On multitudes

Peter Simons, Trinity College Dublin, Ireland

I have some books at home and some books in the office. The books at home are completely different from the books in the office: no book is both at home and in the office. So I have these two groups of books: the books at home, the books in the office. Now I also have some books on logic and some books on Russell. They are different books too: some of the logic books are not on Russell, and some of the books on Russell are not on logic. But some of the books on logic are also books on Russell. So though these two groups are different, they are not completely different: they overlap. Some of the logic books are at home and some are in the office. So the logic books are different from the books at home and different from the books in the office. So far then I have mentioned four groups of books, and they are all different, though some overlap. There is another group of books that I can easily add: all my books. That contains all the other four groups as parts. In also have groups of groups of books: the first group consists of the two groups I mentioned first: home books; office books. The second group consists of the second two groups: logic books; Russell books. That gives me two groups of groups. And I can carry on grouping groups to any level. But obviously although I am talking about higher and higher groups, I do not add any new individual books to those I have. Given the books, the groups, groups of groups, and so on, all come for free.

In mathematics there is a field of algebra called 'group theory'. This is not what I mean, so I prefer to use the word 'multiplicity' instead of 'group', once I have made my meaning clear. For the rest, I want simply to distinguish my account of multiplicities from two other theories: the theories of multiplicities and wholes found in Leśniewski's systems of ontology and mereology; and the theory of sets. Like Leśniewski's theory, multiplicity theory is compatible with nominalism, but unlike Leśniewski's theory it can take over more of the work usually done by set theory.