bibliography contains papers not referred to in the book itself, but which relate closely to the topics covered and which should provide impetus for further research.

REFERENCES

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Parallelisms of complete designs, by Peter J. Cameron, Cambridge Univ. Press, New York, 1976, 144 pp., $ 9.95.

Combinatorics is primarily concerned with two general types of questions concerning arrangements of objects: enumeration, when there are many different arrangements; and the study of structural properties, when the desired arrangements are harder to come by. Of course, there is a large overlap of these two types, and they have some common origins.

There are many relationships between combinatorics and other parts of mathematics. Of special importance for Cameron's book are the relationships with groups, the design of experiments, and coding theory. The relationships with finite groups are fairly obvious and go back to the last century: finiteness implies the use of counting; interesting combinatorial objects will frequently have interesting automorphism groups; and most of the known finite simple groups are intimately related with combinatorial objects on which they act. Cameron's book is primarily concerned with structural properties, just as is much of present-day finite group theory. The structural side of combinatorics also arose in the work on the design of statistical experiments of R. A. Fisher and his successors. More recently, algebraic coding theory has produced new insights into standard combinatorial questions of a structural sort. Many of the best designs and codes have tight structures (and frequently have large automorphism groups), suggesting some sort of classification. This is the point of view espoused in much of this book.

Structure is studied by building up global properties from local information (that is, from configuration "theorems"). Classical examples are the coordinatization theorems for projective spaces of dimension at least 3, and of projective planes in which Desargues' "theorem" is assumed. However, even if a complete classification is unreasonable, it may be possible to associate algebraic objects with suitably restricted combinatorial ones, and then apply standard algebraic techniques.

There are three ways an area of mathematics can be surveyed: by a vast, comprehensive treatise; by a monograph on a small corner of the field; or by a monograph on a cross section. Cameron has chosen the latter method for structural combinatorics. After starting with the seemingly specialized notion of a parallelism of a complete design, he is led into questions concerning finite groups, algebras related to important combinatorial objects, coding theory, and a surprising number of familiar topics in combinatorics and finite