962-A1-106 **Thomas L. Bartlow*** (thomas.bartlow@villanova.edu), Villanova University, 800 Lancaster Avenue, Villanova, PA 19085. *Arrow's Theorem.* Preliminary report.

Suppose a society of n individuals is faced with m alternatives and must make a decision among them. Let each of the n individuals rank the alternatives in order of preference. How should society take these individual preference orders and compile them into a societal preference order? We seek a function from the set of n-tuples of orders of the alternatives to the set of orders. The function should implement some sort of democratic principles. In 1948 Kenneth J. Arrow formulated properties that such a function should possess and proved that no function can possess all of them. In the talk Arrow's theorem will be formulated precisely and proved. (Received August 02, 2000)