Seeing Ourselves among Others

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Abstract
In this work, we present the social data analysis of group interaction as a tool to influence behavior. People are curious about other people and how they compare. By selecting and visualizing a live data stream meaningful to a community, the community becomes more insightful and aware of itself. Individuals and the community at large adapt and change accordingly. We present our own work and other examples to motivate the further study of this introspective social data analysis.

Motivation
People are innately curious about other people. To know more about others we watch others, watch television, chat, gossip, read, blog, post, and more. However, we are not just interested in others. We want to see how we fit in. We want to know how our own interaction compares to others [4][10].

Social Networks, such as Facebook, and instant messaging systems allow us to explicitly relate our actions. We do this by setting away messages, status messages, making profiles, and connecting to groups. Individually, these actions share information about individuals. Combined properly, they allow us to compare our own actions to the traces of others [5].

Realtime Persistence

Interaction is growing increasingly persistent and less ephemeral, especially in the online world. Most interactions are logged, and some are made public. Facebook has capitalized on this combination of realtime persistence and innate curiosity with it's Mini-Feed [6]. Individuals can keep a voyeuristic eye on the happenings of their friends and acquaintances. Potentially, this knowledge encourages interaction and discourse elsewhere on the Facebook site as well as continued use. By selecting and showing a live data stream meaningful to this community of users, the community becomes more aware of itself and others.

Conversation Clock and Conversation Votes

Our own previous work with the Conversation Clock and Conversation Votes has provided insight into the examination of social data [1][2]. Though neither were analyzed online, they illustrate how self-curiosity translates into alterations in group interaction. Each of these visualizations are based in collocated group conversation. The visualizations provide realtime interaction feedback and reflecting past and present group dynamics. Participants in conversation can see indications of dominance, turn-taking, interruption, silence, agreement, mimicry, conversation flow, and other cues. With this information about themselves, participants were found to alter their interaction to improve their appearance in the "social mirror," our visualizations. Participants who felt they spoke too much would back off, while participants who tended toward silence would speak up.

Participants stressed their interest in themselves and how they fit in with the conversation. They sought to change their own interaction in order to strive for a

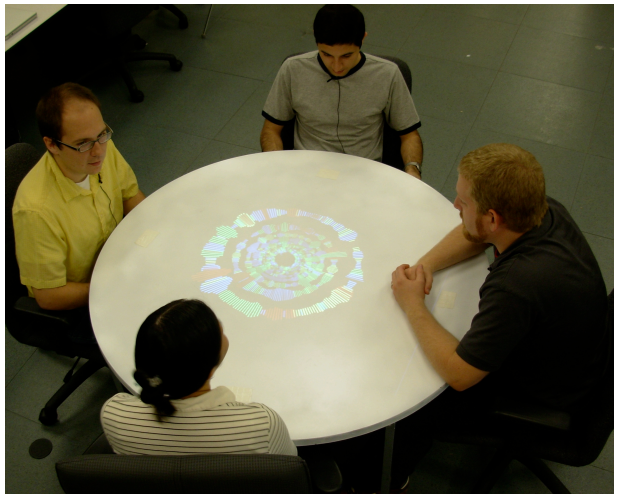
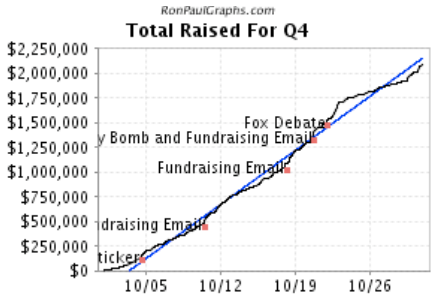
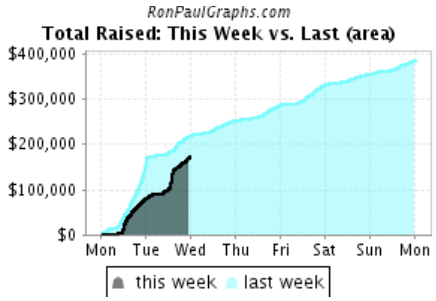
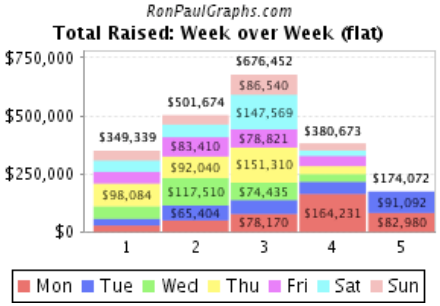


figure 1. Conversation Clock (above) and Conversation Votes (below) influence conversation by encouraging lightweight social analysis in real time.







These are examples of graphs generated to monitor the Ron Paul campaign's donations. Created and used by the community and not the campaign, this graphs showed progress made toward fundraising goals.

more 'ideal' balanced conversation.

Conversation Votes expanded upon Conversation Clock by allowing anonymous agreement and disagreement in the visualization [2]. Thus as a person speaks, the visualization reflects how the listeners feel about the points being made. By contributing this feedback, listeners affect the perception of conversation for everyone at the table.

This interface was evaluated in a more confrontational setting, free debate on political topics. Participants reported explicitly checking the table after a point was made, to see how receptive the group overall. Indications of agreement could encourage speakers to speak more, knowing their contributions are valued or that they are winning people to their side.

These two visualizations demonstrate social analysis of social behavior influences the perception of oneself and others. However, when dealing with larger groups of people, do we get the same introspection?

In Politics

Larger communities can see the same types of influence when communally analyzing their actions.

The recent presidential campaigning efforts of Ron Paul illustrates the use and benefit of live feedback in donating. This campaign released live information about their fundraising online, via their website along with fundraising goals [7]. Specifically, they showed the current total and names of recent donors. Posts in related forums indicate greater excitement and contribution due to the live feedback.

One member went so far as to log all updates from the feedback and present it on his own website [8]. This site provided a visual history of contribution to the campaign. As the campaign set loftier goals, this website allowed individuals to better grasp the progress being made. The live feedback encouraged members to organize money bombs, coordinated simultaneous contributions, to aid the campaign. These graphs allowed the community to keep tabs on how well the campaign was resonating with new voters and how well the campaign was growing.

Another example in politics, pollster Frank Luntz incorporated his analysis techniques into republican and democratic primary debates [3][9]. Luntz separated a small focus group and gave them meters to gauge their emotion. Similar to Conversation Votes, members of the group could indicate their approval or disapproval at any moment. The feedback was aggregated into a graph of approval over time. The graph was show in-synch with the internet stream of the debates, influencing viewers of the debate (it is unclear whether the focus group could see their own input).

Though we cannot measure the effectiveness of Luntz's feedback on potential voters, it does highlight some questions about the community viewing visualized data streams. The data presented offered insight into what others are thinking, but who are the others, why should you trust them, is their opinion meaningful to you the viewer. In this case, the focus group was selected rather than preexisting. Potentially, this audience can be large enough to incorporate all viewers. Is this more beneficial or less beneficial than analyzing with a group more familiar to one's own interests?

Conclusion

It's not a question of whether people are interested in others, that is established. Social analysis of social data is about seeking out group norms. Correctly visualized, this data allows an individual to compare and contrast their own actions against a larger pool and make a group more aware of themselves. Studying the effects of many on the one and the group is a direction we should all look as more of our lives become public. As anyone will be able to see our actions, either individually or in aggregate, we can exert influence on others with traces of action.

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