On The Open-Endedness Of Logical Space
STRUCTURA

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1 Possibility and Absurdity

- Possibility, Absurdity and nonsensicality

    - Possibility: a way for the world to be which is free from absurdity.

        * It is possible that I have a sister.

    - Absurdity: the result of over-specifying a way for the world to be.

        * It is absurd that I have a sister and I have no siblings.

    - Nonsensicality: the result of mis-specifying a way for the world to be.

        * It does not make sense that my sister could be a poet. (given I have no sister.)

- A tension about the border of absurdity

    - If one recognizes more possibilities, then one will be equipped with more theoretical resources.

    - If one recognizes less possibilities, then one obviates silly open questions.

2 Modal Logicism

- Definition: Modal logicism is the view that a metaphysical possibility is just a possibility.

- Lewisian Modal Realism:

    - Recombination principle with a proviso :'Among the mathematical structures that might be offered as isomorphs of possible space times, some would be admitted and others rejected as oversized'.

        * Forrest and Armstrong: consider a world Giganto resulting from recombining the aggregate of all worlds. It is distinct from any world in the aggregate since for any

world which contains n electrons, Giganto must contain at least 2^n electrons to include all the possibilities where a relation F obtains among a certain subset of these n electrons.

- Necessitism

  - There is sense to be made of talk of absolutely general quantification: quantification over absolutely everything there is.

  - Necessarily, everything necessarily exists.

- Non-absurd metaphysical impossibilities
  Both theories contain non-absurd metaphysical impossibilities and hence is incompatible with modal logicism (without a revisionary view of absurdity):
  Recombination without proviso is not absurd (?), and the same for contingent beings.

3 Open-Endedness

- Partition: ww is a partition of logical space if exactly one of them will be realized however the world is.

- Open-Endedness: Let ww be a partition of logical space. Then ww can be used to show that there are possibilities not entailed by any possibility among ww.

- Arguments for Open-Endedness:

  - Kaplan's Paradox: for any possibilities ww, there is a further distinct possibility that I prefer only ww. It ends up violating Cantor's theorem.

  - Uzquiano: rr: $\pi \prec rr$ iff $\pi \prec ww \wedge (\forall vv \preceq ww(\text{at } \pi, \text{I prefer } vv) \to \pi \nprec vv)$
    $\rho : (\forall vv \preceq ww(\text{at } \rho, \text{I prefer } vv) \to vv = rr)$.
    Suppose (towards a contradiction) that ρ is entailed by $p \prec ww$. Consider whether at ρ, I prefer p. If I do, then $\rho \notin rr$, but by the definition of ρ, I do not prefer ρ. But I already prefer p which entails ρ, contradiction. If I don't, then $\rho \prec rr$, and hence $p \preceq rr$, and by the definition of ρ, I prefer p, contradiction. Therefore ρ is not entailed by $p \prec ww$. (with some assumption about my preference).

  - How many island universes are there?
    Given the partition ww. We consider the subpluralities of ww, and order it by $<$ (by axiom of choice). We pair each sub-plurality ww with a cardinal starting from $\aleph_0$ while respecting the order $<$. Thus we have a bijection from subpluralities of ww to the answers about how many island universes there are which in turn represent distinct possibilities. Therefore there must be more possibilities (finer partitions) then ww.

* There is no partition with regard to "how many island universes are there?". (?)

- Definite world and open-ended characterizations: I claim not that the world is open-ended but that there is no such thing as an exhaustive collection of resources for characterizing the way the world is.

- Anti-absolutist: There is no sense to be made of "absolutely general" quantification over possibilites.

4 Logical Contingentism

- No canno: As our conception of the world evolves, we may change our views about which objects exist and which properties make sense, and thereby change the way in which we partition logical space.

- Rejection of necessitism: Something actually exists could fail to exist, and something does not exist could exist.

- The metaphysical possibility from the view of logical contingentism:

  1. There is no maximally specific metaphysical possibilities.
  2. Metaphysical possibility (also possibility) is potentially open-ended: something does not make sense could make sense.

5 A Problem for Logical Contingentists

- $\diamond\exists x(S(x) \wedge Po(x) \wedge \diamond Pl(x))$.

- According to standard semantics, $\diamond$ will need to range over π_0 and π_1 such that:

  1. according to π_0, someone is my sister and a poet.
  2. according to π_1, someone is a plumber rather than a poet.
  3. condition 1 and 2 are witnessed by the same individual.

- However, for logical contingentists there is no such a thing as a mere possible sister of mine. (there are what there are, and there could be someone who is my sister) (?)

- What if we do not specify this person? But at the very least, we will be able to make sure that my sister in π_0 is the person which is a plumber in π_1, and it is not clear how that could be done without specifying the individual. (?)

- Several Remarks:

1. $\diamond$ ranges over the same possibilities.

2. Exportation: If world w represents something as being F, then something is F (simpliciter).

3. Models and Reality: The contingentists acknowledge the non-existence of some of the things that his model theory seems to be quantifying over.

4. Language-Models-Reality.

6 Clausal Semantics and Model Theory

- $\diamond\exists x(S(x) \land Po(x) \land \diamond Pl(x))$.

- $\diamond\exists x(S(x) \land Po(x) \land \diamond_x Pl(x))$.

- At some possibility among $\pi\pi$, there is an individual x who is my sister and a poet, and who is such that , at some possibility among $\pi\pi_x$, she is a plumber rather than a poet. (where the possibilities $\pi\pi_x$ are the result of refining $\pi\pi$ by having them coherently take sides on the existence and properties of x.)

7 Fritz's Puzzle

- (1) Whichever island universes there might have been, three might have been another. (Adding a distinct duplicate of one of them)

- (2) There might have been some island universes that included all possible island universes.

- (1') Necessarily, whatever angels there are, it is possible for all of them to be angels and for there to be an angel which is actually not an angel.

- (2') Possibly, all possible angels are angels.

- Response: there is no sense to be made of 'all possible island universes'.