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The q-voter model with nonconformity in freely forming groups: does the size distribution matters?

We study a q-voter model with stochastic driving on a complete graph with q being a random variable described by probability density function P(q), instead of a constant value. We investigate two types of P(q): (1) artificial with the fixed expected value < q >, but a changing variance and (2) empirical of freely forming groups in informal places. We investigate also two types of stochasticity that can be interpreted as different kinds of nonconformity (anticonformity or independence) to answer the question about differences observed at the macroscopic level between these two types of nonconformity in real social systems. Moreover, we ask the question if the behavior of a system depends on the average value of the group size q or rather on probability distribution function P(q).

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