1046-91-947 **Jonathan N. Katz*** (jkatz@caltech.edu), Caltech, DHSS 228-77, Pasadena, 91125, and **Andrew Gelman** and **Gary King**. *A New Approach to Measuring the Racial Impact of Redistricting.*

Since the passage of the Voting Rights Act in 1965, race has played a central role in drawing legislative district boundaries in the U.S. Most of the academic and popular debate on "racial redistricting" has focused on the creation and impact of so-call "majority-minority" districts. While this debate has been informative, much of it does not address absolute standards for the racial fairness of a proposed (or enacted) legislative map. We offer here a framework and method for directly estimating the immediate quantity of interest: the racial fairness of a redistricting plan, and one that would seem to be consistent with U.S. Constitution and legal doctrine. It is also practical, estimable, and easy to apply. Our measure of racial fairness is based the the probability that a given voter will cast a decisive ballot in an election — i.e., change the outcome of the election — which we will also call voting power. By considering individuals' voting power, a natural definition of racial fairness arises. We show how to estimate this notion of racial fairness from observed election data using extensions of standard statistical techniques. This should allow one to make valid statistical inferences about the likely impact of proposed redistricting plans. (Received September 12, 2008)