Experimental investigation of coalition forming behavior started with the pioneering studies on coalition formation in the triad by Vinacke and Arkoff (1957) and in the tetrad by Kalisch et al. (1954). The former experiment was instigated by theoretical research in the social sciences and the latter was inspired by the mathematical theory of games. Having witnessed much progress in the last three decades, these two disciplines have continued to serve as the main foci of research on coalition formation. Although they differ sharply from each other in their orientation and main objects of focus, the approaches they have advocated are not necessarily antagonistic. Social conflicts can and have provided mathematicians with insights necessary for abstract analyses, and experimental findings have stimulated the development of coalition formation models (Maschler, 1963). From the other side, mathematical analyses of abstract conflicts have provided very powerful conceptual tools for the analysis of real conflicts and have stimulated much empirical and experimental research (Brams et al., 1979; Kahan and Rapoport, 1984; Ordeshook, 1978; Rapoport, 1974). Even the design of experiments on coalition forming behavior has been strongly influenced by the language and abstract formulations of game theory.

Primarily because of this strong influence, recent experiments on coalition forming behavior have increasingly concentrated on a relative small number of experimental paradigms. Research in the late 50s and early 60s mostly employed the Pachisi board paradigm, and several of their variations. These experimental paradigms were later largely replaced by the more abstract weighted majority game, which focuses on the effects of ‘resources’ or ‘weights’ (e.g., delegation votes in a political convention, parliamentary seats, voting stock, etc.) on coalition formation and payoff allocation. Realizing that the greater part of activity in forming economic or political coalitions is non-zero-sum in the sense that different coalitions win different amounts and "the loss to the loser
may not equal the gain to the winner" (Riker, 1967, p. 643), more recent research on coalition forming behavior has been gradually replacing the above paradigms with negotiable conflicts modeled as characteristic function games with sidepayments (CF games).

These shifts in experimental paradigms have led to and been inspired by the construction of an unusually large number of coalition theories by mathematicians, psychologists, economists, and political scientists. Several factors may account individually or collectively for this embarrassing richness. (1) The bargaining process leading to the formation of coalitions and the division of rewards may vary considerably from one area of the social sciences to another, depending on the communication and information conditions and on whether individuals, groups, organizations, political parties, or nations are locked in the conflict. (2) Serious problems are inherent in the extension of the notion of rational behavior from individual to group decision making. (3) There are alternative ways of incorporating social norms of equality and parity, dictates of consciousness, standards of morality, and notions like trust, threat, and counterthreat into coalition theories (Aumann and Maschler, 1964; Maschler, 1963). (4) There are alternative definitions of stability or equilibrium that may be proposed. Whatever these factors are and regardless of how they interact, inspection of the experimental literature on CF games (which include weighted majority games as a special and important case) reveals a dozen or more theories of reward allocation which have been subjected to experimental scrutiny or tested competitively against each other. Some of these theories also generate predictions about the likelihood of formation of different coalitions; these predictions are not discussed in the present paper.

The major psychological theories of reward allocation which have been subjected to experimental scrutiny include minimum resource theory (Gamson, 1961), minimum power theory (Gamson, 1964), the bargaining theory of Komorita and Chertkoff (1973), the weighted probability model (Komorita, 1974), the equal excess model (Komorita, 1979), and Caplow's model of control (1956, 1968). Game theoretical models tested competitively against each other include the core (Gillies, 1953), the $M^{(i)}$ bargaining set (Aumann and Maschler, 1964) and its variants the competitive bargaining set $H^{(i)}$ of Horowitz (1973) and the $M^{(im)}$ cooperative bargaining set of Maschler (1963), the kernel (Davis and Maschler, 1965),