Cooperative Networks in Interorganizational Settings: Analyzing Cyber-Collective Action

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- Project website: http://oca.lab.asu.edu/
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INTRODUCTION

- Social/Political Movements in news:
  - Arab Spring, Occupy protests
  - Saudi Arabian Women movements to protest gender-biased practices (ban on driving, guardianship, etc.)
  - Worldwide movements for Sexual Harassment
- Social media: easy-to-use & ubiquitous platform
- Other forms of collective actions
  - Citizen engagement, StreetBumps App
- Proposed research:
  - Aims to understand the complexity of cyber-collective movements and methodologically track their formation.
Women To Drive Movement

- 1990 Driving Protest in Riyadh
- International Women's Day March 2008
- Women to Drive June 2011

- 1990
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012

- Saudi Arabian Women Campaign September 2007
- We the Women April-May 2009
- My Right to Dignity June 2012

We have just sent him a letter signed by us...

Driving is not against my religion!
Sexual Harassment Movement

- ‘Women to Drive’ is predominantly organized by Saudi women opposed to the driving ban for women in Saudi Arabia.
- ‘Sexual Harassment’ is global in nature demonstrating the universality of this crime against women.
- These forms of collective action are not isolated events.
- There are shared goals of collective awareness and aspirations of addressing gender inequality promoting women's rights.

- Although the ‘Women to Drive’ collective action is specific to Saudi Arabia's gender-biased laws, there is evidence of global support.
- The transnational support for the ‘Women to Drive’ and the inherent global nature of sexual harassment both offer the opportunity to study the nature of cooperation between these networks.
Research Questions

- Campaigns → role of social media in facilitating cyber-collective actions.
- Decentralized individual sentiment ↔ social media network → collective sentiment & collective action
- ECIS’11, BISE (54:3)’12, SBP’13
- The overarching questions are:
  - How does online collective action evolve across multiple networks?
  - What is the role of cooperative networks in online collective action?
Collective action is defined as an action aiming to improve the groups' conditions (such as status or power). The action benefits multiple members of the group but has an associated cost which is impossible for a single member to undertake. Hence, the action is undertaken collectively to share the cost.

Perspectives on collective action:
- Social movements
- Membership in interest groups
- The operation of the international alliances
- Establishment of electronic communities
- Formation of inter-organizational relationships
- Formation of standards-setting organizations
- Bidding behaviors
Literature Review: Social Network Analysis (SNA)

- Social networks: networks of individuals, organizations.
- SNA provides a set of methods geared towards an analysis of social structures and investigation of their relational aspects.
Literature Review: Interorganizational Cooperation

- Blogs as social systems, i.e. systematic ensembles of interdependent, inter-human activities attempting to achieve joint objectives by coordinating joint efforts (Wigand 1979)
- Blogs as emerging organizations - evolutionary formations that emerge, exist, and adapt for the realization of their common goals.
- Effective interorganizational cooperation and coalition formation (Aldrich 1979)
  - Information
  - Resources
- Blogging environment facilitates information exchange, coalition formation, mutual support, and cooperation between the two networks.
Methodology

- Development of transnational online collective action through the broad perspective of interorganizational cooperation.
- Study interaction between two networks to understand cooperation and support dynamics.
- Research methodology
  - Collect data for the women’s rights movements,
  - Preprocess and filter noise,
  - Perform blogger classification,
  - Construct networks for the movements and visualize,
  - Identify interaction between the networks of the movements, and
  - Analyze sentiments expressed in the interactions to understand support/cooperation.
Methodology – Cont.
Data Collection

- 23 countries, 297 blog sites, over 100K posts and growing
- Time period: 2005 onwards
- Indexed in database
Data Preprocessing

Web Content Extractor
Data Preprocessing

- Blog Crawling with Web Content Extractor
  - CSV, TXT, HTML, XML, ODBC data source
  - Title, post content, timestamp, comments, category/tags (system-defined/user-defined)
  - MySQL
Blogger Classification

- Keywords for “Women to Drive” and “Sexual Harassment” used to classify bloggers
  - ‘women’, ‘drive’, ‘women to drive’, etc.
  - ‘sexual harassment’, ‘sexual abuse’, etc.

![Website Distribution](image1)

![Blog Entries of Common Websites](image2)
Network Construction

Network of bloggers for ‘Women to Drive’ and ‘Sexual Harassment’ online collective actions

Visualized using Gephi
Cooperative Network

Focused on bloggers belonging to both ‘Women To Drive’ and ‘Sexual Harassment’ network classifications

Interactions in the cooperative network between the members common to both collective actions within the larger blogger network
Sentiment Analysis

- Sentiment Analysis with Linguistic Inquiry and Word Count (LIWC.net)
  - Efficient and effective
  - Focused at affective processes under psychological processes.
    - 406 positive emotion words
    - 499 negative emotion words
Sentiment Analysis (contd.)

Distribution of positive and negative emotions for the interactions observed in the cooperative network

Serenity’s comment on Monaeltawahy’s entry: “Thank you so much for writing this, Mona! Thank you for speaking up for those of us who are too cowardly to do so (at least yet!), Mona! God bless you and give you more courage and strength!”

GTFrenzy’s comment on OrganicMuslimah’s entry: “Just read it and I love it! I couldn’t agree with you more….”

Mezba’s comment on OrganicMuslimah’s entry: “I fully agree. I say leave the judgement to God…”

Marahm’s comment on Hala: “Good question, Hala, and good answer”

Gazelledusahara’s comment on OrganicMuslimah: “I am in Egypt in now and my classmates and I can totally relate to Everything that you wrote about”

Laylah’s comment on Saudiwoman: “I linked your post to my blog, thanks for the translation ☺️”
Conclusion

- We examined how distinct but related collective actions expand and diffuse beyond national boundaries.
- We studied the role of cooperative networks between online collective actions and found that individual opinions evolve and find traction in the interconnected networks.
- We discovered brokering and bridging processes between the two online collective actions where a set of bloggers acted as brokers bridging two overlapping networks, facilitating the diffusion of information, and, further, becoming liaisons between two different communities.
Future Directions

- Transformation of individual identity to collective identity through cooperative networks
- More rigorous analysis of the network from information diffusion and sentiment propagation perspective
- Cross cultural implications on the proposed methodology, how collective action evolves across multiple cultures.
THANK YOU!

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And They Say “Women” Cannot Drive!

Okay! So I have been in some ridiculous car accidents (one was pretty serious though), all of which with men of different nationalities.... and at the end its always their fault (except for the case against the unidentified -- could have been a woman this time), why the generalization, that women cannot drive!

1. Jawazat Roundabout in Salmiya. I was in the middle lane looking into taking the second exit... and keep in mind I was using signals. A Kuwaiti man, my dad’s age, decides to take the first exit from the left lane, takes a sharp turn and hit the corner and back of the car I was driving. He gets out and blame me... tell me its my fault. The end result, HIS fault!

2. I am waiting to pick up my friend from college, so I am parked (YES ON “P”) outside at the door, when an Egyptian man who wasn’t looking straight drove to my door and hit my car pretty bad! It was fast, I tried honking, but there was no use! He was going on a speed that I couldn’t avoid, and I am happy I came out of it in one piece... just keep in mind that if I wasn’t parked, he would have hit the college’s wall!

3. I park my car in the parking lot, go to work... finish at 4:00pm, head back to my car to find it and the car parked next to it damaged from the back. The security

Mathai | December 29, 2009 at 9:21 PM | Reply
what a coincidence! I posted about women drivers earlier this evening and if you read a couple of my experiences you’ll understand a man’s view point 😚

ansam518 | December 30, 2009 at 8:59 AM |
Why dont you leave a link to your post so that I can click on your name here... easier 😊

How about my experiences?!!