How to have Concretism without Lewisian worlds

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Lewisian Concretism

Lewisian Concretism (**LC**) is the conjunction of these views:

1. necessarily, the actual world is the sum of all the things spatiotemporally (or causally) connected to us
2. possible worlds and the actual world have the same ontological status
3. necessarily, everything is concrete
4. our modal discourse is meaningful

Which entail

5. necessarily, the actual world is concrete
6. necessarily, all possible worlds are concrete
7. there are possible worlds different from the actual world

Concretist views

In general, there are several concretist views, which are entailed by **LC** but are not equivalent.

Let us distinguish between concretism about worlds (**W-Concretism**) and concretism in general (**Concretism**).

	W-Concretism	**Concretism**
Weak	There are no non-concrete *worlds* that could have been concrete	There are no non-concrete *things* that could have been concrete
Strong	There are no non-concrete *worlds*	There are no non-concrete *things*

Why revise Lewisian Concretism?

There are at least three standard objections to **LC**.

- **Incredulous Stare**

  The ontology of **LC** is too extravagant to accept it.
  – Stalnaker 1976 (p. 31), Adams 1974 (p. 215).

- **Irrelevance**

  How the counterparts of actual things are is irrelevant to how the actual things could have been.
  – Plantinga 1974 (p. 116), Kripke 1972/80 (p. 45).

- **Coarse-grained Hyper-intensionality**

  LC is unable to draw hyper-intensional distinctions.
  – Plantinga 1976 (p. 259), Stalnaker 2012 (pp. 5-6).

Goal

Propose a metaphysics which (at least) consistent with:

- theses (1)-(6) of Lewisian Concretism
- **Strong W-Concretism** and **Weak Concretism**

But rejects the thesis that

- there exist many possible worlds and their inhabitants

And avoids

- the three standard objections to Lewisian Concretism.

The underlying idea is that:

- possible entities do not exist, but could have

Let us call this proposal **Modal Concretism**.

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The (toy) paradox

A further reason for rejecting the existence of a plurality of worlds may be given by the “Many-Worlds Paradox” (MWP).

Premises of MWP

(TM) If there is an x that makes true φ, then φ is true.

(W) Every possible world makes true a maximal and consistent set of propositions.

(MW) There are some possible worlds which disagree on the truth of some proposition.

The (toy) paradox

(1)	There are at least two worlds w_0 and w_1	MW
(2)	There is at least a proposition p such that $w_0 \Vdash p$ and $w_1 \Vdash \neg p$	MW
(3)	$p, \neg p$	TM: 2
(4)	$\bot$	3

Premises available for rejection

(W) is just the way possible worlds are logically understood.

(TM) can be reformulated by non-concretists by distinguishing between existence and concreteness. Concretists cannot do this.

(MW) seems to be entailed by the thesis that some truths are contingent together with Kripke's semantics for modal logic.

Premises available for rejection

A Lewisian way out of MWP is to revise the condition on the maximal consistency of worlds, so that you cannot infer contradicting truths from (TM).

Lewis 1968 introduces a monadic world-predicate and a relation of inclusion. Then we can say that worlds make-true only truths about themselves and the things they include.

On the assumption that we should avoid the Irrelevance Objection, we cannot adopt this solution.

I then suggest we reject (MW) and see how much we can do without it.

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How much of Lewis's "paradise for philosophers" can be retained once we cannot quantify over non-actual worlds?

Identifying propositions or properties with sets of concrete entities will not allow one to account for intensional distinctions.

E.g. the property of having kidneys and the one of having a heart would be identical.

The reason is that sets are extensional, thus sets with the same members are identical (and necessarily so).

- We need a way to say that the same property could have had different instances.

Since sets are extensional, a better option is to use *classes* instead of sets.

A *class* represents a collection of entities that satisfy a certain condition, so the identity of a class does not depend on which entities belong to it.

Suppose a is the only existing philosopher, then $\{x\colon x \text{ is a philosopher}\} = \{a\}$.

Suppose instead a and b are the only existing philosophers. Then $\{x\colon x \text{ is a philosopher}\} = \{a, b\}$.

But necessarily, $\{a, b\} \neq \{a\}$, by the extensionality of sets.

See for example:

- Linnebo (2006, p. 159): "It is not essential to [a] property that it applies to precisely those objects to which it in fact applies. Rather, it is essential to the property that it applies to all and only such objects as satisfy the condition associated with the property."
- Schindler (2019, p. 408): "[...] a class may be defined as the extension of a concept or predicate, or, to use Russell's words, 'as all the terms satisfying some propositional function'. Such classes are associated with some kind of definition or rule that tells us in a principled way whether an object belongs to the class or not. This is the notion of class that was championed by Frege, Peano and Russell."

Given that the identity of a class does not depend on its extension, classes are better candidates than sets in order to play the role of intensional entities

But in our metaphysics, non-actual worlds do not exist, so we cannot use them to account for the possibility that a class has a different extension.

To do so, we will use a primitive notion of possibility, thus we will drop Lewis's purely extensional metaphysics.

Examples

Suppose $\{a, b\}$ is the extension of $\{x\colon x \text{ is a philosopher}\}$. Then for c to possibly be a philosopher just is for c to possibly belong to $\{x\colon x \text{ is a philosopher}\}$.

Modal Concretism

The sentences of QML will be analysed as follows.

- $\varphi(a_1, ..., a_n)$ iff $\langle a_1, ..., a_n \rangle \in \{\langle x_1, ..., x_n \rangle : \varphi(x_1, ..., x_n)\}$
  - $\varphi(a)$ iff $a \in \{x : \varphi(x)\}$, for simplicity
- $\exists x \varphi(x)$ iff $|\{x : \varphi(x)\}| \geq 1$
  - $\neg \exists x \varphi(x)$ iff not $|\{x : \varphi(x)\}| \geq 1$
    i.e. $|\{x : \varphi(x)\}| = 0$
  - $\forall x \varphi(x) =_{df} \neg \exists x \neg \varphi(x)$
- modal sentences are modal sentences about classes.
  - $\Diamond \varphi(a)$ iff $\blacklozenge(a \in \{x : \varphi(x)\})$
  - $\Diamond \exists x \varphi(x)$ iff $\blacklozenge(|\{x : \varphi(x)\}| \geq 1)$
  - logic for $\blacklozenge$: S5 without Barcan formulas as theorems

Properties and Propositions

Properties

Take open formulas as predicates, e.g., $\varphi(x)$. Then,

- the property $\langle\varphi(x)\rangle$ is $\{x\colon \varphi(x)\}$
- a instantiates a property iff $a \in \{x\colon \varphi(x)\}$
- existence is (also) a property of properties, i.e. $|\{x\colon \varphi(x)\}| \geq 1$

Properties and Propositions

To account for *propositions* in our ontology, let us define the predicate of *truth-making*.

First, let "$C(x)$" be the predicate "x is concrete" and $W(x)$ be the predicate for "x is a world". Then,

- $W(x) \ =_{df} \ \forall y(Cy \rightarrow y \leqslant x)$
  i.e. x is a *world* iff everything that is concrete is *part* of it.

Truth-making is defined as a predicate for worlds thus

- $x \Vdash \varphi \ =_{df} \ \varphi \wedge W(x)$

Propositions

Take closed formulas as sentences, e.g., φ. Then,

- the proposition $\langle\varphi\rangle$ is $\{x : x \Vdash \varphi\}$

Modal Concretism

This account of propositions is very natural for two reasons.

1. We can derive principle (TM).

(1)	$\lvert\{x : x \Vdash \varphi\}\rvert \geq 1$	ass.
(2)	$\exists x(x \Vdash \varphi)$	1
(3)	$\exists x(\varphi \wedge W(x))$	$\Vdash \varphi_{df}$
(4)	φ	logic

2. Under the assumption that necessarily everything is concrete (**EC**), the truth-value of a proposition can be represented by its cardinality

2. Under the assumption that necessarily everything is concrete (**EC**), the truth-value of a proposition can be represented by its cardinality

A) Necessarily, there is only one world

(1)	$W(a) \wedge W(b)$	ass.
(2)	$\forall y(Cy \rightarrow y \leqslant a) \wedge \forall y(Cy \rightarrow y \leqslant b)$	W_{df}
(3)	$\Box\forall xCx$	**EC**
(4)	$\forall y(y \leqslant a) \wedge \forall y(y \leqslant b)$	2, 3
(5)	$a \leqslant b \wedge b \leqslant a$	4
(6)	$a = b$	$\leqslant$
(7)	$\neg\Diamond\exists xy(Wx \wedge Wy \wedge x \neq y)$	reductio

❷ Under the assumption that necessarily everything is concrete (**EC**), the truth-value of a proposition can be represented by its cardinality

B) Necessarily, either $|\langle\varphi\rangle|=1$ or $|\langle\varphi\rangle|=0$.

(1)	$\blacksquare(|\langle\varphi\rangle|\neq 0 \text{ or } |\langle\varphi\rangle|=0)$	logic
(2)	not $\blacklozenge(|\langle\varphi\rangle|>1)$	A
(3)	$\blacksquare(|\langle\varphi\rangle|=1 \text{ or } |\langle\varphi\rangle|=0)$	1, 2

2. Under the assumption that necessarily everything is concrete (**EC**), the truth-value of a proposition can be represented by its cardinality

It remains to rule out that $\varphi \wedge \exists xCx$ is true but $|\langle\varphi\rangle| = 0$

We can either

- assume a mereology with *universalism*, or
- just assume $\Box(\exists xCx \rightarrow \exists yWy)$

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Conclusion

Modal Concretism is consistent with:

1. necessarily, each world, were it to exists, has all the concrete things as parts (definition of "world")
2. the ontological status of worlds is concreteness, or, at most, de dicto contingent concreteness
3. necessarily everything is concrete by assumption (motivated by Ockham's razor too)
4. modality is a primitive feature of reality
5. the actual world is always concrete (though possibly contingently concrete)
6. necessarily, every world, if it exists, is concrete.

Conclusion

Modal Concretism is consistent with:

- **Strong W-Concretism**
  There is only one possible world and it is concrete
- **Weak Concretism**
  Possible concrete entities do not exist, but could have

? **Strong Concretism**
Not clear. It might be possible to use our primitive possibility applied to sets to say that a certain predicate could have had a different extension.

Avoiding the objections

- VS Incredulous Stare

  We do not need to assume that possibly existing things exist *simpliciter*.

  To explain the possibility that some things have a property, or some propositions are possibly true,

  we just need to assume that it is possible that some things belong to a certain class.

Avoiding the objections

- VS Irrelevance

  To explain the possibility that some actual things have a certain property, we do not need to rely on other-worldly counterparts.

  We can just assume that those very things can belong to the relevant class of things.

Avoiding the objections

- VS Coarse-grained Hyper-intensionality

  Since we treat properties and propositions as classes, and no longer as sets, we are no longer forced to say that necessarily coextensive properties, or propositions, are identical.

  It is nonetheless desirable that we find another identity criterion for classes.

  Which identity criterion is an open question.

Open questions

1. Which identity criterion for classes?
2. Which theory of classes?
3. Are classes concrete?
4. Are classes reducible to concrete entities?

Even if the answers to 2 and 3 were negative, the present account is still consistent with the conjunction of **Strong World-Concretism** and **Weak Concretism**.