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Suppose a group of voters is trying to select one candidate out of many, and for simplicity, each voter either approves or disapproves of any individual candidate. Suppose further that each candidate is a real number, and that the set of candidates that a voter approves of is always an interval. (Consider a one-dimensional political spectrum from liberal to conservative, for instance.) Francis Su and others have shown that if, out of every three voters, there is a candidate that at least two of them approve of, then there is a single candidate that a majority of the voters approve of (in other words, the agreement proportion is greater than $1/2$). More generally, they showed that if among every m voters, k can agree on a candidate, then one can obtain an agreement proportion of at least $(k - 1)/(m - 1)$.

Su posed the question of what happens when the voters' preferences are arcs along a circle, instead of intervals of reals. We show that an analogous theorem holds, with an agreement proportion of $(k - 1)/m$ instead of $(k - 1)/(m - 1)$. (Received September 26, 2006)