Complex (anti)-social networks: Ethnic conflicts and human rights violations

Kiran Sharma and Anirban Chakraborti
School of Computational and Integrative Sciences,
Jawaharlal Nehru University, New Delhi-110067, India
Email: kiransharma1187@gmail.com
(In collaboration with TCS research lab)

Abstract:

"Everyone has the right to life, liberty and security of person."
                                    -- Universal Declaration of Human Rights (1948).

Ethnic conflicts and human rights violations are among the major threats to international peace and security. Ethnicity is often an inherited status based on the society in which one lives, which often becomes a major issue for conflicts. To violate the human rights is to deny individuals their fundamental moral entitlements, which include torture, slavery, rape, etc. Yet violations continue to thrive in almost every society of the modern world.

Socio-physicists have been analyzing and studying the gigantic amount of data associated with human social conditions and behavior, using multidisciplinary tools and approaches. In this study [1], we used the GDELT database, which comprises news reports from media containing records of a wide range of socio-economic and political events in time. We extracted and filtered the relevant events to construct the networks of ethnic conflicts and human rights violations. Complex network analyses of the events and the involved actors provide important insights on the engaging actors, groups, establishments and sometimes nations, pointing at their long range effect over space and time. We found power law decays in distributions of actor mentions, co-actor mentions and degrees and dominance of influential actors and groups. Most influential actors or groups form a giant connected component which grows in time, and is expected to encompass all actors globally in the long run. We demonstrated how targeted removal of actors may help stop spreading unruly events. We studied the cause-effect relation between types of events, and our quantitative analysis confirmed that ethnic conflicts lead to human rights violations, while the converse was not true.

In this talk, we will present all these recent findings and further discuss the influence of possible correlated socio-economic factors or how they may be associated with such anti-social phenomena. The findings and results may assist experts and decision makers on forming public policies and designing effective means of controlling. International security agencies, etc. may also benefit in contending anti-social events such as conflicts, riots, terrorism, etc.

Reference:
[1] K. Sharma, G. Sehgal, B. Gupta, G. Sharma, A. Chatterjee, A. Chakraborti and G. Shroff, "A complex network analysis of ethnic conflicts and human rights violations", *SCIENTIFIC REPORTS* **7**: 8283 (2017). (http://rdcu.be/u0LJ)