Organizational Dynamics with Symmetric Reponses of Members

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In this paper, we consider the dynamics of an organization whose members share a sense of camaraderie. More specifically, the organization to be considered is formed when people who share a specific sense of purpose spontaneously gather and cooperate with one another to engage in a specific social activity. We describe the state of such organizations with an index derived from a "principle" of each member. We can then trace the evolution of an organization by examining the behavior of the index. We consider the behavior of the index to be determined through two channels: 1) the principle response among members and 2) the relation between a member's principle and the social environment. We analyze the evolution of the organization by using a dynamical system with a particular focus on how an organization changes in response to changes in the social environment. Using the bifurcation theory, we obtain a result where an organization with a symmetric response of members' principles eventually either splits into two parties or maintains unity but with a different index. In addition, we propose a process for the reaction of an organization to changes in the social environment and show that the type of initially formed symmetric response determines the final state of the organization.