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Social pressure in opinion dynamics. (English) Zbl 1442.91076
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Motivated by privacy and security concerns in online social networks, the authors studied the role of social pressure in opinion dynamics. These are dynamics, introduced in economics and sociology literature, that model the formation of opinions in a social network. The authors enriched some of the most classical opinion dynamics, by introducing the pressure, increasing with time, to reach an agreement. They also proved that for clique social networks, the dynamics always converges to consensus if the social pressure is high enough. Moreover, they provided bounds on the speed of convergence. They finally characterized the graphs for which consensus is guaranteed, and made some considerations on the computational complexity of checking whether a graph satisfies such a condition.

They introduced several important results in this paper. Some of the results are given below.

Theorem 1. If G is a clique, $S = B = \{0, 1\}$, and $\rho^* > M$, then, for every \mathbf{x} , $\mathbf{E}_x[\tau] \leq n^3 + k^*$, where $k^* = \min\{k \mid \rho^{(k)} > M\}$.

Theorem 2. A connected graph G is well-partitioned if and only if G has a non-singleton locally minimal cut of a graph $G = (V, E)$.

Moreover, their case study on Brexit was able to attract more value to support their theories. This paper will surely enrich the area opinion dynamics of social networks.

Reviewer: [Santanu Acharjee \(Golaghat\)](#)

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