

Altruism in Local and Global Network Topologies: A Game Theoretic Study of Resource Allocation in Social Networks

Rupei Xu

Department of Industrial and Systems Engineering,

University of Minnesota--Twin Cities

Minneapolis, MN, 55414, USA

xuxxx852@umn.edu

Abstract

The assumption that players are all rational and self-interested has dominated the Game Theory and Economics for centuries. However, there is a lot of altruistic phenomenon in daily life. How to understand the altruism? This paper gives a bridge of selfish and altruistic types of players and uses the resource allocation game in social networks to explain the relationship between altruism and local and global network structures.

Key words: Resource Allocation, Altruism, Social Networks, Network Topology