1056-91-84 Sarah Berube, 255 Grapevine Road, Wenham, MA 01984, and Karl-Dieter Crisman* (karl.crisman@gordon.edu). Manipulating Profiles in Nonparametric Statistics: Stacking and Switching. Preliminary report.

A number of well-known results of D. Haunsperger connect voting theory - including the paradoxes involved - with certain non-parametric tests in statistics. Recently, A. Bargagliotti and D. Saari have recast and extended many of these results in terms of geometric/algebraic symmetry decompositions of the space of voter profiles arising from statistical data sets, especially in the three sample case.

In this talk, we first characterize the effects on outcomes of a manipulation we call 'stacking' of the profile space; an immediate result of this characterization is that one can create profiles arbitrarily close to being purely Basic. By applying another manipulation called 'switching', we can give a useful first characterization of pure Basic profiles as well. Finally, these are shown to actually exist via computer search (disproving a conjecture of Bargagliotti and Saari). (Received July 23, 2009)