Social Influence and Social Media

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It is generally well accepted that your position in the social network affects your ability to get information. However, we often overlook the fact that you can also use your position to impact what information others receive. In this tutorial, these ideas are brought together to ask, how do the network positions of those with whom you interact, influence you? This issue is explored using high dimensional network data. The basic principles are illustrated using health data and then the way bots in Twitter manipulate networks by applying those principles are shown. In general we find that heedful network coordination among alters can effect better outcomes for ego. However, in social media, heedful network manipulation by alters can create communities of ignorance. Technologies and procedures for assessing social influence are demonstrated and follow along processes are used to explore social influence. Illustrative data from real and twitter networks are shown. Sample Twitter data is provided.

Description: A lecture, discussion, and limited hands-on workshop in which attendees learn about social influence modeling, super-spreaders, super-friends, echo-chambers and social influence bots. The procedure for assessing social influence in the ORA toolkit is explored. Attendees will learn how to recognize social influence bots, and assess data for influence. Attention will be focused on heterogeneous dense graphs, and metrics for identification of super-spreaders, super-friends, echo chambers, and assessing the impact of social-influence bots.

This session begins with a theoretical overview and a discussion of the basic influence processes. Then it will move to illustrations of the impact of these processes in off-line health care coordination (autism and end-of-life care) and then in Twitter (ISIS, Alt-Right, EuroMaidan). Then the procedure for assessing these networks in social media will be discussed and walked through. Data for those who have a PC and the right tools can follow along. Finally, the link to fake news will be shown.

Who Should Attend? Those who are interested in assessing social media data, and understanding the social influence process. Those interested in assessing the spread of fake news. The material and its delivery is suitable for researchers and practitioners, alike. This is designed to be a non-technical workshop, however, by its very nature, the material will involve some mathematics, although this will be minimized as the delivery is driven towards forming an understanding of the concepts, not mastery of the details.

Topics Include:

- Social Network Analysis
- Multi-mode, multi-link, high dimensional network metrics
- Analyzing Twitter data
- Echo Chambers
- Social Influence Model
- Super-Spreaders
- Super-Friends
- Social Influence Bots
- ORA software
    - Twitter import, Twitter Report

Computer Equipment:

The free version of ORA is only available for the windows operating system. The student version of ORA can be downloaded from here: http://www.casos.cs.cmu.edu/projects/ora/ . The professional version of ORA and the mac version are available here: http://netanomics.com/ora-pro/ . Participants should bring their own laptops to workshop if they want to do the follow along exercise. If you have a mac version, you will need to have a PC emulator. The software will be screen-projected to the group as a live walk-through demonstration. Participants will be provided with data through a web link. All participants will also be given a SBP-BRiMS 2017 discount on purchasing the professional version of ORA which is available for both MA's and PCs.

Maximum Number of Attendees: Unlimited