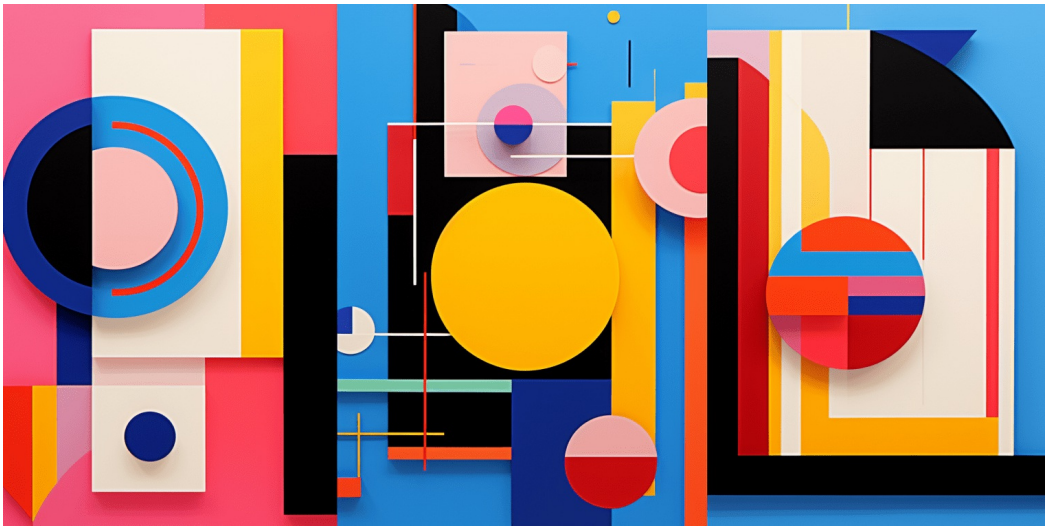

[Commentary] On the Existence of Mem (ɱ)

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Abstract

We define a set of things of one singular kind as the set of all things that can causally affect one another. To enable causal interaction between such sets, we define a thing that is of a *non*-singular kind as consisting of more than one singular kind. Such a thing of a non-singular kind supervenes on things of singular kinds and is open to causally intervene between sets of things of different singular kinds without violating the definition of a set of things of one singular kind. With the empty set as a set of things of one singular kind, we define *Mem* as 'either the smallest element of intervening sets in the indefinite set of sets of things of a singular kind and the intermediate supervening sets, or, if nothing exists, the empty set'. Thus, Mem exists. *Comment*. The argument focuses on a definition of a supervening set of things of a non-singular kind. Besides that, it really only claims that if we define Mem as some set of existing things or the set without elements, Mem exists. That, though, is tautological. The argument, thus, can only be interesting if anything besides the empty set exists. That only the empty set would exist, however, is refuted by this very claim.

1. *Definition of Mem*

We will define Mem as a set of things.

1.1.

Mem is related to causality and the *first* cause of things.

1.2.

We will start by looking at the set of everything that is physical (the physical), however one individuates physical ‘things’.

1.3

We next ask if the physical consists of things (however they are individuated) of only one kind (that is, only physical things).

1.4

With that tautologically established, we ask if the physical can be causally affected by anything from another set of things of another singular kind. We will answer this by defining a set of things of one singular kind as the set of all things that can causally affect one another (in principle or practically). By this, the answer to the question above is ‘no’.

1.5

By defining a set of things of one singular kind as the set of all things that can causally affect one another, the next question is if there are such sets. This question is multifaceted. An interesting case is the empty set. Is that set a set of all things that can causally affect one another? Or can we just ascertain that the empty set is a set of things of one singular kind since it in fact is one of a kind?

Another question is if there can be more sets than one that consist of ‘all things that can causally affect one another’.

Given our definition of a set of things of one singular kind as a set of all things that can causally affect one another, two separate sets of things of a singular kind cannot causally affect one another.

1.6

We will now define a new entity that helps bring causality back into the picture. Consider the*imaginary* numbers and the *real* numbers. No imaginary number is a real number, and vice versa. Based upon the imaginary numbers and the real numbers, we can define *complex* numbers with both imaginary parts and real parts. Accordingly, we can define things that are of a *non*-singular kind, consisting of more than one singular kind. Also, just as complex numbers*supervene* on imaginary and real numbers, a thing of a non-singular kind would supervene on things of singular kinds. Such a thing of a non-singular kind is open to causally intervene between two sets of things of different singular kinds without violating the definition of a set of things of one singular kind.

1.7

The things of a set of things of one singular kind (the set of all things that can causally affect one another) are now allowed to causally interact *via* the defined supervening set, with a set of things of another singular kind.

The number of causally linked sets of things of a singular kind is now indefinite. Between them, though, there is a supervening set as defined.

1.8

We can now define Mem in relation to the indefinite set of sets of things of a singular kind and the intermediate supervening sets. Since there is a possibility that nothing exists, we also take into account the empty set, which we determine is a set of things of one singular kind.

1.9

The disjunctive definition of Mem: Mem is either the smallest element of intervening sets in the indefinite set of sets of things of a singular kind and the intermediate supervening sets, or, if nothing exists, the empty set.

2. *On the Existence of Mem*

If there exists anything except for the empty set, there is an intermediate supervening set between the empty set and the second set of things of one singular kind. That supervening set is Mem. If there exists nothing except for the empty set, Mem exists (as the empty set).

3. *Comment*

The argument focuses on a definition of a supervening set of things of a non-singular kind. Besides that, it really only claims that if we define Mem as some set of existing things or the set without elements, Mem exists. That, though, is tautological. The argument, thus, can only be interesting if anything besides the empty set exists. That only the empty set would exist, however, is refuted by this very claim.