A Case Study of Blog Comments in a National Crisis

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Abstract
We present an analysis of a comment network in the Kuwaiti blogging community during the two weeks in January 2006 surrounding the death of Kuwait's Emir Sheikh Jaber Al-Ahmed Al-Sabah. We find a rise in commenting activity corresponding to this event, and use a tag cloud to visualize and analyze this topic and others in the blog posts being commented on. We also present an analysis of the Kuwait Blogs comment network during this succession crisis.

Keywords
blogs, social networks, information visualization

1. Introduction
Kuwait Blogs is a small tight-knit community of bloggers mostly based out of Kuwait. A central website and blog (http://www.kuwaitblogs.com/) unites the community, citing news and events related to the community and aggregating and listing member blogs. At the time of our study, there were 151 active blogs listed on the site.

Most of the bloggers are Kuwaiti nationals living in Kuwait, and their blogs tend to be personal in nature. The bloggers write about their day-to-day lives and at times discuss more critical issues impacting their nation. The bloggers have also formed friendships with one another, reading and commenting on each others' blogs. The community holds meet-ups on a monthly basis, where members meet each other face-to-face. In the relatively conservative nation of Kuwait, the bloggers' free expression of their emotions and opinions is unusual. As such, many of the bloggers keep their identities a secret and blog using pseudonyms.

In January 2006, we studied the community as a major national crisis took place. Kuwait's ruling Emir (prince) of nearly thirty years, Sheikh Jaber Al-Ahmed Al-Sabah, passed away on January 15, 2006 [1]. The Emir's death was a major political and historical event in the country. Along with being credited as the father of modern Kuwait, the late Emir had been symbolized as a father-like figure. For many Kuwaitis and expatriates in their twenties and thirties, Emir Jaber was the only ruler they had ever known. Along with shock and grief, the Emir's death brought

about a succession crisis [2]. The crown prince, Sheikh Saad Al-Abdullah Al-Salim Al-Sabah, automatically became the Emir but was only in power for ten days due to being extremely ill [2]. There were sharp divisions among members of the royal family and the Kuwaiti Parliament about who would rule the country [2].

2. Impact of Emir's death on blog content
During the two-week period surrounding the Emir's death, we analyzed the content of blog posts written by the community. Omitting inactive blogs and those that did not allow comments, we studied 468 blog posts from 89 blogs. To understand the impact that the Emir's death had on the Kuwaiti bloggers, we tagged each blog post left during this period with a one or two-word descriptor. As illustrated in Figure 1, we then visualized these descriptors (known as tags) using a tag cloud, a list that displays tags in differing sizes, where the size of the tag indicates its popularity [3]. The cloud reveals a number of themes prevalent in the blog posts during this time period. Along with their initial grief and shock, Kuwaitis were concerned about who would succeed the late Emir and the stability of the new government. Moreover, certain events that were unlikely to receive mass media coverage were highlighted in depth in the Kuwaiti blogosphere. For instance, following the Emir's death, a campaign of text messages of a political nature (spreading rumors about the late Emir, the royal family, and the stability of the Kuwaiti government) swept Kuwait's cell phones. This phenomenon was documented in the Kuwaiti blogosphere.

Another event that drew a response from the community was when, for several days, customers of a Kuwaiti Internet service provider were unable to reach the entire Blogspot domain, where most of the Kuwait Blogs are hosted. The Kuwaiti bloggers immediately assumed that their blogs were being banned due to their political posts. The ISP claimed that the issue was a technical glitch, yet many bloggers continued to believe that their blogs were banned due to political reasons. Regardless of the cause of the ban/technical glitch, bloggers who did not host their blogs at Blogspot posted links to free proxy servers so that the Kuwaiti bloggers could still access the rest of their blogosphere.

In making sense of the turbulent events during those weeks, the Kuwaiti bloggers used their blogs to share their opinions and feelings with one another and to document moments in the nation's social memory that were not documented elsewhere in the media.

Fig. 1: *Tag cloud of blog post coding*

3. Blog comments network

Along with analyzing the content of the blog posts, we also examined the 3943 comments left on 486 blog posts from 89 Kuwait blogs during the same two week period in January 2006. Some posts attracted many comments while a great number prompted no comments at all: the mean number of comments per blog post is 8.425, the median is 6, and the mode is 0. Not surprisingly, the greatest number of comments in the dataset was left on the day of the Emir's death (575 comments).

As we examine the interactions in the comments network, we observe several central hubs receiving the majority of the blog comments in the network and a few of the bloggers in the community posting a disproportionate number of comments. The bloggers who left the most comments, however, were not always the most central in terms of the number of comments they receive (see Figure 2). Overall, there is a moderate correlation between the number of blogs within the community that a blog receives comments from and the number of blogs that they themselves leave comments on (Pearson's $\rho = 0.44$, $p<0.0001$). A fair fraction of the ties are reciprocal: if blogger A commented on B's blog, in 43% of the cases B also commented on A's blog. But a blogger need not comment on others' blogs to engage in conversation. In fact, the number of comments a blog receives from others is much more highly correlated with the number of times the blogger posts comments on their own blog ($\rho = 0.62$, $p<10\text{-}9$), than it is with the number of comments they post on others' blogs ($\rho = 0.32$, $p<0.01$). This indicates that posts that attract many comments do not do so merely on the virtues of the post itself. It is also to some extent the blogger's tendency to engage those posting comments on their blog in conversation that appears to encourage commenting activity.

4. Conclusion and future work

We analyzed the posting and commenting patterns of the Kuwait blogs community during a politically charged time. A tag cloud analysis showed that the bloggers were consumed by the political situation in their country and were able to document events not covered by the mainstream media. A network visualization revealed much dense interaction through commenting. In future work we would like study to flow of conversation across different blogs through comments and trackbacks.

(a)

(b)

Fig. 2: *The network of comments in Kuwait blogs. Nodes are sized by (a) how many people commented on their posts and (b) how many posts they left comments on*

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