1035-91-1857 **Francis Edward Su*** (su@math.hmc.edu), Department of Mathematics, Harvey Mudd College, 301 Platt Blvd., Claremont, CA 91711, and **Kristen Huff** and **Alex Izsak**. *Are Societies Agreeable?*

In earlier work with Berg, et al., we considered a model in which a collection of voters (a "society") have approval sets on a linear spectrum, i.e., each voter has a closed convex set of platforms of the spectrum which they would be willing to approve. We showed that under certain 'local' conditions (if the society is "agreeable"), we can guarantee a strong 'global' condition: that there will be a majority winner under approval voting. In this work, we examine conditions under which we might infer from data whether a society is actually agreeable and where the approval voting winner might lie in the spectrum. (Received September 20, 2007)