The Mathematics of Non-Individuality

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Abstract

Some of the forerunners of quantum theory regarded the basic entities of such theories as 'non-individuals'. One of the problems is to treat collections of such 'things', for they do not obey the axioms of standard set theories like Zermelo-Fraenkel. In this paper, collections of objects to which the standard concept of identity (Leibinizian identity) does not apply are termed 'quasi-sets'. The motivation for such a theory, linked to what we call 'the Manin problem', is presented, so as its specific axioms. At the end, it is shown how quantum statistics can be obtained within quasi-set thbeory.

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