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**REPEATED-MEASUREMENT AND OTHER
EXPERIMENTAL DESIGNS****19.1 INTRODUCTION**

In previous chapters the basic ideas involved in the design, analysis, and interpretation of one-way classification experiments, and factorial experiments, were discussed in considerable detail. In psychology and education considerable use is made, both through choice and necessity, of other experimental designs. The purpose of this chapter is to introduce the reader in an elementary way to a number of other experimental designs in common use. Some of these designs involve assumptions, and present problems, that are not involved in designs previously discussed. Some awareness and understanding of these assumptions and problems are essential to the proper use of these designs.

Research workers in psychology and education make frequent use of experimental designs in which measurements are repeated a number of times on the same subjects. These designs, and the assumptions underlying their use, are described in some detail in this chapter. Randomized block designs, designs with nested factors, and Latin square designs are also described.

The treatment of these designs in this chapter must of necessity be elementary. Some of these designs can be combined and extended in a variety of ways leading to experiments of much complexity. Because of the ready availability of computers for data analysis, the current trend in psychology and education is toward more complex designs. Questions can be raised regarding the merits of this trend toward complexity. A much more advanced treatment of the topics discussed in this chapter will be found in books by Winer (1971), Myers (1972), and other authors.