WHAT MAKES THEM CLICK: GENDER, SOCIAL MEDIA & THE COLLEGE AUDIENCE

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ABSTRACT

We investigate the use of social media among the collegiate audience. Specifically, we focus on how men and women within that audience use social media to interact with and influence one another. We build upon the research of others, which suggests men and women utilize social media to communicate for different purposes. Our analysis employs quantitative methodology. By conducting and analyzing the results of a survey and targeted Twitter-based messaging campaigns after intentionally adding more photos to test engagement, we gain deeper understanding of social media usage patterns by gender on a college campus. By creating and analyzing variables such as the Social Media Follower Strength (SMFS), which enumerates how deeply a person is involved with social media sites, through a quantitative methodology, we find students most involved on campus are most entrenched in campus social media, women prefer photos and men prefer video content. We believe our findings have implications in the arenas of communications, marketing and information-sharing in the increasingly social and digital society.

Keywords: Social Media, Gender, Communication, Technology

INTRODUCTION

Social networking and specifically the social media platforms of Facebook and Twitter have created new methods of interaction in our increasingly global society. Arguably, they have defined the early part of the 21st Century in how they have galvanized individuals to act and create change. We believe it is important to investigate social media because of its pervasiveness in the daily life of traditionally college-aged individuals in the United States and beyond, and because of the sheer volume of engagement on social media by society as a whole. Consider this: As of Dec.31, 2014, Facebook has 1.39 billion monthly active users and an average of 890 million active daily users on Facebook.com [6]. Instagram, a subsidiary, reached 300 million users in December 2014 [8]. And Facebook continues to grow. Analysis of 2014 ComScore data shows Facebook is the most widely used social media network among 18-24 year old Americans, especially when considering the company as a whole, which includes the photo-based platform, Instagram [7]. Twitter, the fastest growing social media platform of 2014, reports 288 million active daily users with 500 million Tweets being sent each day [15].

In this research, we study gender-based differences in participation and engagement rates on social networks. Our inclination was that social media participation styles are borne out of predispositions to certain social structures and tendencies for each gender. Being able to leverage these natural communication styles on social media would allow groups and organizations to reach the largest possible audiences and get the most return on growing marketing and advertising spending on social media [5]. Additionally, studying the effect of gender on social media has the potential to inform us about how social networks established in the physical world potentially transfer to the environment of social media. Evidence suggests such a tendency could exist, and that naturally gendered networks may bear themselves out in online social media networks [17].

It also has been posited that Maslow's psychological theory of needs underpins certain social media usage behaviors, and that women in particular use social media for perceived needs such as engagement, recreation and information gathering. An argument exists that these social needs occur in each individual, and in turn some see social media as a way to enhance their potential to have these needs met [3].

While there is a substantial amount of research on social media and gendered social behavior individually, there is a dearth of research on these topics and their potential relationship. To gain insight therein, we aimed to answer two research questions:

1. Is the degree of social media participation and engagement the same between male and female college students?
2. Are men and women engaging in the same types of behavior on social media?

The rest of the paper is organized as follows. We first review prior literature regarding social media participation and gender. Next, we explain the two studies we conducted and what our research shows. Finally, we present discussion from our analysis as well as implications, limitations and future research opportunities.

LITERATURE REVIEW

Volkovich and colleagues [17] completed a case study in Spain to identify gender patterns in social media. They found that each gender exhibited different patterns on social networking sites (SNS). For example, if a female invites another female to join a SNS, the invitee is more likely to accept the invitation. Furthermore, it is more likely that a female's first invite will go to another female. Additionally, researchers found that users with a below average number of friends have more female friends, and most users with an average number of friends exhibit gender homophily. Moreover, users with more than the average number of friends have more opposite-gender friends. The case study also found other patterns related to "friending" and joining a SNS for each gender. However, these patterns did not explain how each gender engages and interacts with the social media sites themselves.

In his book The Filter Bubble, Eli Pariser explores the implications of search engines and algorithms personalizing search results through gathered data [11]. This data comes from interpreting many user signals. For example, the geological location of the user, the type of device the user is using, and even what clicks he/she has made. Pariser even writes that Google uses up to 57 different types of signals to personalize search results [11], and as a result of this search results are becoming highly personalized for each individual. The main problem this creates is it filters out other important information which the user may not care for, but should at least know, which is stereotyping. He argues that algorithms make predictions about single users based on other similar people. For example, he cites an example of how a bank may or may not approve a loan based on the trustworthiness of his/her friends [11]. Overall, while Pariser covers online personalization, he doesn't explore this personalization at the gender level nor deeply explore how this personalization affects the two genders differently.

Chen [3] explored women's motivations for social media use, and how those motivations translated to their frequency of social media usage. The author randomly surveyed 392 female bloggers and found three motivational factors that have a positive relationship with an individual's time spent on social media: information, recreation, and engagement. However, these motivations fluctuated depending on the social media platform. Respondents who chose Facebook as their favorite social media platform reported stronger engagement motivations than the women who chose Twitter as their network of choice. Respondents turned to Facebook for engagement but to Twitter for information. Even though engagement and information were both motivating factors, the third motivating factor, recreation, was an absolute must for the women surveyed. However, the author mentioned this response may be overrepresented because these women were bloggers and blogging can be considered a creative art. Regardless, the motivating factors for men, in comparison to women, remain vague.

Fisher's case study on Facebook's Sponsored Stories analyzed the importance of audience contribution in social media without considering gender [7]. Fisher's work contrasts this to the passive role of the audience in traditional media and argues that the identity of the content creator matters and, the author suggests, audience labor theory needs an update. Fisher says it is this active participation in disseminating advertising messages that is being assigned a financial value by social media companies. Fisher wrote: "One of the defining features of social media is the central role that the audience plays in it. The audience in social media is characterized as engaged, expressive and collaborative. This is precisely why the audience is commonly referred to as 'users'" [7]. By better understanding the user's behavior, a marketer, for example, may be able to better predict a user's behavior based on the user's gender.

Burger demonstrated through data mining via Support Vector Streams that there is a predictable element to the content of an individual's Twitter stream [2]. The classifier used by the research team significantly outperformed other models–and humans–in the ability to parse the language used in a tweet and predict the individual's gender. The algorithm performed at a 71.9 percent accuracy rate, suggesting that an underlying pattern of differences exists between the behavior of each gender in terms of communication approach, and that the contrast might not be easily perceived by human analysis.

Two studies investigated how gender stereotypes are perpetuated as they manifest on social media through the inclusion of "selfies" and other pictures shared by social media users. The analysis of Facebook profile photos by Rose and colleagues [12] indicated pictures of males predominantly included active, dominant, and independent portrayals, while pictures included by female users included attractive and dependent portrayals. Similarly, Tortajada and colleagues [13] found that among Spanish teenagers, self-portrait imagery shared on social media platforms mirror the already-studied gender-hyper-ritualization found in advertising.

Several works, including Born Digital and Alone Together, explore how digital natives view themselves online, make decisions about what to share and even how online interactions have changed perception and understanding of reality. In Born Digital, for example, John Palfrey and Urs Gasser explore the tendency of digital native to "collect friends" [10] and enter and exit relationships freely online. Sally Turkle's Alone Together explores in part how technology is replacing the comfort of person to person interaction [14]. We wanted to go a step beyond and measure how involved digital natives on our campus were with social media content promoting events and activities on campus. To do that, we analyzed through survey data many different accounts from the university that each respondent followed, we called this measure Social Media Follower Strength. We believe identification and analysis of those hyper-engaged individuals moves the discussion forward.

In his book, *Technology and Culture*, Allen Batteau's theory of technological exuberance explained the explosion of social media platforms that has settled into the handful now most supported [2]. Further, his analysis of how technology's adaptation results in "meaningful objects" helps us understand how social media has become an extension of self for the digital natives we studied.

In summary, the prior studies identified motivations for participation in social media, the importance of user engagement in the overall functioning of social media, and how a user's gender may influence his or her decisions about what to share about themselves, intentionally and unintentionally. However, no study we found specifically asked about if or why the binary genders interact differently with social media. Our research builds on the previous studies and aims to identify a pattern of behavior differences between male and female college students.

RESEARCH METHODOLOGY

To answer our questions, we conducted two studies and analyzed the data quantitatively. The first study was a 15-question survey, and the second was an intervention to intentionally add more photos to two Twitter-based event awareness campaigns, based on the responses we received, to test for increased engagement by users.

For our first study, we created a survey that was fielded on Survey Monkey. In order to reach all prospective respondents, defined as students attending a University in the Midwestern United States, of all ages and degree programs (undergraduate, graduate and professional programs), we distributed the survey link through an all-campus weekly email newsletter, and shared the multiple times throughout its availability in Twitter and Facebook posts from university-affiliated accounts. It was also shared with several small classes of students. However, because our primary population of interest were those who already followed one of the University affiliated social media accounts, our survey was primarily propagated through the use of social media. All respondents who completed the 15-question survey and included a contact email address were entered into a random drawing to win a $5 or $10 gift card to the University's bookstore. Our survey was kept brief intentionally to guard against respondent fatigue. Furthermore, our intentions of this survey were kept hidden, and the title of this survey was simply "Social Media" in order to prevent pre-developed bias of respondents. A copy of the survey is included in Appendix A.

In addition to the survey, two event-awareness Twitter campaigns were modified to include more photos, based on the early survey responses. Campaign 1 was focused on awareness of and ticket sales for a Top 40 band appearing

on campus. Campaign 2 was focused on the launch of the state's first bike-share program. Engagement results were compared to a campaign completed prior to our survey period, which focused on awareness of the University's 150th birthday and was less intentional about the sharing of photos. Separate from the campaigns, more photos were included on Facebook, Twitter and Instagram beginning the second week of April 2015.

RESULTS

In this section, we examine the results of our studies. First, we briefly explain the demographics of our survey respondents. Second, we analyze where respondent males and females were statistically similar and different. Lastly, we explain the results of our Twitter awareness campaign intervention.

We received 66 survey responses over the course of 5 weeks by distributing the survey over Facebook and Twitter, directly informing classrooms and by word-of-mouth. Our data collection continues. Thus far, among the respondents, 37.9 percent were male and 62.1 percent were female. About 60 percent lived 10 minutes away from campus or closer. The two largest response groups for type of degree sought by each respondent were Bachelor of Arts at 36.4 percent of total responses, and Bachelor of Sciences at 42.2 percent of respondents. Table 1 expresses the demographics of the respondents in more detail.

Table 1. Demographics of Respondents

Gender			Favorite Platform	All	Male	Female
Male	25	37.90%	Twitter	10 15.2%	1 4.0%	9 22.0%
Female	41	62.10%	Facebook	17 25.8%	5 20.0%	12 29.3%
University Involvement			Instagram	12 18.2%	1 4.0%	11 26.8%
Male	41%		Google+	2 3.0%	1 4.0%	1 2.4%
Female	81%		Pinterest	2 3.0%	0 0.0%	2 4.9%
Time From Home (minutes)			YouTube	17 25.8%	15 60.0%	2 4.9%
<5	29	43.90%	**Degree Seeking**			
5-10	10	15.20%	None	3 4.5%	BA	24 36.4%
10-20	16	24.20%	Gen. Ed.	2 3.0%	BS	28 42.2%
20+	11	16.70%	AS	7 10.6%	Master's +	2 3.0%

To best understand our respondents' engagement level, we created a measure called Social Media Follower Strength (SMFS). To do this, each social media platform selected by a respondent received a value of one. We defined the SMFS as the sum of those values. For example, a respondent who followed two university-affiliated accounts on Facebook, one on Twitter and three on Instagram would have a follower strength of six.

Below, Table 2 shows all the categories that were not statistically significant, thus identifying where both genders were similar. Overall, our results show no statistical difference in usage patterns of males and females on Twitter (p-value = .17) or Google+ (p = .824). Even though Twitter usage wasn't statistically different, the mean difference was large (mean diff. = .68). While even the retweet rates weren't significant, they, also, had a considerably large mean difference (-.58). Both genders showed similarities in five categories for following a university-affiliated account on social media: sports news (p = .166), professional networking (p = .81), news about major or activities (p = .102), interaction with other students (p = .426), and finding friends (p = .396). It also showed no significant difference in seven areas of interest: sports (p = .168), music (p = .762), deadlines (p = .06), scholarships (p = .156), faculty recognition (p = .271). Also showing no significant difference were three methods of learning about on-campus events: fliers (p = .554), university websites (p = .276), and instructors (p = .611). Among respondents, both men and women as groups said information about scholarships and on-campus deadlines were most meaningful to them.

Table 2. Social Media Engagement – Similarities

	Male Mean(SE)	Female Mean(SE)	t-score	p-value
Retweet Rates	1.39 (0.22)	1.97 (0.19)	-1.96	0.055
Purpose for following social media				
Sports News	0.14 (0.07)	0.30 (0.08)	-1.41	0.166
Professional Networking	0.09 (0.06)	0.11 (0.05)	-0.24	0.810
News about major or activities	0.18 (0.08)	0.39 (0.08)	-1.67	0.102
Interaction with other students	0.09 (0.06)	0.17 (0.06)	-0.80	0.426
Find friends	0.05 (0.05)	0.11 (0.05)	-0.86	0.396
Interesting Posts				
Sports	0.23 (0.09)	0.41 (0.08)	-1.40	0.168
Music	0.14 (0.07)	0.17 (0.06)	-0.30	0.762
Deadlines	0.30 (0.10)	0.56 (0.08)	-1.92	0.060
Scholarships	0.48 (0.11)	0.67 (0.08)	-1.44	0.156
Faculty Recognition	0.09 (0.06)	0.19 (0.07)	-1.11	0.271
How to achieve better engagement				
More information about associates	0.43 (0.11)	0.59 (0.08)	-1.20	0.235
More videos	0.05 (0.05)	0.22 (0.07)	-1.83	0.073
More news you can't get other places	0.26 (0.09)	0.31 (0.08)	-0.36	0.717
Platform Usage Frequency				
Twitter	2.35 (0.31)	3.03 (0.33)	-1.39	0.170
Google+	1.61 (0.21)	1.68 (0.20)	-0.22	0.824
How students knew about events				
Fliers	0.18 (0.08)	0.25 (0.07)	-0.60	0.554
University Websites	0.22 (0.09)	0.11 (0.05)	1.10	0.276
Instructors	0.22 (0.09)	0.28 (0.08)	-0.51	0.611

Table 3, below, displays the results on where both genders displayed differences. As you can see, the female respondents had a significantly higher follower strength, indicating more engagement from females than males among the college audience. Using the methodology outlined above to calculate follower strength, we found women had a significantly higher engagement rate with university-affiliated social media accounts than males (t-score = -3.68, p-value <.001).

The results indicate significant difference among males and females regarding their usage patterns on the following platforms: Facebook (p = .001), Instagram (p < .001), Pinterest (p < .001), and YouTube (p = .021). We also recognized differences in what types of content would make men and women engage more with university-affiliated accounts; how often they attended on-campus events and how they reported learning about those events. Women also significantly preferred posts recognizing the accomplishments of other students.

Specifically, women used Facebook more often and more frequently daily; women were significantly more likely to use Instagram and Pinterest and men were significantly more likely to use YouTube. Women attended significantly more on-campus events and reported that they learned of those events from university-affiliated social media or friends on social media significantly more often than their male peers There also is a statistically significant difference in the type of content that would most cause a female follower to engage with the University's posts: More interaction from other users and the university (p = .011), and more photos (p = .005).

We asked about why students follow University accounts. The categories that exhibited significance between genders were event news (p <.001) and general news (p = .004). We believe this shows the female audience to be more interested in and engaged with the campus environment overall.

Table 3. Social Media Engagement - Differences

	Male Mean(SE)	Female Mean(SE)	t-score	p-value
Social Media Follow Strength	0.92 (0.29)	3.15 (0.44)	-3.68	< .001
Event Attendance Rate	2.17 (0.28)	3.36 (0.30)	-2.75	0.008
Purpose for following social media				
Event News	0.05 (0.05)	0.62 (0.08)	-5.20	< .001
General News	0.30 (0.10)	0.68 (0.08)	-2.96	0.004
Interesting Posts				
Community events	0.30 (0.10)	0.68 (0.08)	-2.96	0.004
On campus activities	0.35 (0.10)	0.72 (0.08)	-3.00	0.004
Student recognition	0.13 (0.07)	0.36 (0.08)	-1.98	0.053
How to achieve better engagement				
More interaction	0.14 (0.07)	0.46 (0.08)	-2.64	0.011
More photos	0.14 (0.07)	0.50 (0.08)	-2.95	0.005
Platform Usage Frequency				
Facebook	3.13 (0.31)	4.54 (0.27)	-3.37	0.001
Instagram	1.43 (0.25)	3.43 (0.31)	-4.49	< .001
Pinterest	1.17 (0.08)	2.62 (0.22)	-5.11	< .001
YouTube	4.17 (0.32)	3.22 (0.25)	2.38	0.021
How students knew about events				
Friends	0.30 (0.10)	0.64 (0.08)	-2.61	0.012
Friends via Social Media	0.05 (0.05)	0.47 (0.08)	-3.75	< .001
University Social Media	0.04 (0.04)	0.50 (0.08)	-4.09	< .001

Applications: Social Media Account Intervention

In addition to our survey, two Twitter-based event-awareness campaigns were modified to intentionally include more photos. Consider this: the account's Twitter feed has had a typical monthly engagement rate, as calculated and displayed within the analytics provided at analytics.twitter.com, of an industry-acceptable 4 percent (January to March 2015). In the first 19 days of April (with two weeks of the above changes in place), that engagement rate increased to 6 percent. The number of tweets sent by April 19 was nearly double the number sent in all of March. The number of photos shared has nearly tripled. (More about this effort in the discussion to follow.)

In both of the test campaigns, overall engagement was higher, at 9 percent for the concert event (Table 5) and 9.6 percent for the Social Bikes event (Table 6) compared to 5.6 percent for the Founders Day pre-test (Table 4). When specifically considering response to the tweets with photos, Social Bikes garnered 11.4 percent engagement; the concert received 9.7 percent engagement and Founders Day photo posts had 6.5 percent engagement. This indicates the college audience - specifically the women within it as a significant portion of them reported in the survey - expect and react to photos on social media.

The Founders Day event occurred entirely before our studies began. The event, distribution of free cupcakes for students in celebration of the university's 150th birthday, was promoted on Twitter, Facebook and Instagram as other events have been. What follows in Table 4, with an overall engagement rate of 5.6 percent, serves as our baseline for analysis.

Table 4. Pre-test: Founders Day

	No Photos			With Photos				
Date	2/3	2/6	2/6	2/5	2/6	2/6	2/6	2/6
Impressions	1046	165	401	677	3689	293	316	237
Engagement	34	1	7	47	221	34	24	14
E. Rate	3.3%	0.6%	1.7%	6.9%	6.0%	11.6%	7.6%	5.9%

Because so many survey respondents, and a significant number of females, reported preference for photos, the university-affiliated news and events account intentionally added more photos to the promotion efforts of two events that occurred during our study period. Our first campaign was focused on event awareness and ticket sales for a Top 40 charts pop music band performing on campus. While the first two posts announced the selection of the band, no photo was included. Intentionally, every tweet about the concert in April included a photo. In addition, the account retweeted 10 posts from other accounts about the concert – all also containing photos. Unfortunately, impressions and engagement data on retweets is unavailable. But, taken together, the engagement rate on original content was at 9 percent for the concert event (Table 5), well above the 5.6 percent rate our pre-test example. Approximately 400 tickets were sold. So far, we have been unable to access ticket sales by date to analyze any direct impact of our Twitter campaign.

Table 5. Campaign 1: Concert

	No Photos		With Photos								
Date	3/13	3/13	4/13	4/15	4/15	4/15	4/15	4/16	4/16	4/17	4/18
Impressions	327	132	367	344	163	481	277	1402	232	269	314
Engagement	10	3	10	17	6	34	55	220	8	7	16
E. Rate	3.1%	2.3%	2.7%	4.9%	3.7%	7.1%	19.9%	15.6%	3.4%	2.6%	5.1%

Our second campaign was focused on building awareness among the student-body of a new program operated by our city's public transportation authority that introduced bicycles for use based on an hourly or monthly fee (at a discount for students). Again, we intentionally added photos to original content and sought out and retweeted six Tweets from other accounts also with photos. Again, analytics data on those retweets is unavailable. Taken together, the engagement rate for that campaign (Table 6) was nearly 10 percent. An estimated 150 people attended the event with a majority of them registering to participate in the program. Attendance grew throughout the two hour event, which may mean the Tweets shared actually spurred attendance.

Table 6. Campaign 2: Social Bikes

	No Photos			With Photos			
Date	4/15	4/15	4/15	4/15	4/15	4/15	4/15
Impressions	169	161	205	174	1094	171	518
Engagement	6	1	9	10	144	36	34
E. Rate	3.6%	0.6%	4.4%	5.7%	13.2%	21.1%	6.6%

The overall number of photos shared by the account continues to outpace our pre-test (Table 4), with a now stated goal of at least 4 of every five Tweets including a photo. In addition, because of the proportion of respondents who reported engaging on social media multiple times per day and the proportion of female respondents who said they were more likely to engage with photos reported that Instagram or Pinterest was their platforms of choice. Social media campaigns from the university's news and events focused account were modified on three different platforms. Instagram: The frequency of photo sharing on this account was increased from twice a week to daily. In the first two weeks of this new strategy, the account's audience grew more than any other month since the account's first. Facebook: A concentrated effort was made to include at least three photos on a single post at least once a day, as well the typical mix of content that may include a short video or a website link. Facebook audience growth is not significantly higher, however the engagement level has increased overall

DISCUSSION

The first question we sought to answer was: *Is the degree of social media participation and engagement the same between male and female college students?* Our data suggests the answer is no. Our results suggest that mean social media follower strength for male and female respondents exhibited a statistically significant difference. The mean follower strength value for females was 2.23 points higher than the male follower strength value, demonstrating that female respondents are engaging with more university accounts across more platforms than male respondents (Table 3). Additionally, female respondents exhibited a greater interest in a variety of social media topics, as illustrated by the mean response differences in topics such as event news, general news and news about their major. And a greater

overall interest strength in all topics, demonstrated by their higher mean in every category of interesting posts. However, retweeting behavior exhibited in the data did not show a statistically significant difference in gendered social media interaction through re-tweeting or re-posting.

Our second question was: *Are male and female college students engaging in the same types of behavior on social media?* Again, the evidence suggests the answer is no. When it comes to the reason for following the university affiliated accounts on social media, the responses for the following categories were statistically insignificant: general news, professional networking, news about major or activities, interaction with other students, and finding friends. This demonstrates that females do engage more if the activity furthers their social circle, professional career prospects or real-world interactions with others students via university activities. However, two categories statistically significant were sports news and event news. Eight percent of male respondents were interested in event news, while 83 percent of female respondents were interested. So, while males and females do have some commonalities between them, they differ in their engagement behavior, particularly hinging on the pragmatic worth of social media as a networking tool.

Going forward, it is worth noting that on our particular campus both men and women as groups said information about scholarships and community events were most meaningful to them (Table 2). Incorporating more information about scholarship opportunities and deadlines may add value to the accounts. It also is worth mentioning that it appears the more engaged a respondent already is on campus (based on the amount of organizations they were involved in and their living proximity to campus), the more frequently they reported following multiple university-affiliated accounts and multiple social networking platforms.

IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

Our data supports the conclusions of Chen and others regarding what women are looking for on social media. In addition to information, females reported being influenced by the engagement of others (interaction from others was a reason they would engage more with a post significantly more than it was for men). And they expect visual content in the form of photos while men, if they expect more than information, prefer videos. We also saw in our Twitter campaign analysis that posts with photos had higher engagement rates.

Therefore, especially when targeting the collegiate audience, all effective social media communications strategies would be wise to place a high priority on the number and frequency of photos shared. When developing a strategy, it is important to consider adding a specialty platform (i.e. Instagram for women and YouTube for men) in order to reach a specific gender. While it is somewhat apparent from these results that female social media users are interested in leveraging social media to participate in social events and further their career, it is somewhat unclear what male users are after. Perhaps gender dynamics outside of social media–particularly the advantages and disadvantages of each gender's socio-normative position in the professional and academic world–could be a factor for the relative eagerness of female students to gather every advantage possible. Alternatively, it could merely be a marker of the general differences in social media consumption between the genders.

Our study has several limitations. First is the relatively small sample size. We are addressing this through ongoing data collection. Second is the possible over-representation of Computer Information Science majors among male respondents. Lastly, because Facebook and Twitter do not provide individual-level data about which user is engaging with which post or any specific gender information by engagement, we were unable to analyze our campaign interventions by gender at the individual user level.

We have several future research ideas in mind. First, in this study we did not find what could motivate males to participate more with university social media accounts and would like to in a future study. Second, it would be interesting to develop a social media campaign with specifically gender-targeted content for males and females that could be A/B tested for engagement. Understanding the possible effect on engagement levels could again have implications for social media marketers in all industries.

Additionally, the medium size of the student body enrolled at the studied university, 6,722 students [16], compared to the larger national-mean enrollment college campuses, based on the definitions provided by College Data [4],

indicates face-to-face communication may carry an increased emphasis in our sample environment than it would within a larger student body. Thus, some of the engagement patterns we have tracked could have been significantly affected by a possible lurking variable representing a shift towards verbal communication in cases where information can be easily gathered by smaller and more familiar social circles. Conversely, large college campuses could prove to be more easily navigated through social media platforms that tend to circumvent, or in the case of more recently produced platforms–such as ask.fm and yik yak–even emphasize anonymity.

Lastly, the most significant opportunity to continue our work is to focus on the significant differences on "engagement from others" as a motivator for interaction with a post for females. Are women more likely to follow others? Specifically, test the role of "influencers" as a motivator among the college audience and understand how best to reach those influencers could have implications both on campuses and for companies using social media to engage with their constituents and customers.

REFERENCES

1. Batteau, A. W. (2009). Technology and culture. Waveland Press.
2. Burger, J. D., Henderson, J., Kim, G., & Zarrella, G. (2011, July). Discriminating gender on Twitter. In *Proceedings of the Conference on Empirical Methods in Natural Language Processing*. Association for Computational Linguistics, 1301-1309
3. Chen, G. M. (2015). Why do women bloggers use social media? Recreation and information motivations outweigh engagement motivations. *New Media & Society, 17*(1), 24-40.
4. College size: Small, medium or large? (n.d.). Available: http://www.collegedata.com/cs/content/content_choosearticle_tmpl.jhtml?articleId=10006
5. eMarketer Staff Report. (n.d.). Total U.S. ad spending to see largest increase since 2004. eMarketer. Available: http://www.emarketer.com/Article/Total-US-Ad-Spending-See-Largest-Increase-Since-2004/1010982
6. Facebook Newsroom. (n.d.). Available: http://newsroom.fb.com
7. Fisher, E. (2015). 'You media': Audiencing as marketing in social media, media, culture & society. *Sage Journal, 37*(2015), 50-67. Available: http://mcs.sagepub.com/content/early/2014/10/11/0163443714549088
8. Instagram. 300 million: Sharing real moments. (2014, December). Available: http://blog.instagram.com/post/104847837897/141210-300million
9. McDermott, J. (2014). Facebook losing its edge among college-aged adults. *Digiday*, Available: http://digiday.com/platforms/social-platforms-college-kids-now-prefer
10. Palfrey, J., & Gasser, U. (2013). Born digital: Understanding the first generation of digital natives. Basic Books.
11. Pariser, E. (2011). The filter bubble: How the new personalized web is changing what we read and how we think. Penguin.
12. Rose, J., Mackey-Kallis, S., Shyles, L., Barry, K., Biagini, D., Hart, C., & Jack, L. (2012). Face It: The impact of gender on social media images. *Communication Quarterly, 60*(5), 588-607.
13. Tortajada-Giménez, I., Araüna-Baró, N., & Martínez-Martínez, I. J. (2013). Advertising stereotypes and gender representation in social networking sites. *Comunicar, 21*(41), 177-186.
14. Turkle, S. (2012). Alone Together: Why we expect more from technology and less from each other. Basic Books.
15. Twitter. About. (n.d.). Available: http://www.twitter.com/company
16. Washburn University Enrollment Report Fall 2014. (2014).
17. Volkovich, Y., Laniado, D., Kappler, K. E., & Kaltenbrunner, A. (2014). Gender patterns in a large online social network. Springer International Publishing. *Social Informatics*, 139-150.

APPENDIX A

[Q1] What is your self-identified gender?

[Q2] How far from campus do you live? (Assume normal driving traffic)

[Q3] Which of the following are you involved with?

[Q4] What degree are you pursuing?

[Q5] Which Washburn social media site do you follow?

[Q6] What was your specific purpose for following any of the above listed Washburn social media accounts?

[Q7] What types of posts from Washburn related social media accounts interest you most?

[Q8] Compared to how often you retweet/repost other posts, how often do you retweet/repost Washburn's posts?

[Q9] What would make you engage with Washburn's posts more?

[Q10] Given the following social media platforms, how frequently do you use them?

[Q11] Which of the following is your favorite platform?

[Q12] Please explain why is [Q11] your favorite platform.

[Q13] Approximately how many university events have you attended since August?

[Q14] Thinking of the events you attended, how did you know about them?

[Q15] What was the primary reason you attended those events?