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Abstract

In this paper, we discuss a voting model by considering three different kinds of networks: a random graph, the Barabási-Albert(BA) model, and a fitness model. A voting model represents the way in which public perceptions are conveyed to voters. Our voting model is constructed by using two types of voters—herders and independents—and two candidates. Independents conduct voting based on their fundamental values; on the other hand, herders base their voting on the number of previous votes. Hence, herders vote for the majority candidates and obtain information relating to previous votes from their networks. We discuss the difference between the phases on which the networks depend. Two kinds of phase transitions, an information cascade transition and a super-normal transition, were identified. The first of these is a transition between a state in which most voters make the correct choices and a state in which most of them are wrong. The second is a

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