Classical Possibilism and Fictional Objects

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Overview

1. Actualism versus Possibilism
2. Description Theory
3. Sorts of Possibilia
4. Reductionism

Why Possibilism?

Example

(1) Superman doesn't exist.

(2) Superman wears a blue rubber suit.

Actualism

If (1) is true, (2) cannot be true.

Possibilism

(1) and (2) can be true.

Possibilism vs. Actualism

Actualism

If an extralogical property is ascribed to an object that doesn't exist, the whole statement is false (or weaker condition: not true).

Possibilism

If a property is ascribed to an object that doesn't exist, the whole statement may be true.

- A metaphysical distinction can be introduced on the basis of a linguistic distinction in this case, because (i) metaphysics without a language is not feasible, and (ii) the distinction can be made in any language including ideal, logic languages.

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Some Possibilist Positions

- Meinongianism (Meinong)
  - Concrete objects exist.
  - Abstract objects subsist.
  - Other objects like round squares neither exist nor subsist.
- Noneism (Priest, Routley)
  - Objects that don't exist do really not exist: no subsistence, persistence, etc.
  - Round squares don't exist.
  - Agents can have intentional states towards various kind of non-existent objects, including round squares.
- Classical Possibilism (early Russell)
  - Every object exists in one way or another (subsistence, persistence, etc.).
  - Often by mistake associated with Meinong.
  - Tendency not to find talk about round squares meaningful.

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Classical Possibilism and the Existence Predicate in FOL

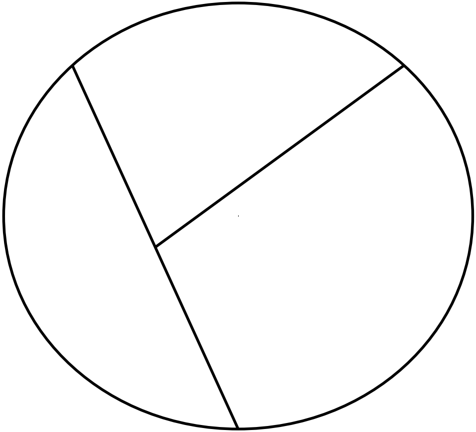
Actualism

+ existence predicate reducible
+ if there are several existence predicates, they must all have the same extension
+ quantifiers are existentially loaded
+ 'to be is to be the value of a bound variable'

Possibilism

- existence predicates might not be reducible (and they have no special, logical properties)
- several existence predicates may have varying extensions
- quantifiers are only means of counting
- both existent and certain non-existent things can be counted

Partitioning the Domain



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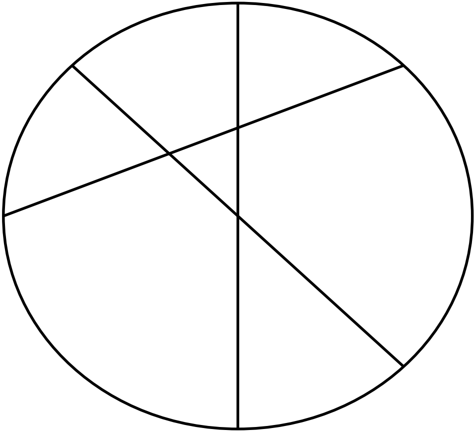

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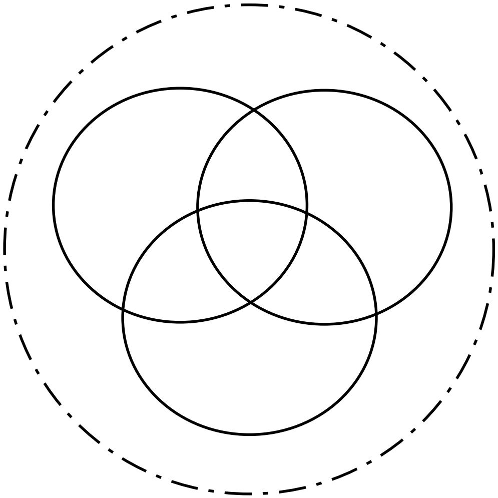

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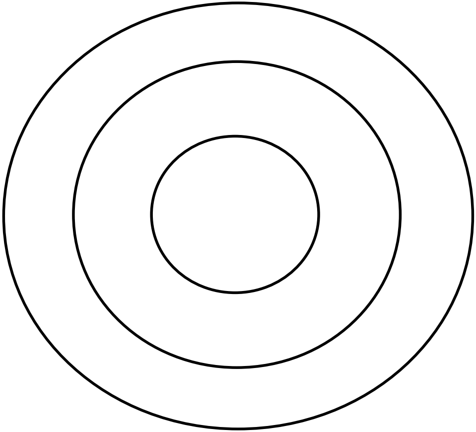

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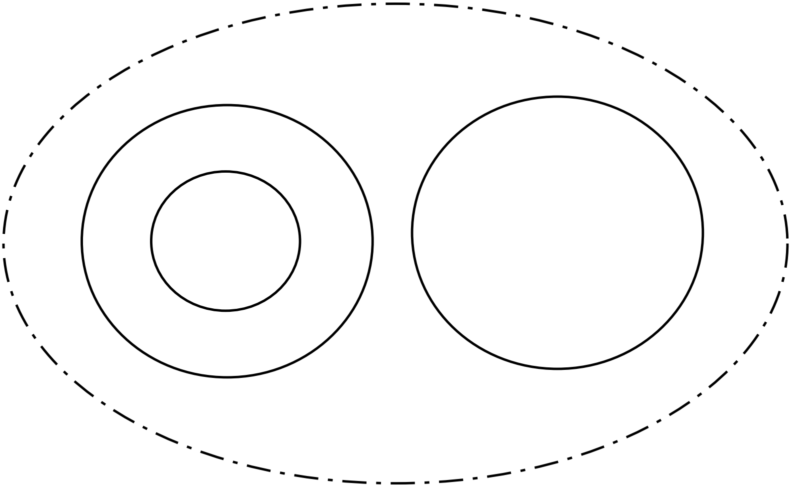

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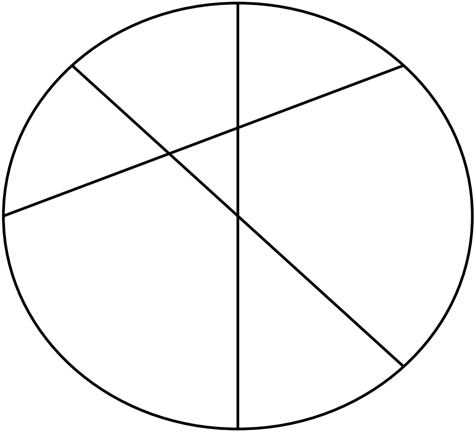


Non-Traditional Predication Theory (Sinowjew/Wessel/Staschok)

Syntax

For every positive predicate symbol P there is a corresponding inner negation form $\neg P$.

Semantics

Model Constraint: $[\![P]\!] \cap [\![\neg P]\!] = \emptyset$. Otherwise no change needed. ($\sim$ is used for outer, truth-functional negation)

- In the axiomatic system of Sinowjew/Wessel the inner negation is conceived as a form of predication. (ascribing a property to an object vs. denying that an object has a property)
- Similar to partial evaluation in Priest's N_4.

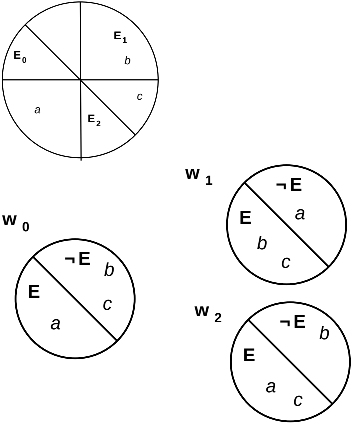
From FOL to FOML

Classical Possibilism in FOL

- n existence predicates $E_1, \ldots E_n$
- different readings: 'exists actually', 'exists fictionally', etc.

Normal, Constant-Domain Modal Logic

- 1 existence predicate
- n modalities
- each modality has its own reading



Digression: The Barcan Formula

- Both BF and CBF hold in Constant-Domain FOML
  - BF: $\forall x \Box Fx \rightarrow \Box \forall x Fx$
  - CBF: $\Box \forall x Fx \rightarrow \forall x \Box Fx$
- Classical Possibilism: use relativized quantifiers
  - BF*: $\forall x[Ex \rightarrow \Box Fx] \rightarrow \Box \forall x[Ex \rightarrow Fx]$
  - CBF*: $\Box \forall x[Ex \rightarrow Fx] \rightarrow \forall x[Ex \rightarrow \Box Fx]$
- Neither BF* nor CBF* hold in Constant-Domain FOML
  - BF/E: $\forall x \Box Ex \rightarrow \Box \forall x Ex$ (Problem: counterintuitive)
  - "if all things necessarily exist, then necessarily all things exist"
  - "**if** all things necessarily exist..." but they don't!
  - Hence, BF/E trivially true in all intended models.

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Standard Tools Needed

Iota Quantifier

$\imath xAB := \exists x[A \wedge \forall y(A\{x/y\} \rightarrow x = y) \wedge B]$ where $A\{x/y\}$ is the same as A except that all free occurrences of x in it are substituted by a new variable y.

Assuming normal, double-index constant domain modal logic:

Actuality Operators

$M, g, c, i \vDash @A$ iff. $M, g, c, i' \vDash A$ where i' is the same as i except that $world(i') = world(c)$ and $time(i') = time(c)$.
$M, g, c, i \vDash \mathrm{Act}\, A$ iff. $M, g, c, i' \vDash A$ where i' is the same as i except that $world(i') = world(c)$.
$M, g, c, i \vDash \mathrm{Now}\, A$ iff. $M, g, c, i' \vDash A$ where i' is the same as i except that $time(i') = time(c)$.

Standard Tools Needed II

Absolute Tense Operators

$M, g, c, i \vDash \mathrm{Past}\, A$ iff. $M, g, c, i' \vDash A$ where i' is the same as i except that $time(i) < time(c)$. (Correspondingly for Fut.)

For finitely many modalities m and finitely many agents Agt ($Agt \subset D$):

Normal Modal Operators

$M, g, c, i \vDash \Box^m A$ iff. for all i' s.t. $R^m(world(i), world(i'))$: $M, g, c, i' \vDash A$.

Doxastic Modal Operators

$M, g, c, i \vDash \Box^m_a A$ iff. $\alpha = [\![a]\!](c)(i)$ is defined and in Agt, and for all i' s.t. $R^m_\alpha(world(i), world(i'))$: $M, g, c, i' \vDash A$.

Conventions: Leave out m when not needed, write Bel_x for $\Box^0_x$.

Basic Characterization

Natural language proper names are translated to. . .

- . . . definite descriptions with wide scope w.r.t. to any de re modality expressed in the sentence (WDT)
- . . . definite descriptions that are rigidified w.r.t. any de re modality expressed in the sentence (RDT)

Example

(3) It is possible that Anne believes that Bob loves Carol

(3a) $M, g, c, i \vDash \imath x[Ax]\imath y[By]\imath z[Cz]\Diamond \mathrm{Bel}_x L(y, z)$

(3b) $M, g, c, i \vDash \Diamond \imath x[@Ax]\mathrm{Bel}_x \imath y[@By]\imath z[@Cz]L(y, z)$

The Content of Descriptions

Nominal Description Theory (NDT)

The description contains the property of being called such-and-such. See Bach (2002).

(4a) Anne is hungry.
(4b) $\imath x[@Ax]Hx$

Extended Description Theory (EDT)

The description contains the property of being called such-and-such plus subjective, agent-dependent identification criteria. See Rast (2007).

(4c) $\imath x@[Ax \wedge Ix]Hx$

Kripke's Challenge I

I. Semantic Argument: Not all proper names have descriptive semantic content.

- NDT: The bearer of a proper name is called by that proper name (in the current speaker community).
- EDT: If no identification criteria were associated with a proper name, we'd have no means of ever identifying the bearer of that name. Such a name would be useless.

Kripke's Challenge II

II. Epistemic Argument: DT incorrectly predicts that the truth of statements of the form 'If a exists, then a is P' can be known a priori.

- Yes, it is known a priori that 'If Anne exists, then she is called *Anne*' is true.
- This is a linguistic a priori.
- There is no a priori way of knowing whether some spatiotemporal object actually exists or not.
- Other forms of existence can be established a priori. (Example: mathematical existence, viz. the existence of mathematical objects)

Kripke's Challenge III

III. Modal Argument: Proper names are rigid and description theory just doesn't get this right.

- If you can use a rigid constant, you can use a rigidified definite description.
- However, you don't want to rigidify descriptions when the name occurs in a de dicto modality.
- Semantic Reference: $\imath x[Ax]\imath y[By]Bel_y Hx$
- Speaker Reference: $\imath y[By]Bel_y \imath x[Ax \wedge Ix]Hx$ (see Rast (2007) for details)

Side note: If water is necessarily H_2O, then it is impossible to discover that water is not H_2O. That's absurd.

From Language to Metaphysics

Fictional Objects

(1&2) Superman doesn't exist and wears a blue rubber suit.
(1&2') $M, g, c, i \vDash \imath x @[Sx \wedge \neg Ex \wedge \Box^f Ex](\neg Ex \wedge Wx)$

- It is commonly presumed that fictional objects don't actually exist, but exist as fictional objects.

Past Objects

(5a) Socrates is wise.
(5b) $M, g, c, i \vDash \imath x @[Sx \wedge \neg Ex \wedge \mathrm{Past}\ Ex]Wx$
(5c) $M, g, c, i \vDash \imath x @[Sx \wedge \mathrm{Past}\ Ex]Wx$

- It is commonly known that past objects have existed in the past (and no longer exist now).

Example: Sherlock Holmes

1. Sherlock Holmes is a detective. (true in w_0, true in all w_i)
2. Sherlock Holmes doesn't exist. (true in w_0, false in all w_i)
3. Sherlock Holmes exists. (false in w_0, true in all w_i)
4. Sherlock Holmes is a flying pig. (false in w_0, false in all w_i)
5. Sherlock Holmes is not a flying pig. (true in w_0, true in all w_i)
6. Sherlock Holmes loves his wife. (false in w_0, false in all w_i)
7. Sherlock Holmes doesn't love his wife. (false in w_0, false in all w_i)
8. Sherlock Holmes was cleverer than Hercule Poirot. [Salmon 1998]
   (by assumption true in w_0, false in all w_i)
9. Sherlock Holmes wasn't cleverer than Hercule Poirot.
   (by assumption false in w_0, false in all w_i)
10. Sherlock Holmes is a fictional character. (true in w_0, false in all w_i)

Doxastic Possibilia

Doxastic Objects without Existence Stipulation

(6a) Anne: Fluffy is green.

(6b) $M, g, c, i \vDash \imath x @[Bel_a(Fx \wedge I_a x)]Gx$

- The unique object x Anne believes to be called 'Fluffy' and satisfy certain criteria I_a is green.

Doxastic Objects with Existence Stipulation

(7a) Anne (suffering from schizophrenia): Bobby will help me.

(7b) $M, g, c, i \vDash \imath x @[Bel_a(Ex \wedge Bx)]\mathrm{Fut}\, H(x, I)$

(8a) Anne (healed): Bobby won't help me.

(8b) $M, g, c, i \vDash \imath x @[Bel_a(\neg Ex \wedge Bx)]\mathrm{Fut}\, \neg H(x, I)$

- An agent can have beliefs about objects that according to his beliefs (i) don't exist actually, (ii) might or might not exist actually, and (iii) exist actually.

More Complicated Examples

Shared Doxastic Objects

(9a) Bob (about Todd, the elf): Todd is short.
(9b) $M, g, c, i \vDash \imath x @[Tx \wedge Bel_G(I_G x \wedge Ex)]Sx$

- Requires a notion of group belief, where in this case Bob could be in G.

Doxastic Fictional Object

(10a) Anne: Supraman is big and green.
(10b) $M, g, c, i \vDash \imath x @[Sx \wedge Bel_a(I_a x \wedge \Box^f Ex)]Bx \wedge Gx$

- May be true while $M, g, c, i \vDash \imath x @[Sx \wedge \Box^f Ex]Bx \wedge Gx$ is false, for example because the term 'Supraman' doesn't denote.
- Anne speaks an ideolect, but once she uses 'Supraman' something she has in mind is called that way.

Doxastic Fictional Object Supraman (continued)

(10a) Anne: Supraman is big and green.
(10b) $M, g, c, i \vDash \iota x@[Sx \wedge Bel_a(I_a x \wedge \Box^f Ex)]Bx \wedge Gx$
(11a) Anne believes that Supraman doesn't exist.
(11b) $M, g, c, i \vDash Bel_a \iota x@[Sx \wedge Bel_a(I_a \wedge \Box^f Ex)]\neg Ex$
(12a) Bob believes that Supraman doesn't exist as a fictional object.
(12b) $M, g, c, i \vDash Bel_b \iota x@[Sx \wedge Bel_a(I_a \wedge \Box^f Ex)]\neg\Box^f Ex$

Nonexistent Objects and Actuality

- Do we need to get rid of nonexistent objects?
- Why should we?—They don't actually exist!
- Still we might prefer to be reductionists in the following sense.

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'Proxy' Reductionism

For every object x that doesn't exist actually, there is an object y that actually exists and encodes x.

$\forall x \exists y[(\neg Ex \wedge \Box Ex) \supset (Ey \wedge \mathcal{R}(y, x))]$

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Anti-Realism About Fictional Objects

For every fictional object x there is someone who believes that it is a fictional object.

$\forall x \exists y[(\neg Ex \wedge \Box^f Ex) \supset (Ey \wedge Bel_y \Box^f Ex)]$

Advantages of Classical Possibilism with DT

- Different kinds of existence are tied to different criteria for establishing existence:
  - Actual, concrete spatiotemporal objects exist when they can be encountered in experience.
  - Fictional objects exist in the worlds compatible with the corresponding work of fiction.
  - Doxastic objects exist when someone believes they exist.
- Various ‘ontological’ rules can be formulated in the object language:
  - A thesis about fictional objects: $\forall x[\Box^f Ex \rightarrow \neg Ex]$
  - A form of anti-realism: $\forall x \exists y[Ex \rightarrow Bel_y Ex]$
- Insofar as consistent objects are concerned, the approach is highly expressive:
  - $\imath x[@Bel_a Sx]\imath y@[Sx \wedge \Box^f Ex]x \neq y$
  - “the one that Anne believes to be called ‘Superman’ is not the same as Superman”

Limitations and Open Problems

- Lack of Inconsistency
  - For inconsistent objects use non-normal worlds and consult your local Priest. :-)
  - For realistic modeling of mathematical objects inconsistent objects seem to be necessary.
  - Mathematical objects are hereby understood as abstract objects that mathematicians have in mind.
  - Modeling of abstract and doxastic objects generally limited when no inconsistent objects are taken into account. (strong rationality assumptions)
- The Nature of Descriptive Content
  - Superman: $\imath x@[Sx \wedge \Box^f Ex] \ldots$ or $\imath x@[\Box^f (Sx \wedge Ex)] \ldots$?
  - Is it part of the meaning of 'Socrates' that he no longer exists?
  - Direct reference theorists of course just answer *No*, but the question is more difficult to answer for a descriptivist.
  - Lack of motivation for EDT: Kripke's semantic argument is probably stronger than how I have presented it.

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