Duane Cooper* (dcooper@morehouse.edu), Department of Mathematics, Morehouse College, 830 Westview Dr. SW, Atlanta, GA 30314. Analysis of Cumulative Voting's Potential to Yield Fair Representation.

For representative bodies, the election method of cumulative voting replaces the democratic principle of "one person, one vote" with "one person, n votes", where n is the number of representatives to be elected in the jurisdiction. We describe results on the potential of cumulative voting to yield fair representation to minority populations by comparison to apportionment methods. We extend this consideration beyond measures of fairness to population subgroups to consideration of fairness to individual voters via spatial modeling. (Received September 22, 2009)