Why the Academy Awards[®] may fail to pick the "best picture" -- again by Steven J. Brams and Paul Hager

Spring is approaching and with it, the 74th Academy Awards® ceremony. Both professional handicappers and garden variety cinephiles will be spending the coming weeks trying to divine the collective mood of Academy voters in order to guess the winner.

Experience has shown that picking the artistically "best" movie for Best Picture is not an optimal strategy. Movies with a challenging theme or innovative style indicative of a cinematic masterpiece often fail to win, particularly if there is an accessible "crowd pleaser" among the nominees. But how can this be? The voting members of the Academy of Motion Picture Arts and Sciences (AMPAS) are professionals with a greater knowledge and appreciation of the blend of art and technology involved in movie making than those outside their fraternity. One would expect their collective judgment to be superior to that of the rest of us.

It turns out that mathematics and the little known science of voting explain why AMPAS so often fails to select the "best" picture. Although AMPAS refuses to divulge any information on the voting method it uses, it is an open secret that Academy members vote for only one nominee in a given category. This voting method, known as plurality voting, is the same method used throughout the United States for electing people to public office.

Plurality voting is a perfectly acceptable voting method whenever voters are choosing between only two candidates (or nominees). As soon as there are three or more options, the method breaks down.

When there are two (or more) artistically similar candidates that split the votes of their supporters, a minority candidate can win. Split voting may well have had a decisive impact a number of times in Academy voting, with the most famous, or infamous incident occurring in 1950. That year, both Bette Davis and Anne Baxter received Best Actress nominations for *All About Eve*. When Judy Holliday became the surprise winner in *Born Yesterday*, it was widely believed that Davis and Baxter had split the vote.

Vote splitting is a special case of the more general problem voting science has demonstrated with plurality voting: it is prone to selecting something other than the true favorite or "majority winner" of a group of voters. A majority winner is the candidate who would defeat all others in a series of one-on-one match-ups.

Following are two of many examples in which the Best Picture winner selected was probably not the majority winner.

In 1976, the five nominees for Best Picture were *Rocky*, *All the President's Men*, *Bound for Glory*, *Network*, and *Taxi Driver*. *Rocky* was the winner.

Certainly **Rocky** was a good movie, but if it had been matched only with **Taxi Driver** would it have won? Most movie buffs would probably say no. **Network** would arguably have won a head-to-head match-up with **Rocky** as well.

The winner in 1979 was *Kramer v. Kramer*. The other nominees were *All That Jazz*, *Apocalypse Now*, *Breaking Away*, and *Norma Rae*. *Apocalypse Now* is generally considered a great movie; it is hard to imagine that Academy voters would have favored *Kramer v. Kramer* over it in a direct comparison.

Since mathematicians first demonstrated the defects of plurality voting in the late 18th century, many theorists have contributed to what became the discipline of voting science. Better alternatives to plurality voting have been proposed and analyzed. One of the best is known as approval voting. Approval voting allows a voter to choose more than one candidate (or nominee) in a given race. All of the votes cast are totaled. Whichever selection gets the most votes wins. Approval voting eliminates the split-vote problem and almost always selects the majority winner -- the true favorite. If AMPAS were using it, the winners in the various categories would have a more legitimate claim to the title of "best".

Approval voting is currently used by eight professional engineering and scientific organizations. The largest of these, the Institute of Electrical and Electronics Engineers (IEEE), has around 400,000 members worldwide. AMPAS should become the ninth. Until it does, there will be no way of knowing whether the Oscar® winners reflect the artistic judgment of the Academy voters or the vagaries of a seriously flawed voting method.

[700 words]

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