THEORY OF NONSETS

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Collectivizing relations

One often think of sets as displaying the following characteristics (among others): (1) no set is a member of itself; (2) sets (unlike properties) have their extensions essentially; hence no set can exist if one of its members has not; (3) sets form an iterated structure : at the first level, sets whose members are nonsets, at the second, sets whose members are nonsets or first level sets, etc. Cantor also inclined to think of sets as *collections*, i.e., things whose existence depends upon a certain sort of intellectual activity, a collecting or "thinking together". Here is Cantor's definition of sets in 1895 [Cantor 1932, p. 282] : By a "set" we understand any collection M into a whole of definite well-distinguished objects x of our intuition or our thought (which will be called the "elements" of M). For doing so, Bourbaki suggests that there must exist a relation R such that the x in question are put together into the whole. This one is named a "collectivizing relation" and noted as follows : $\mathrm{Coll}_x R$ says that R is collectivizing in x.

The problem of sets

One of the problem we can rise about such a definition is that many objects or beings in the world can form a collection without the result might be understood as a whole. Very often, it is not the case. Of course, a basic feature of reality is that there exist many things that we can collect. And when a multitude of given objects can be collected together, we arrive at a set. For example, there are two tables in this room. We are ready to view them as given both separately and as a unity, and justify this by pointing to them or looking at them or thinking about them either one after the other or simultaneously. Somehow the viewing of certain objects together suggests a loose link which seems to tie the objects together in our intuition. If the so-called objects are simple ones, there is no problem at all. If they are exactly the same, you can even add them. But suppose