

## Negative response to an excessive bias by a mixed population of voters

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We study an outcome of a vote in a population of voters exposed to an externally applied bias in favour of one of two potential candidates. The population consists of ordinary individuals, that are in majority and tend to align their opinion with the external bias, and some number of contrarians individuals who are always hostile to the bias but are not in a conflict with ordinary voters. The voters interact among themselves, all with all, trying to find an opinion reached by the community as a whole. We demonstrate that for a sufficiently weak external bias, the opinion of ordinary individuals is always decisive and the outcome of the vote is in favour of the preferential candidate. On the contrary, for an excessively strong bias, the contrarians dominate in the population's opinion, producing overall a negative response to the imposed bias. We also show that for sufficiently strong interactions within the community, either of two subgroups can abruptly change an opinion of the other group.