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Francis Edward Su* (su@math.hmc.edu), Department of Mathematics, Harvey Mudd College, 1250 N. Dartmouth Ave., Claremont, CA 91711. *Preference Sets, Graphs, and Voting in Agreeable Societies.*

When mathematical objects have a social interpretation, the associated theorems have social applications. We give a few examples of topological and geometric "set-covering" theorems that can be used in social science applications to model preferences and understand when agreement is possible. This talk features joint research with Harvey Mudd College undergraduates Deborah Berg '06 and Andrew Niedermaier '04. (Received September 28, 2005)