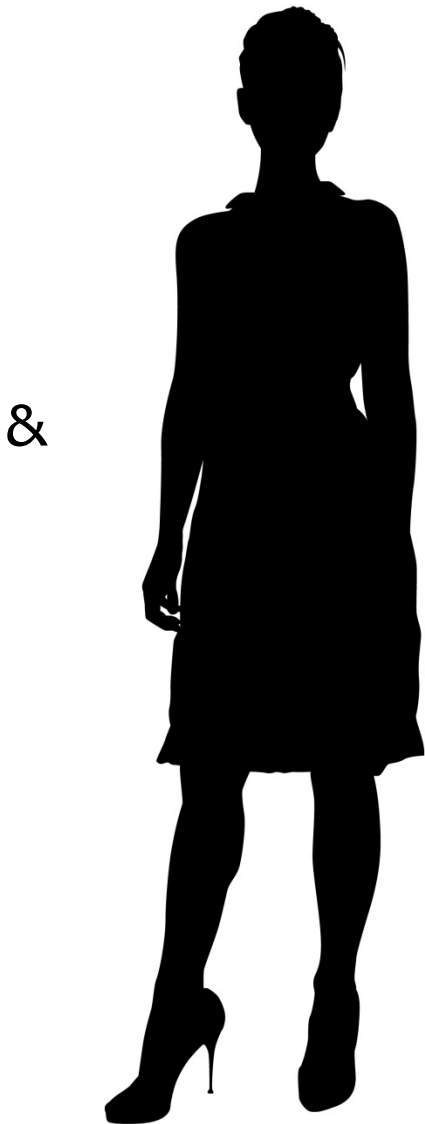


The State of Glo's Social Networks: A Multi-Network Analysis



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INTRODUCTION

This essay presents an analysis and comparison of the Facebook and Twitter networks of the beauty and fashion site Glo (glo.msn.com). In what follows, we examine the state of each network via network graphing analysis, noting similarities and differences in the way they function, and recommend strategies for Glo going forward based on our investigations.

BACKGROUND

Launched nearly two years ago, Glo is a beauty and fashion site published by MSN and HB, LLC, a joint partnership between the production company Berman Braun and Hearst Magazines.

As a partner-published site with 60-70% original content, Glo is an anomaly among the MSN properties, most of which feature a mix of syndicated content and are published on the MSN platform. Glo is also allowed greater leeway in site design and branding than other MSN sites. It is highly visual, with large, high-quality images of celebrities and models and more "white space" than most MSN sites. The end result is a site that skews more savvy and fashion-forward than the MSN portal as a whole. As a percentage of monthly traffic, the portion of Glo's audience that accesses the site through a bookmarked url or by typing the site name into a browser, as opposed to through a link on the MSN home page, is two to three times that of comparable channels within the MSN portfolio.

That said, Glo's primary method of distribution is through links on the MSN home page (msn.com). One of Glo's key reasons for maintaining social networks through Facebook and Twitter is to reduce dependence on the portal. By directing users back to the site, social networks can serve as a secondary distribution method to help drive general user engagement metrics such as page views, visits, and time spent online. These networks could also be ideal places to surface niche content that, while in keeping with the Glo brand, might not get distribution on the more mass-oriented MSN home page.

METHODOLOGY

Because social networks are constantly evolving, we wanted to capture a snapshot of the most recent interactions and individuals within Glo's networks. However, we also wanted to be able to see patterns and test our assumptions.

We pulled representative data from Facebook and Twitter over a period of two weeks, from 2/28/12 – 3/13/12 (Tuesday – Tuesday). This allowed us to examine at least two of Glo's weekly publish cycles. The site refreshes daily and has several predictable weekly features that inform users' interactions with it. For instance, a new weekly horoscope is posted on Monday, and on Fridays the "Gotta Have It" product featured on the site is one that was chosen by Facebook fans earlier in the week.

We approached data collection for the two networks slightly differently. When gathering Facebook data, the Node XL plug-in allows one to see user activity on a discrete number of multiple recent posts. Thus for Facebook, we pulled data once, specifying the most recent 100 posts, and were able to see 2 months' worth of activity and content. When gathering Twitter information, however, Node XL only pulls in the most recent tweet from each user. One cannot set parameters to survey a set time period. Twitter's rate limits also make large data pulls take upwards of half a day. Both out of necessity and in order to get a true picture of how users pass information throughout the network, we pulled Twitter data at multiple times over our two-week analysis period.

Node XL is a useful tool for analyzing the behavior of agents within social networks, and for revealing the larger patterns of behavior that make up the network itself. But we also wanted to determine how useful each social network was to the larger goals of the Glo site. In order to do that, we examined another data source, Omniture. The Omniture system is implemented on the Glo site. It measures page views, visits, referrals, and other metrics that are important to ad-supported websites. We set the date parameters for our Omniture data to encompass both of the time periods covered by our Node XL data.

FACEBOOK ANALYSIS

The Facebook fan page interface is like that of a traditional blog, in that users' interactions with a post (such as likes or comments) appear in physical proximity with that post.



Figure 1, Glo Facebook Fan Page Post

Glo has over 15,000 fans on Facebook. However, becoming a fan of something on Facebook is relatively easy. Due to the low barrier to entry, a high fan count does not necessarily equal a truly engaged community. To put this in perspective, Quaker Oats has 769,951 fans as of this writing. To analyze the activity of Glo's fan page, we pulled user-post graphs, showing how users interacted with each of Glo's posts, as well as co-liker and co-commenter graphs, showing which users liked the same posts and commented on the same posts.

The user-post graphs below show us the relationships between users and content on Glo's Facebook page.

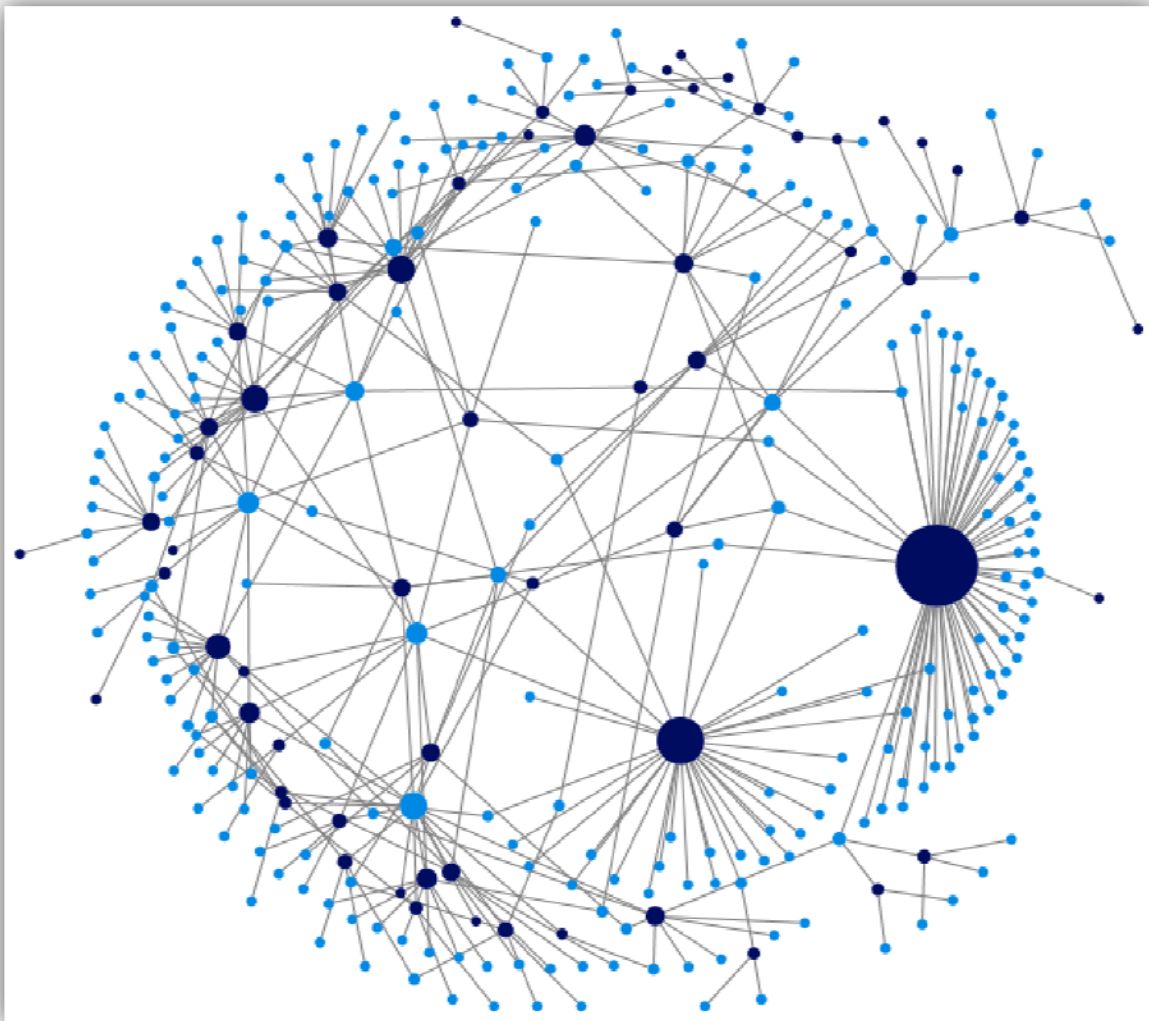


Figure 2, Facebook User-Post Engagement

Analyzing the most recent 100 posts on GloMSN's Facebook page shows that one post in particular ("Which racy lacy dress would you wear?," fig. 1) has received almost double the amount of engagement of any other within the time period. In fig. 2 above, dark blue vertices represent posts while light blue vertices represent users. The larger the disk, the larger the degree of that post or user, or the more engagement that post or user is receiving.

Other high-degree posts in descending order were, "Who wore this black-and-white dress better," a comparison of Claire Danes' and Kate Winslet's Golden Globes fashions, and two Friday product

polls, "Which rainy day activity notepad would you choose", and "smiling mug or on/off coffee cup?"

It's interesting to note that the top two posts were fashion- and celebrity-specific, and fairly female-skewed, whereas numbers three and four were not only product-oriented, but among the more gender-neutral product polls for Glo. Often the products featured are makeup or hair-specific; these were notepads and coffee cups.

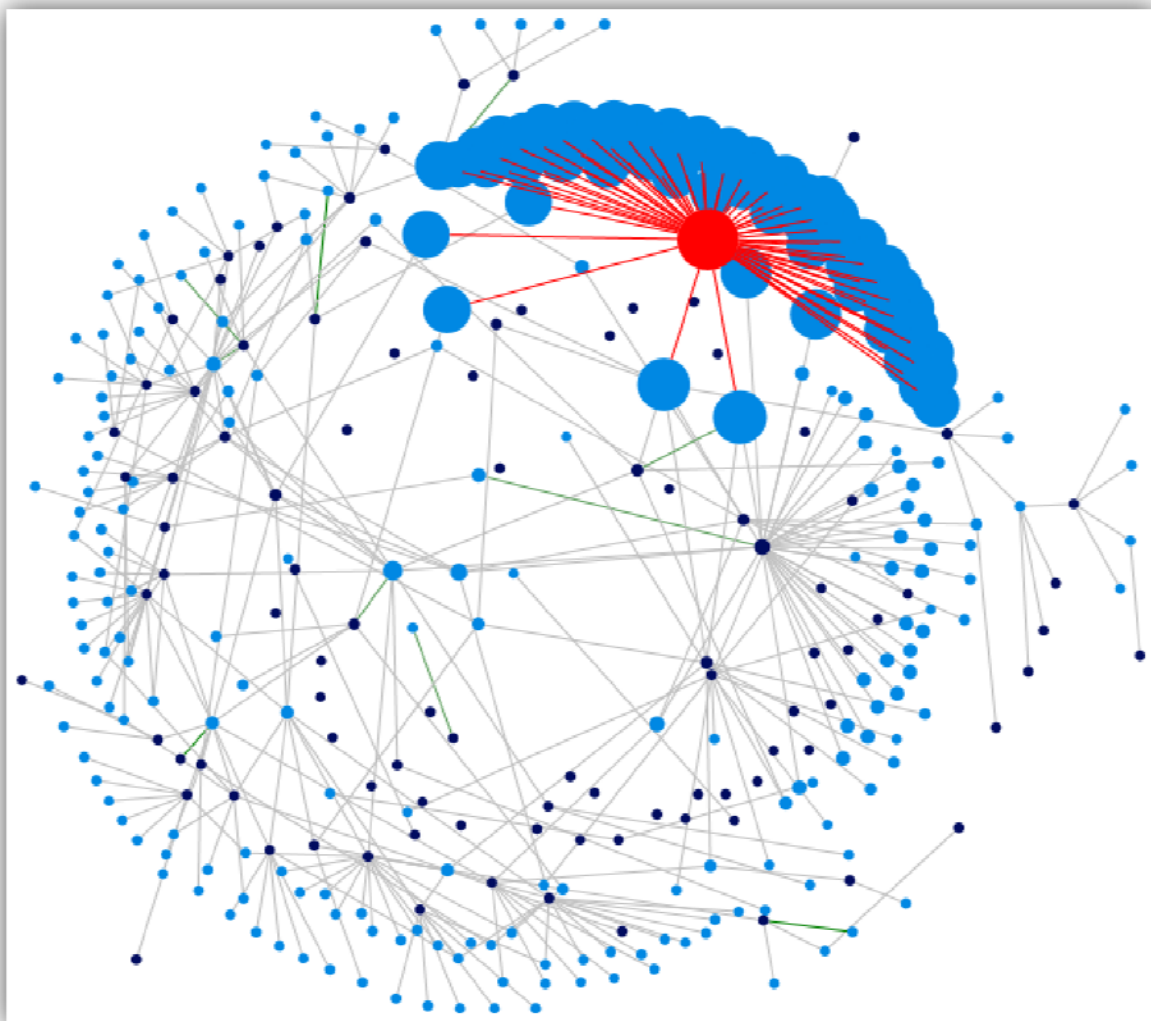


Figure 3, Facebook User-Post Attention

This graph shows the correlation between original posts and comments from users about those posts. Dark blue vertices represent posts while the light blue vertices represent users visiting GloMSN's Facebook page. The large vertices are those posts and comments garnering the most attention (Eigenvector centrality). This measure takes into account the influence of those to which the vertex is connected.

The bright red vertex in the upper right corner is the post garnering the most attention from users visiting the page. By this measure as well, "Which racy lacy dress would you wear?" is the front-runner, followed by the question about Kate and Claire's Golden Globes dresses.

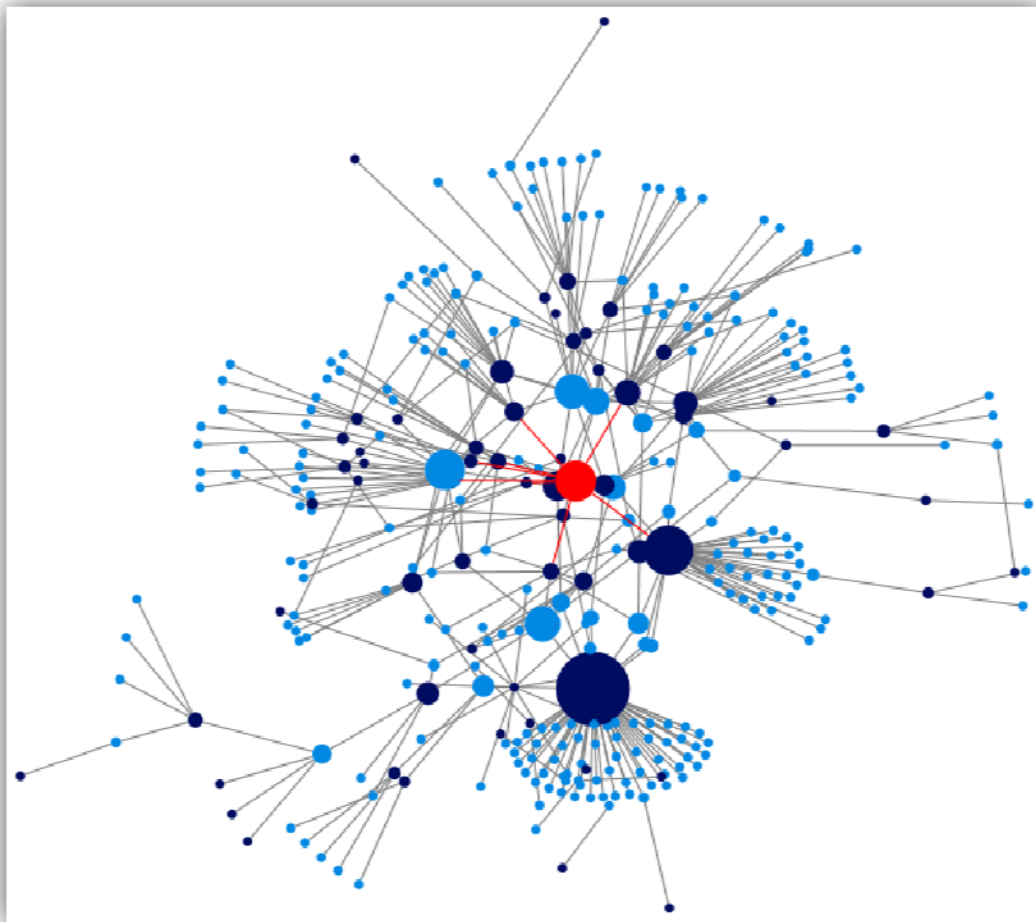


Figure 4, User-Post Bridges

However, using this measure, the posts at number three and four change from questions of notepads and coffee cups to, respectively, a poll on "which walk is most like your own?" (e.g., the Marilyn-Monroe Wiggle or the Audrey-Hepburn Ballerina) and the question, "Ladies, Ladies: What say ye to the 'man bun'... yay or nay??"

Once Eigenvector centrality is taken into account, the top posts are those meant for a female audience.

In the graph above, the dark blue vertices once again represent posts while the light blue disks represent users. By changing views to the Harel-Koren Fast Multiscale layout, we can visualize the key vertices that connect one group of post/users to another (Betweenness Centrality). Large disks represent those posts or users who act as bridges throughout the network. The bright red vertex represents Mary Alice Martinez, a user who has commented on multiple posts thereby passing information among various groups or clusters.

The other users with the highest betweenness values are Fahid Mukhtar, Maureen McDonnell, and Amber Marie Blockinger. While Glo editors do appear lower in the top ten list of users for "betweenness," it is interesting and encouraging to note that none of these top four users is directly associated with the production of the site.

In addition to the relationship between users and posts, we wanted to examine the relationship among users. To look more closely at this, we analyzed graphs on co-commenters and co-likers.

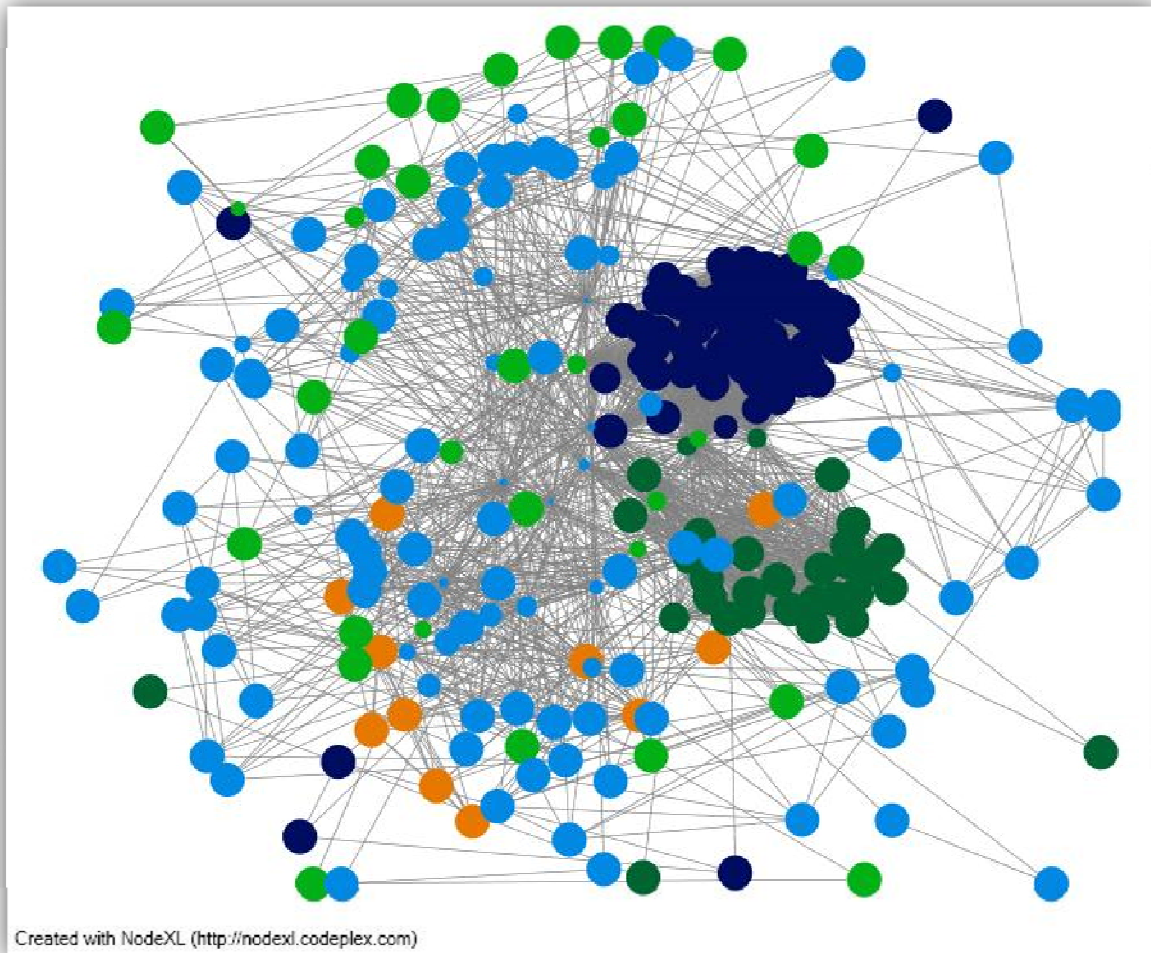


Figure 5, Co-Commenters (Clusters)

The graph above shows members who tend to comment on the same posts. The members were separated into clusters using a clustering coefficient, and each cluster was assigned a different color. We then analyzed the clusters for member affinity – i.e., did a cluster's members share qualities that might make them more comfortable commenting together – and content affinity (whether the post content dictated the clusters).

We found that G1, the tight dark blue cluster, contained the popular "lacy racy" post, a post on male tights ("mantyhose"), and a post on breaking up with your ex. No member affinity was clear. This cluster may contain infrequent commenters who only comment on popular posts.

G2, the more diffused group of light blue vertices, included at least eight Glo editors. The content was mainly centered around "Gotta Have It" product polls, though not those that had garnered the most attention. The editors' behavior, in commenting out of a sense of duty when a post did not organically succeed, may be what got them clustered together.

In G3, the tightly clustered dark green group, the content included the Kate Winslet vs. Claire Danes Golden Globes dress post. As this was another very popular post, the closeness of the clustering could be due to the users being fellow infrequent commenters.

The other group notable for its affinities was G6, the orange group. The post that united this group was a question about Friday the 13th fun facts, and four out of 10 of the commenters were male, making this the cluster that skewed the most male.

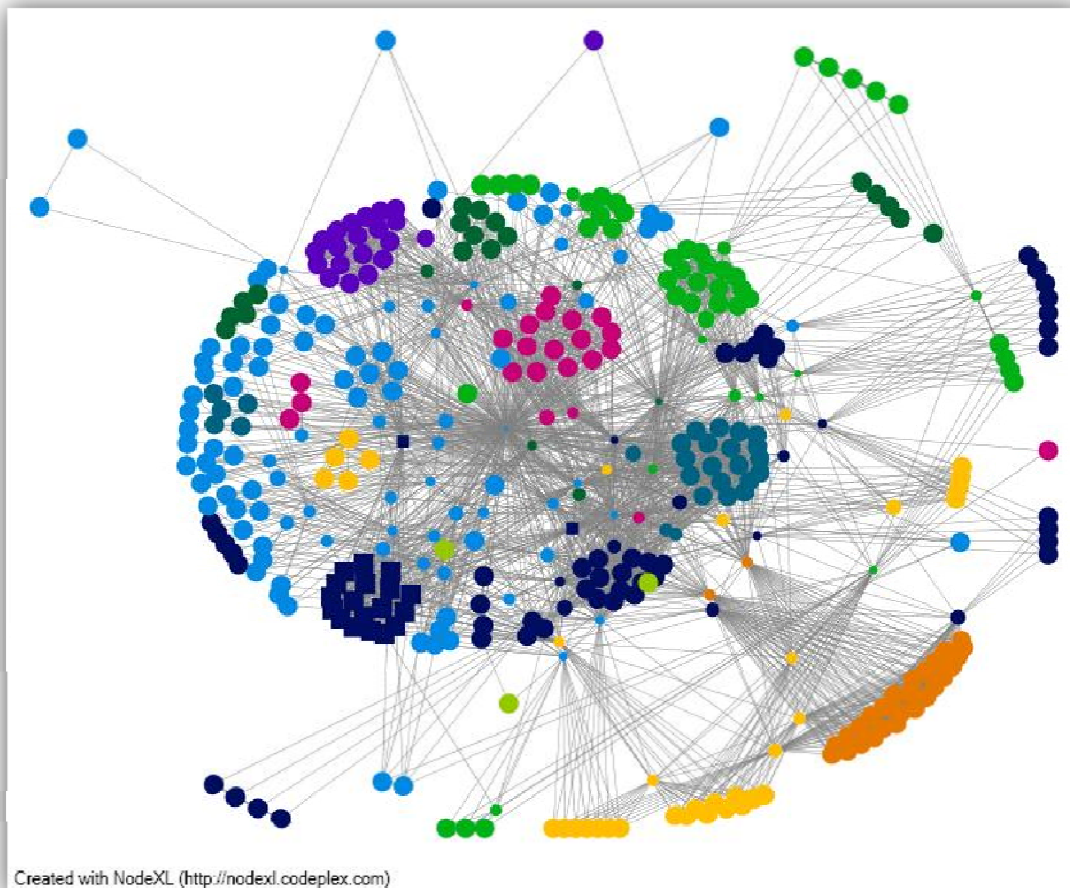


Figure 6, Co-Likers (Clusters)

Though “liking” a post requires less commitment than commenting, we still thought it was useful to examine co-likers, or people who tend to like the same posts. Affinities in liking might show us undercurrents of behavior among the “lurkers” who, though they might not comment often or ever, could still constitute engaged user groups who move in herds.

The low barrier to “liking” a post is obvious from the sheer number of vertices here. There were 12 clusters identified.

The clearest affinity was in Group G4, the bright green cluster toward the top right. This was a very male-skewed group. G12, the medium blue cluster at the middle right of the graph, contained many users with Spanish first and last name combinations but US English listed as their language. Ultimately, these “birds of a feather” observations were interesting but not conclusive.

TWITTER ANALYSIS



Figure 7, Glo Twitter Page

Twitter’s interface (fig. 7) is very different from that of Facebook. Comments are organized by time they come in, not automatically grouped by thread or topic. The conventions of using the @ sign

and the #tag to signify direct address and topic category, respectively, evolved as ways for users to make sense of what could easily become a stream of non sequiturs. Relationships are different as well: Facebook calls connected users "friends" (signifying an undirected network), whereas Twitter is a directed network which classifies users as either following or being followed.

In order to examine how Glo's Twitter followers were interacting with Glo's tweets and with each other, we surveyed data pulled from Glo's entire user network (both those who follow Glo and those who are followed by Glo), as well as data reflecting the most recent mentions of @GloMSN across the platform.

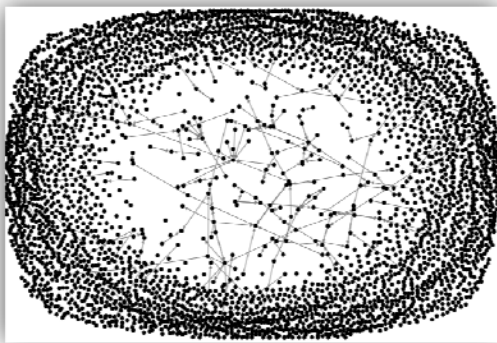


Figure 8, Complete Twitter User Network

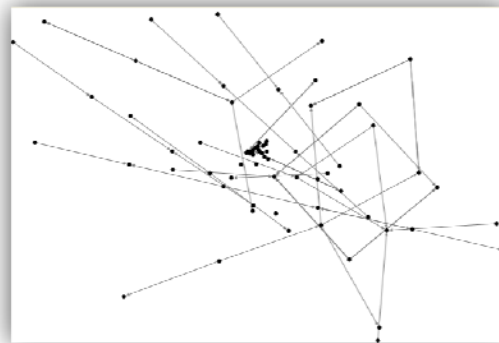


Figure 9, Altered Followers Data Set

Glo's Twitter network was large and difficult to analyze. (fig. 8) We wanted to look at the established relationships among Glo's followers, so we focused on followers with at least two ties to other people in either direction. To do this, we calculated the sum degree (in-degree and out-degree) of each vertex, including only values "greater than 1" in the vertex visibility column. (fig. 9) We can see that this analysis greatly shrank the "followers" data set, showing that many of Glo's followers do not have connections with each other.

Next, we wanted to examine the altered data set to see whether it contained tightly connected subgroups. We grouped by "cluster," which highlights the different groups by color.

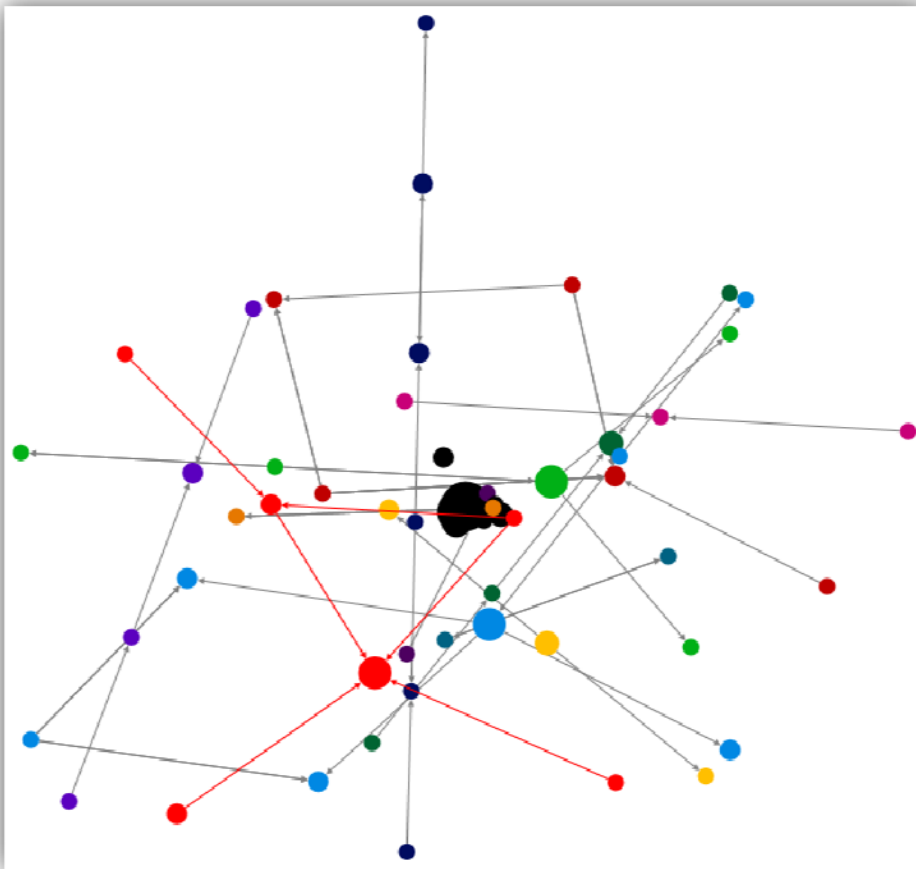


Figure 10, Clusters in Glo Twitter Network

There were 12 main clusters, all of which were beauty or celebrity-related. No one cluster emerged as the most important; however, there was a consistency in the make-up of each that reveals something about the connected elements of Glo's network.

Media properties, retail brands, and celebrities intermingled within all of these clusters. For instance, the users who made up the cluster highlighted in bright red above (fig. 10) were: @ellemagazine (the fashion magazine Elle), @mrjoezee (a stylist for Elle), @heidiklum (a model who works with Elle), @giltgroupe (an online fashion retailer), @worldmcqueen (a couture fashion brand), and @sheckys (a sort of high-end Groupon for fashionistas).

Examining the clusters reveals that the strongest connections in Glo's Twitter network are built around professional interdependencies within the worlds of beauty, fashion, and media.

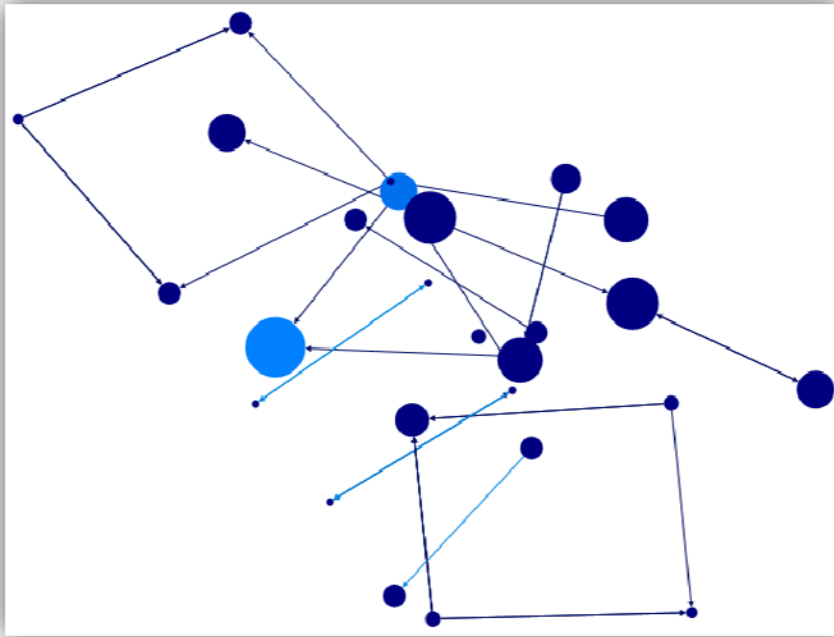


Figure 11, Influential Users in Glo's Twitter Network

We also wanted to examine Glo's user network to determine which users were attracting the most attention and which users acted as bridges between the various parts of the network. We mapped eigenvector centrality to vertex color and betweenness centrality to vertex size. Because we wanted to measure the influence of its users, as opposed to its own influence, eigenvector centrality and betweenness centrality were set to 0 for GloMSN.

In the graph above (fig. 11), light blue vertices indicate a high amount of attention being paid to a user's tweets, while larger vertices are passing more information throughout more regions of the network. We can see that within Glo's network, @ellemagazine is garnering a lot of attention and is acting as a bridge for the rest of the network. The dark blue edges indicate the tweet was a mention while light blue edges indicate a reply.

In addition to examining Glo's larger network, we wanted to look at where Glo was being mentioned on Twitter, and determine the relative importance of individuals who mentioned MSNGlo in their tweets.

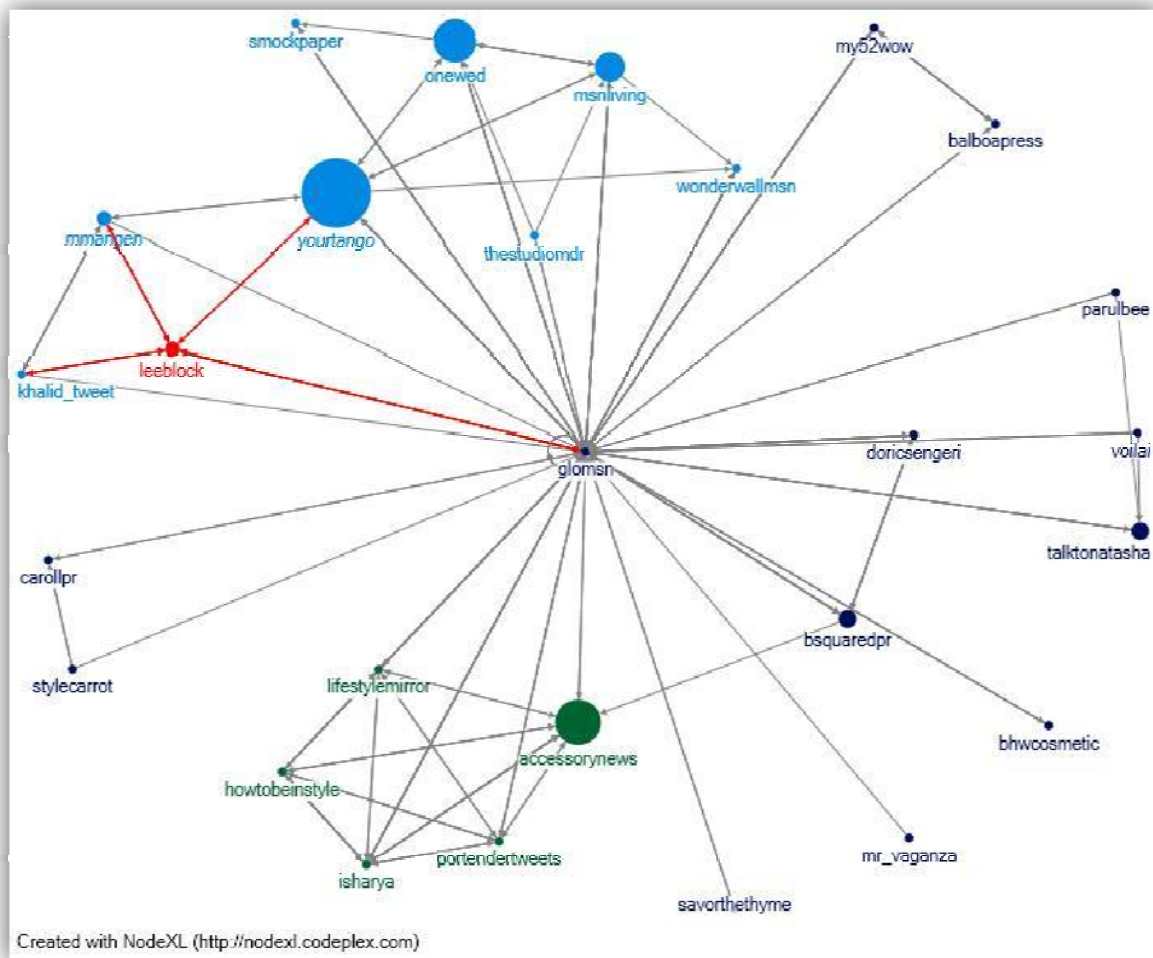


Figure 12, Glo Mentions & Replies on Twitter

By mapping vertex size to betweenness centrality and correlating this with eigenvector centrality (shown in the tooltip), we were able to identify those who attract the most attention and those who most effectively pass along information while mentioning MSNGlo in their tweets. (fig. 12)

@yourtango (the love and relationships site YourTango, which has provided Glo with syndicated content in the past) had the highest Eigenvector centrality and the highest betweenness centrality numbers. In this example, their tweet was a Follow Friday tweet. Follow Friday is a weekly Twitter game in which users recommend who to follow on Twitter. Taken too far, this can equal the equivalent of a weekly spam mail sent to an entire address book and can skew a property's importance in the network.

In previous analysis, however, YourTango's non-#FF tweets mentioning MSN Glo had high degrees of both betweenness and Eigenvector centrality. Thus, we can conclude that YourTango is an important part of the network. Similarly, in previous data pulls Wonderwall and MSN Living, both fellow MSN properties, were shown to have higher importance – which indicates that group 1, the light blue vertices, contains many important partners for Glo.

@leeblock (bright red vertex) had the highest numbers among non-#FF tweets, meaning they not only were the center of attention with their tweet, but they were also influential conveyors of information. This makes sense when one realizes that Lee Block is a relationships expert who has been interviewed for Glo stories.

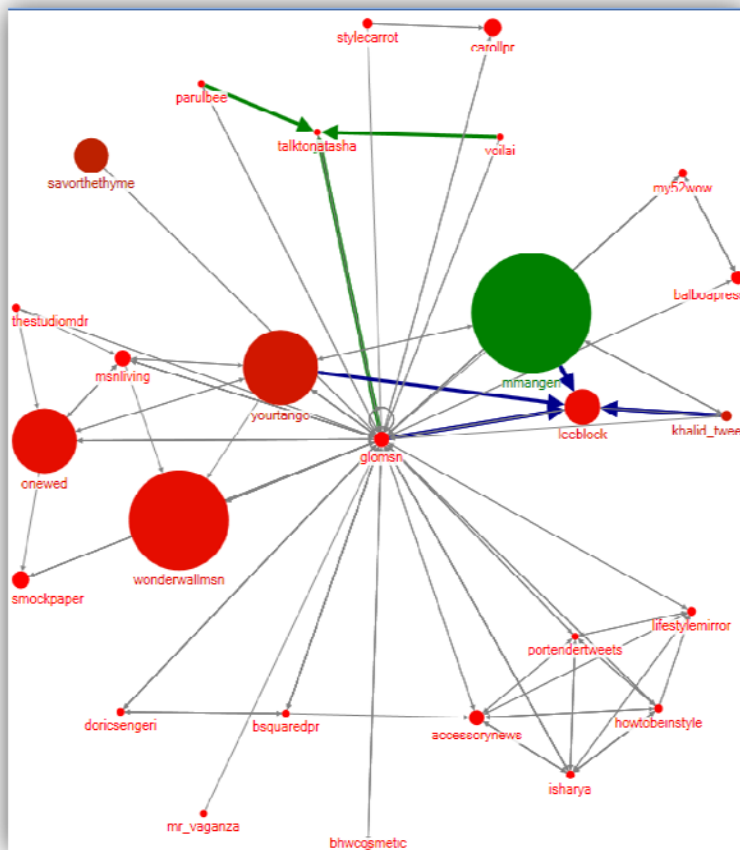


Figure 13, Retweets of Glo Content

We also wanted to take a closer look at how specific messages are diffused through Glo's network, so we set out to find users who mentioned @GloMSN in their tweets and might also be influential on Twitter. By filtering out #FF or #MakeupMonday references, we found two users, @leeblock and @talktonatasha, who linked to a Glo article and were retweeted by others. (fig. 13)

Mmangen RT @leeblock: When "Me" Becomes "We" <http://t.co/RPJFhrRN> via @GloMSN

Voilai RT @talktonatasha: Feast your eyes on candy-inspired #decor and accessories, just in time for #Easter <http://t.co/yfvgtRPf> via @GloMSN

In the image on the previous page (figure 13), @leeblock's relationships are highlighted in blue and @talktonatasha's relationships are highlighted in green.

In the resulting image above, brighter red vertices have more tweets, and larger vertices have more followers. As we can see, @leeblock (Lee Block, relationship expert) has a large following – more than 11,000 followers – and is influential in women's issues. Her retweet by @mmangen, who has more than 45,000 followers, will also help her message reach a large and potentially influential audience.

We saw a similar pattern in earlier graphs, in which @iammikkittaylor (the Twitter handle for Mikki Taylor, an editor-at-large for *Essence Magazine*) emerged as a key player in the diffusion of a specific Glo url. Like Lee Block, Mikki Taylor is an expert who is involved in content creation for Glo. She has a strong Twitter following in the African-American beauty and media industry.

@talktonatasha is the Twitter handle for Natasha Lee, Glo's photo editor. Her tweet, a link to a décor and accessories story, was retweeted by @voilai (Olivia Faye Jones, a shop owner in West Yorkshire, UK, who has an Etsy boutique). @voilai's motivation becomes clear when one looks at the Glo story in question: It features one of the products available on her Etsy page. This self-promotional pattern – retweets of stories that feature certain products, by those products' creators – was also characteristic of patterns we saw in earlier analysis.

OMNITURE ANALYSIS

We used Omniture to determine the top social-media referrers during the two-month period that encompassed both our Facebook data and our Twitter data.

As we can see (fig. 14), Facebook was by far the highest, and Twitter (t.co) was a distant second.

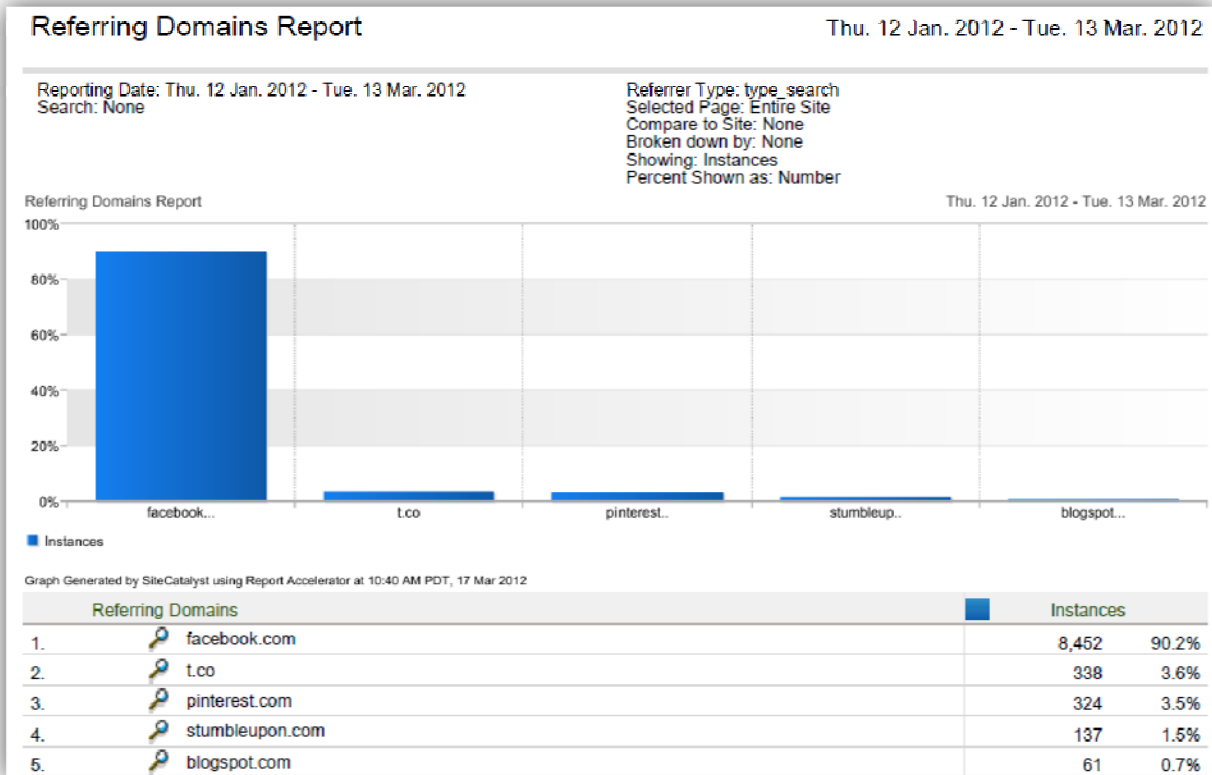


Figure 14, Top Social-Media Referrers to Glo (10% sample)

As Glo's Omniture implementation is set to deliver a 10 percent sample, all referral numbers in the figure above need to be multiplied by 10. Facebook, then, actually delivered 84,520 referrals. Even so, these referral numbers are not high when viewed in perspective of the 10 million total referrals to Glo that occurred during this period. Omniture also tallied the page views that each property's referrals drove. Considering that the average number of page views per visit on Glo is 12 pages, the numbers in the table below show that although Facebook is clearly driving more traffic than Twitter, neither network is generating a significant volume of traffic.

	Referrals	Page Views	PV/Referral
Facebook	84,520	499,610	6
Twitter	3,340	13,740	4

In addition to measuring total volume of traffic, we wanted to examine which kinds of content were driving people from each network to Glo. We also wanted to determine whether there was any connection between high engagement or attention with a Glo post on a social network (as determined by Node XL) and number of referrals to the Glo url featured in that post. We surveyed individual referring links from each network.

Facebook:

Story or post	Fan Page Attention/Engagement (Node XL)	Referrals
Things not to say to a stay-at-home mom	Did not appear on fan page.	16,520
Superstitions for Friday the 13 th	Medium.	4,520
Coffee cup product poll	Medium	550 (linked to Glo to see winner)
Which walk is more like yours?	Medium	280
Which racy lacy dress ...?	High	20
Which Golden Globes dress ...?	High	0 (there was no onsite Glo component – just a post)
Notepad product poll	Medium	0 (no link back to see winner)

Looking at the table above, it’s interesting to note that the top post in terms of attention and engagement (“racy lacy dress”) is at the bottom in terms of referrals. Conversely, “Things Not to Say

to a Stay-at-Home Mom,” which did not even appear on the fan page, managed to be the top referral url from the Facebook domain, probably on the strength of its MSN home page promotion and many (499) onsite Facebook Connect comments.

Twitter:

Story or tweet	Tweet Engagement/Attention (Node XL)	Referrals	Tweet Originated
Caroline Rules: Starting over in a new city	Did not appear (fell between data pulls)	490	Caroline Manzo (Glo columnist)
Most eligible bachelors (Josh Groban image)	Did not appear (fell between data pulls)	110	Unknown (story was featured on MSN home page)
What to give up when “me” becomes “we”	High	60	Lee Block (Glo expert)
Remembering Whitney Houston	High	30	Glo – retweet by Mikki Taylor (Glo columnist)
Baubles on a budget	Medium	20	Jewelry designer featured in Glo story

In the Facebook analysis, because we were limited to data pertaining to the fan page, all posts came from Glo staff. In our Twitter analysis, this is not the case. We’re able to analyze tweets that come

from users throughout the network. For this reason we've added a "Tweet originated" column to the table above. The key trend in the table above is that nearly all of these top-referring urls were tweeted in a promotional capacity, by people involved in the creation of the story. There also seems to be a direct relationship between tweet significance per Node XL analysis and referrals back to Glo.

COMPARISON

Our analysis of Glo's Facebook fan page and Twitter networks has shown us that each network behaves very differently. Aside from the Glo editors, there does not appear to be overlap between the influential users on each network. We've also noted that some of the differences in the networks' emergent behaviors may be driven by the interfaces of Facebook and Twitter themselves.

Glo's Facebook network is a community of people who interact with Glo content in a personal manner. Their strongest engagement occurs with celebrity fashion polls. Broader, more general content (such as the Friday the 13th post and the notepad and coffee cup product posts) draws in men, but the most influential users are women who are not associated with the production of Glo content. The community uses casual language and shares personal thoughts or folksy tips in comments, such as (in response to the question, "would you wear this dress?"), "Nope....I'm WAY too 'hippy.' Too bad, it's a cute look!"

Some of this interaction can be attributed to how Facebook is set up. Facebook is a personal, profile-oriented site suited to discussion threads that remain grouped together with an initial comment. People use their real names and feature images of themselves or family members in their profile pictures. Connected users are called "friends."

The Facebook wall interface is reminiscent of a content site or a blog in its layout; many posts, along with their comments, feel like pieces of content in their own right. This is especially true of polls, which were some of the highest-engagement posts we analyzed. Polls and other voting posts may not translate to high referrals because the experience on Facebook is satisfying enough that there's no need to click through to Glo.

The Glo Twitter network, by contrast, operates in a professional capacity. Influential users work within the beauty, fashion, media, or entertainment industries. Tweets are directed toward industry insiders, typically with a self-promotional bent. This tweet from a makeup company that provided a product for a Glo gallery is typical: "It's love...#lashlove! We're incredibly excited to be on @gloMSN's radar! Get the @Eyeko Skinny now at @Sephora!" The breathless tone used here is a convention of the beauty and fashion industry and should not be mistaken for the casual, personal tone of Glo's Facebook community.

Twitter itself is a less personal experience. Twitter users have “handles” that are often not their real names, and their images are often avatars or logos. Twitter relationships are based on “following” or “being followed” – the interface is suited to delivering pronouncements, as opposed to sustaining a conversation.

This helps explain why influential users in Glo’s Twitter network are typically those in positions of power, used to dispensing information. They include experts who are quoted by Glo, columnists for Glo, and fellow media properties such as Your Tango or MSN Living. It’s worth noting that in our research when columnists or experts tweeted the urls to their Glo stories – as opposed to Glo sending the tweets first and the experts retweeting – they resulted in higher referrals to Glo. An influential individual’s tweets may be seen as more valuable or authentic than a media property’s tweets.

CONCLUSION AND RECOMMENDATIONS – FACEBOOK

Facebook is personal and has the greater potential to drive traffic volume to Glo while establishing connections with “regular people.”

To boost referrals, we suggest Glo implement Facebook Connect comments on gallery pages as well as article pages. This could help get Facebook awareness for pieces not posted on the Glo fan page, similar to what happened with the “stay at home mom” story. Gallery pages account for more than half of Glo content.

Every poll should include a call to action to vote on more questions, or to see the results of the last poll.

We’ve seen that some posts, though highly engaging, do not drive high referrals. Glo could capitalize on these by using these as fodder for user-generated content.

Glo editors responsible for different topic areas may want to address the Facebook community as individuals instead of speaking as a collective “Glo” brand voice. This could create a stronger connection with the audience, making them more likely to respond to posts or click on stories authored by familiar contacts.

CONCLUSIONS AND RECOMMENDATIONS – TWITTER

Twitter is professional and is best used to deepen Glo’s industry credibility and to establish awareness of Glo with potential advertisers.

Though overall referrals are smaller, Twitter's industry focus lends itself to distributing niche content that might not be placed on the MSN home page. Glo should cultivate a stable of expert columnists with niche networks and expertise (for instance, those specializing in ethnic skin or hair care).

Experts should send out their own tweets publicizing stories, rather than Glo doing it.

Advertisers love "social components." Sales teams for Glo should steer brands toward Twitter promotion, as opposed to Facebook, for their sponsored content. Advertorial or sponsored content is not as glaring in the Twitter environment.

Glo's editorial staff should use Twitter to find story sources and freelancers on niche topics.