2014)
- Denotations of *that*-clauses ×

2 Theories of Propositions
- Structured entities: Russellian & Fregean
- Pleonasitic and Primitive entities
- Sets of possible worlds
- *The States-of-Affairs account*

Single Propositions
- *Single propositions are truthmaker conditions*
- Sets of possible states of affairs
- Refinement of the possible worlds notion
- *(A)* is true iff a member of A obtains/actually exists
- *(A)* is true at *w* iff *w* overlaps a member of *(A)*
*Problem:* what about *(A ∧ ¬A), (1 + 1 = 3), (a ≠ a), . . . ?

Double Propositions
- *Truthmaker + falsemaker conditions*
- Pairs of sets of possible states if affairs, *(T, F)*
- E.g. *a* is a falsemaker for *a ≠ a*, so *(a ≠ a) = (∅, {a})*

3 The Nature of Propositions

P1. *Bearing a truth-value* is of the nature of a proposition
P2. Propositions are set-theoretic entities
P3. The nature of a set is explained wholly by its membership

C. Therefore, a proposition’s bearing a truth-value must be explained wholly by its membership
- I'm using ‘nature’ and ‘essence’ interchangeably
- P2 may be inessential
- Let’s see how theories of propositions fare by C . . .

4 Structured Propositions
- Their nature is to contain particulars & properties (or senses)
- Structure is part of their nature
- But *bearing a truth-value* is a contingent property, conventionally associated with such structures (King 1995)
- So structural account can’t explain nature of propositions (Jago 2015)
- Q: what if structures aren’t sets? (I don’t think it matters)

5 Unstructured Propositions
- Sets of p.w. have *truth-at-a-world* in their nature
- They have *truth simpliciter* in their nature if there’s a unique concrete actual world
- Not clear they explain falsity: is non-membership part of a set’s nature?
- The states view does better: truthmakers and falsmakers are parts of their nature
- Truth or falsity simpliciter is of their nature if only actual states are concrete
6 Identity Conditions

⇒ Exact truthmaker equivalence gives identity conditions on logically complex propositions

(\&) \( \alpha \) is a truthmaker for \( A \wedge B \) if and only if, for some \( \beta, \gamma \) where \( \beta \) truthmakes \( A \) and \( \gamma \) truthmakers \( B \),
\( \alpha = \beta \sqcup \gamma \). (Compare van Fraassen 1969)

(\lor) \( \alpha \) is a truthmaker for \( A \vee B \) if and only if either \( \alpha \) truthmakes \( A \), or \( \alpha \) truthmakers \( B \), or else if \( \alpha = \beta \sqcup \gamma \)
for some truthmakers \( \beta \) for \( A \) and \( \gamma \) for \( B \).

Exact Truthmaking Semantics

From Fine and Jago 2015, Fine forthcoming:

\( \models p \iff \alpha \in tp \)
\( \models \neg A \iff \alpha \not\models A \)
\( \models A \wedge B \iff \exists \beta \gamma (\alpha = \beta \sqcup \gamma \land \beta \models A \land \gamma \models B) \)
\( \models A \vee B \iff \alpha \models A \lor \alpha \models B \lor \exists \beta \gamma (\alpha = \beta \sqcup \gamma \land \beta \models A \land \gamma \models B) \)

Exact Truthmaking Entailment: \( \Gamma \models A \iff \) for any model \( M \) and any state \( \alpha \) of \( M \): \( \alpha \models A \) whenever \( \alpha \models B \) for each \( B \in \Gamma \).

Some Entailments & Equivalences

\[ A \wedge B \models B \wedge A \]
\[ A \wedge (B \wedge C) \models (A \wedge B) \wedge C \]
\[ A \vee B \models B \vee A \]
\[ A \vee (B \vee C) \models (A \vee B) \vee C \]
\[ A, B \models A \wedge B \]
\[ A \vee (B \wedge C) \models (A \wedge B) \vee (A \wedge C) \]
\[ A \models A \wedge B \]
\[ A \models A \vee B \]
\[ \neg A \models \neg (A \wedge B) \models \neg A \vee \neg B \]
\[ \neg (A \wedge B) \models \neg A \wedge \neg B \]

References