

extends to general games results of Krental, McKinsey, and Quine (Duke Math. J. vol. 18 (1951) pp. 885–900). In paper no. 13 Gale and Stewart study z - s t - p games with perfect information (chess is such a game). It was proved by v. Neumann (e.g., v. Neumann and Morgenstern, *Theory of games and economic behavior*, 2d. ed., Princeton University Press, 1947, p. 112; see also E. Zermelo, *Ueber eine Anwendung der Mengenlehre auf die Theorie des Schachspiels*, Proceedings of the Fifth International Congress of Mathematicians, Cambridge, 1912, vol. II, p. 501) that every such game whose number of moves is finite has a solution in pure strategies. Gale and Stewart consider games where the number of moves is infinite, and among their results is the construction of a game with perfect information which has no solution in pure strategies. In paper no. 14, G. L. Thompson studies signaling strategies and applies his results in paper no. 15 to a model of the game of bridge. A signaling strategy for a player is “a pure strategy for that player restricted to that subset of his information sets which prevent him from having perfect recall.” In paper no. 16, J. W. Milnor analyzes a situation which occurs in certain games, where “one can measure the ‘incentive’ to move at any particular configuration by imagining the possibility of passing instead.”

The fourth and final section is devoted to n -person games. In paper no. 17 L. S. Shapley proposes to evaluate the equities of the players of an arbitrary n -person game. Whether such a game has a solution in the sense of v. Neumann and Morgenstern is an unsolved problem. In papers no. 18, no. 19, and no. 20, R. Bott, D. B. Gillies, and L. S. Shapley, respectively, introduce interesting classes of games for which they obtain solutions. In paper no. 21 H. Raiffa proposes “arbitration conventions” for choosing an imputation from the solution set of v. Neumann and Morgenstern.

Each section of the volume is preceded by an excellent editorial introduction which summarizes the various papers and indicates lines of further research. The volume itself is indispensable for students of the subject.

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