

Caoss Workshop Summary

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This is a brief summary of the talks in Caossnyc 2012. It provides citations to most of the works covered in the workshop.

1 Sinan Aral

Causal inference is the only way to understand peer influence. Sinan's talk was focused on how to separate causality from factors including:

- homophily (the tendency for individuals to choose friends with similar tastes and preferences, and thus for preferences to be correlated among friends)
- confounding factors (the tendency for connected individuals to be exposed to the same external stimuli)
- simultaneity (the tendency for connected individuals to co-influence each other and to behave similarly at approximately the same time)

Influence is defined as how it changes the likelihood that people are engaged in some behavior.

He presented some of his studies in different scenarios.

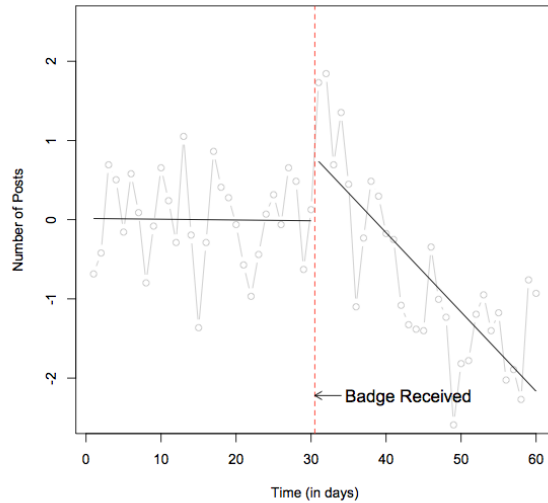
- Randomized experiment to study the influential and susceptible members. [Aral and Walker, 2012]
- Diversity-bandwidth tradeoff: weak ties lead to novel information, but are typically lower bandwidth channels. [Aral and Van Alstyne, 2011]
- The classic sales skill of knowing what a customer needs to hear can significantly enhance the influence of qualitative information precisely because what the consumer already knows affects how they evaluate messages. (the effects of Jim Crammer) [Aral et al., 2011]

2 David Jensen

David mainly talks about inferring causality from observational data. The key idea is to infer bayes networks which finds the independence or relation between different variables. We can eliminate possible relations in this way.

Causal discovery

- Causal inference, [Pearl, 2009]



- Causal discovery, [Glymour, 1987]
- Quasi-experiment design, [Shadish et al., 2002]

An interesting plot about activities of getting badges on stackoverflow is interesting. What is especially interesting is an initial increase followed by the predicted decrease <http://xkcd.com/418/>.

3 Jure Leskovec

Most of the works discussed are what I have known. So I just list the citations here.

- [Anderson et al., 2012]
- [Leskovec et al., 2010a]
- [Leskovec et al., 2010b]

4 Short talks

- A caution against convenient data: assessing bias in psychological studies of online data

Seth Flaxman

Be careful about sampling bias

- An internet experiment on bargaining in networks

Yashodhan Kanoria

Strong or weak positions in networks, not reflected in experiments

- Giving cascades in crowd-funded marketplaces

Rem Koning & Jacob Model

DonorsChoose.org seems to be an interesting data source

- Testing Behavioural Economics in the Wild with online and eCom-
merce Data

Debajyoti Ray

talks about disentangling ("irrational") loss aversion from ("rational")
stockpiling in a field experiment

- Improving Spatial Models of Political Ideology by Incorporating Social
Network Data

John Myles White

uses twitter network to help align senate and house opinions

- The Groupon Effect on Yelp Ratings: A Root Cause Analysis

Georgios Zervas

yelp rating falls after groupon sales

5 David Reiley

It is available online. <http://www.idei.fr/doc/conf/iast/reiley.pdf>

The key idea is also about selection bias. Those who search "online brokerage" on Google are already more likely to go to eTrade.

Harvard business review article compare those who saw an online ad with those who didn't

online display 10%

search 200%

David mainly discusses how to avoid overestimation the effectiveness of advertising, or be as honest as possible.

6 Duncan Watts

Duncan talks about the emergence of online social network and Amazon Mechanical Turk provides a great chance to do large-scale social experiments.

He discussed 5 experiments.

- searching social networks [Goel et al., 2009]
- social influence and cultural markets [Salganik and Watts, 2009]
- financial incentives and performance [Mason and Watts, 2009]

A quick conclusion from this is to pay the minimum amount that can attract turkers to work. People always expect their salary to be higher than what they are paid.

- cooperation in static networks [Suri et al., 2011]
- cooperation in dynamic networks [Wang et al., 2012]

Mason and Suri also write a guide for Amazon Mechanical Turk experiments [Mason and Suri, 2012].

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