1014-06-1667 S. Baker Peacock^{*}, 600 Inverary, Harlingen, TX 78552, and M. Paredes. *Modern Algebra and Social Choice*. Preliminary report.

The simplest way to present the origin of this research is to focus on three individuals ranking three objects with preferences that are reflexive, anti-symmetric, and transitive. This is often referred to as the Voting Paradox or Condorcet Paradox, and the arrangement of the objects describing it is the same as the body of a table of a cyclic group of order three. Many questions are posed in the project to determine whether this type of situation may be generalized to groups that are cyclic, non-cyclic, abelian, non-abelian, and/or infinite. Due to some constraints of the voting paradox situation, we also consider other situations that reflect similar negative issues in social choice. Since the classification of finite groups is complete and the voting paradox and majority decision failure pattern in a large class of preference orderings has not yet been classified, a solid connection between the areas is the desired outcome. (Received September 28, 2005)