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Title:	Spread of In uence Across Disconnected Communities
Authors:	Khattri, Arushi (/jspui/browse?type=author&value=Khattri%2C+Arushi)
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Abstract:	In social networks, communities are defined by a group of highly intra-connected and sparsely inter-connected nodes in a network. Detecting Communities, dynamics of its formation and and understanding its relevance in social network analysis has been of great interest across several disciplines such as sociology, mathematics, computer science, physics and Epidemiology. The current thesis is an attempt to understand distances between communities and use the results thus obtained in analysing the reservation system that is prevalent in India from the past 7 decades. We model the the problem in network theory terms and study the distinct community formation that takes place in the Indian society based on caste-based homophily. Reservation system has been in practice since the independence and instead of social upliftment this system is believed to have caused a social disparity amongst the socially forward and the socially backward classes. We model the reservation system and show that it has played an important role in reducing the distance between the uplifted and the downtrodden, hence drawing a bridge between the disconnected classes. We define the term spread of in uence in terms of the average shortest path and study the changes in the average shortest path when bridges are added between the clusters. We present our results empirically and make an attempt to give a theoretical explanation for it. xi
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