TO DRIVE OR NOT TO DRIVE: CULTURE AND GENDER IN ONLINE SOCIAL NETWORKS IN SAUDI ARABIA - A CASE STUDY

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ABSTRACT
The ‘Arabic Spring’ of 2011 ushered in a period of vast use of social media channels in the Middle East, during which Arabic women promoted their rights. Although politics is a strong motivator, little research has been done on social values in that context. Thus, this study looks at and explores the extent to which Middle Eastern women use Twitter to declare their entitlements and accountabilities in civic society. Here, mixed methods have been applied. The results indicate a genderized dominance within Twitter’s online community and interesting issues of nationalisms and global conventions were discussed. Extreme and unexpected cases triggered strong support from both genders, and these cases made a difference in male support of women’s cases regarding their impulsive and none-impulsive declaration of opinions. In this context, questions have been raised as to how safe Twitter is for women in segregated domains, and how change can take place within and among different online societies regardless of gender.

Key words: Social media; Twitter; women and gender; online communities; cultural change; users’ characteristics, the Middle East;
region. Here, the controversial question remains as to whether social media is considered an effective and efficient tool for change. From an objective point of view, reference [14] divided the authors between a) optimists, who support the idea of social media empowerment and building new democratic strategies, and b) skeptics, who view participation as delusional, and social media as a tool of repression used by authorities [14]. As a result, one might conclude that the successful use of SM depends strongly on the context and the circumstances associated with the use of social media, including time, participants, goals, methods, and, of course, the results of that use, which seem to be absent and not measured.

CURRENT STUDY

The changes in social norms are as strong a force as politics [19], and social media channels are used to propagate this change [3]. There has not been to date a qualitative study that specifically looked at this case from an objective point of view. This study is part of a larger research project that explores in depth the gap in literature pertaining to women using social media in the ME.

In this study, we emphasize the importance of the contextualized approach in studying social media [1][14]. Specifically, we are exploring the social aspects and change over time in a case that relates exclusively to women in a specified context: the ban on car driving for women in Saudi Arabia. Saudi Arabia is the only country where women are not permitted to drive [4], and this issue has received global attention. Although no written law forbids women from driving [3], the government officials state that the women driving issue is a social concern, meaning that the people have to accept it first [23]. On the other hand, citizens asked the government to take steps to ensure the safety and proper legalization similar to other countries close to the Saudi's culture like UAE and Kuwait [4].

The issue seems to be rooted in: a) the conservative Saudi culture that forbids women travelling long distance without a male guardian (religious roots); b) the fear of tarnishing women reputation due to different threats, such as verbal or physical abuse (social pressure roots); c) the absence of female police or law officers, and official trainings (logistic roots). In a strongly male-dominated culture, there is also a lack of substantial evidence concerning how women are reacting to this issue.

With the vast use of social media worldwide, Saudi Arabia has a significant share [9]. Twitter, in particular, is free news media and a social interaction channel. It is widely used and very popular among both men and women in Saudi Arabia [9]. In Twitter, users are free to voice their opinions without the restriction of formal news media or blogs, or the biased effects of using online surveys. Twitter is an open platform for exploring and studying social interaction and behaviour in the online sphere. Therefore, we used tweets to investigate how Saudi women use social media, how they react to issue related to them, has the gender differences any effects on online discussions? And who are the key players in that case? There are two sides of this investigation. Therefore, we have divided this study into two phases of data collection and analysis.

The first phase aims to understand the social acceptance and online community interaction [1][8]. Our aim is to measure public opinion, hence we focused on a collection of tweets in which we conducted both text and network analysis [1][8]. This phase produced interesting results in terms of how and who plays a major role in the online Saudi society, and what critical issues relating to women were associated with each other.
The second phase was to measure women’s opinions and compare them to those of their male counterparts. We used the example of Loujain, a young Saudi woman who was imprisoned for 2 months for driving. The tweets associated with this example were manually coded across gender differences (support/opposition). We went a step further, here, by coding the way these differences were voiced (e.g., in a shocked, humorous/sarcastic, justifying, or informing tone). The social picture that resulted from this analysis helped us obtain clearer insights on how women’s issues are presented and dealt with, and how gender plays a significant role in this matter.

BACKGROUND

Arabic Women in Social Media

Social media has provided a free and accessible tool to everyone who has the means to use it. Furthermore, social media can be considered as the criteria, as introduced by [15], which act as the voice of women’s empowerment. In spite of the control of the formal news media, women who used blogs (a form of social media channels) were strong and patriotic leaders, as well as organizers [16]. In addition, there is evidence of strong and effective women’s participation in uprisings, especially in Tunis and Egypt [16][17][18][19]. However, this was not the case in Saudi Arabia or the Gulf States (i.e., Kuwait, UAE, Qatar, Oman, and Bahrain). These states did not experience demonstrations or social unrest. Therefore, the participation in online social platforms happened for different reasons, such as promoting driving for women and voting in municipal elections [4]. However, in a strongly segregated country, such as Saudi Arabia, it was expected that online interaction between men and women would be beneficial and that it would help women draw attention to their issues in a safe manner. However, cross-gender online communication, such as online forums, was very limited and women were subjected to ridicule and disregard. In addition, they were forced by the male administrators of the online forums to limit their discussion to the women-only forums [20].

Women to Drive Movement

The Arab Spring uprisings have inspired some Saudi women to call the attention to what they called “The Right to Drive” and “Women to Drive” movements [2]. These women wrote a petition to Saudi authorities asking for a new regulation that would allow women to drive motor vehicles on public roads. The movement was announced on October 26, 2013, which became the mobilization day for all Saudi women to drive their cars on the streets. The day before the appointed day, a spokesman from the Ministry of Interior warned the participants, and as a result, the crowd failed to organize [2].

The Case of Loujain Alhathloul

Loujain (Twitter handler @LoujainHathloul) is a young Saudi woman who has lived in Vancouver, BC for the past few years as part of her scholarship that allowed her to study abroad. On November 29, 2014, she retweeted a post from @Oct26driving; the tweets included a self-recorded YouTube video posted by Loujain while she was driving her car in UAE. In the following hours, she posted several tweets saying that she is only an hour from the Saudi border. She had obtained a UAE driving license that was valid all across the CGCs, and she encouraged her followers to stay tuned and wait for what will happen at the Saudi border. She arrived at the border and waited for nine hours. During her wait, she posted pictures and updates emphasizing how she was treated by the officers (including a CNN post on Twitter broadcasting her case). After 24 hours, a Saudi female reporter, @maysaaX, arrived from the UAE to support her. Both ladies were arrested [22]. On February 12, 2014, Loujain...
posted a welcoming message indicating her release [21]. Since that incident, until the time of this study, her tweets have been social in nature and supportive of women, as well as national causes.

DATA COLLECTION & ANALYSIS

First Phase

Sample collection

We used the hashtags #Women2Drive (both in English and Arabic) to collect tweets during the period of March 18- April 15, 2015. This time was chosen for 2 reasons: a) the Saudi government had experienced significant changes at the Royal level, which might seem to be a good opportunity to voice civic demands, and b) the demand for driving had been quiet for a while, thus drawing attention to it again might decrease the chance of opposition [6]. We obtained a total number of 1419 tweets in both Arabic and English. The collection was made through Twitter search API.

Analysis and results

We analyzed the data using Netlytic, an online social networking analysis tool [7]. The English tweets were automatically cleaned. However, we had to do a cleaning process with Arabic tweets where we removed the following: stop words, irrelevant terms that were associated with ads, and general terms (e.g., Saudi Arabia). Then, we generated a word count (Fig. 1). This step was important to determine the frequently used terms. The number of unique words was 19355. Here, we used the top 100 terms and tracked them.

The biggest words in the cloud belonged to a famous tweet that was frequently retweeted and mentioned (in about 24% of the tweets). The tweet was posted by the user @ksa12300, the user name of a group of conservative and religious Saudi users who identified themselves as such. The tweet itself says: “In the covenant of King Salman, tongues talking about #Women2Drive and the Promotion of Virtue were silenced, and #CEDAW is infanticide and its promoters were expelled. The era of correction and firmness has begun”.

Another dominating tweet that was also often circulated contained a link to a YouTube video that referred to a famous Saudi clergyman who gave a reason as to why women are banned from driving, which was: “not to go to her lover”. This particular tweet received some opposing comments, as it was considered “a defame of Saudi girls’ virtue” and “accusation of character”.

In addition, further analysis showed that there were some hashtags that appeared to be connected to women and driving, for example:

- #women_feminism and #nyflc2015 (New York feminist leadership conference) that appears in the English tweet “#NYFLC2015: Here's a cartoon for

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1 In reference to the Committee for the Promotion of Virtue and the Prevention of Vice (or the so called religious police in Saudi Arabia)

2 The Convention on the Elimination of all forms of Discrimination Against Women issued by the UN
attendees to read and share on Sunday morning. #Feminism #SaudiArabia #Women2Drive http://t.co/pNL09do6v4” in reference to a cartoon picture that indicates that all scenes of women driving cars were deleted from a movie.

- #BanOfMaleGuardianshipLaw (in Arabic) appeared in reference to another issue specific to Saudi women: every female has to have a legal male guardian, regardless her age.
- #Syria as in the tweet “Not by Islamists, no world's outrage. Keep them busy with #Women2Drive!!” was shown in reference to a picture of tortured and killed Syrian civilians.

The sample also showed a number of users (i.e., the users are identified by a set of characters preceded by the sign @). These users were either mentioned frequently because of their tweets, got retweeted, or the user was influential. To determine which of these is the case [4], we did a network analysis [7]. The left picture in Figure 2 illustrates the original network of the users. We filtered the network by keeping only the 5 largest clusters of users (right picture). An influential user centers each cluster. The more followers who retweeted, replied to, or mentioned the centered user, the larger the cluster.

The largest cluster is the green network (labeled as #1), which is centered on the user @ksa12300 with 199K followers. This group refuses to support women driving and has contributed the dominant tweet mentioned previously. Similarly, the user @mo7mad_ils3od has 14k followers and is one of the Saudi royal family members. He is an active social media user, is conservative, and supports the idea of women not driving. He contributed this message in Arabic: “As if all women’s issues have shrunk away leaving only #Women2Drive and #BanOfMaleGuardianshipLaw. They [libertines] are only interested in corruption”. The purple cluster on the left side of Fig 2 (labeled #2) represents his network.

The turquoise network close to the upper right corner (labeled #3) belongs to a female user @111rose222 who has 4,815 followers. She is an active user whose tweets are humorous and witty. However, when we looked up her account, we could not find a strong sign of support or opposition related to women driving. Her post was a photo of an Arabic actress leaning on her car in a suggestive way, with a comment that said: “All participate. Should women learn about all simple problems relating to cars? (laugh³).

³ Using the commonly known Emoji (small digital images expressing emotions or objects)

In the top middle figure, there is a network that is located slightly farther from the others (labeled #4). It belongs to @HsnFrhanAlmalki, a user who has posted the YouTube video (mentioned above) with the comment “I never heard of such a reason
before”. He has 174k followers and identifies himself as “a social activist specialized in Islamic law and history, and a critic of extremism”.

In the middle of the graph there is a scattered cluster (labeled #5) in which a number of female users (e.g., @Ms_riri, @X_Saudi) promote supportive and pleading messages in Arabic, such as “Since 1990 Saudi women are demanding their rights, but they are getting ignored”, “We demand justice from our king. It has been 20 years”, and “King Salman, please issue a regulation, even if limited. Everyone is taking advantage of us: chauffeurs, male drivers, landlords, taxis ... Please do something”.

Overall, the analysis in this phase helped us formulate a general picture of the social perceptions relating to issues that pertain to women. It was shown that men, in this case, dominated the discussion on these issues. They approached it cautiously, yet with great determination using religion and cultural reasons. It was interesting to see that they also used nationalism and loyalty to an issue like driving. The global perspective was present as well as they used the CEDAW as a westernized symbol. It was also interesting to see that those who marginalized women issues are surrounding and dominating the other parties in the middle. Those intermediate players were moderators. They were mostly women. They approached their problems with more realistic and practical reasons. They addressed the authorities directly stating their daily problems and gave ample solutions. However, the difference of opinion between women and men was not clear on a larger scale. One limitation of using Twitter search API is the lack of automatic gender identification. Unlike other social media channels (e.g. Facebook and YouTube), Twitter neither provides the sex/gender option for first-time users, nor does it detect the users’ gender automatically.

Some individual users, such as the case in this analysis, can be identified by name or self-reference (i.e., in Arabic it is easier to identify the gender if the author is talking about him/herself), however, it is hard to detect this with English).

Second Phase
One of the purposes of this study is to differentiate between men and women who support women’s causes. During her arrest, the hashtag “#Loujain_Alhathloul_Appears_In_Terrorism_Court” was posted on Twitter publically in Arabic by a Saudi e-news source, @noonpost, on December 25, 2014. The development, in this case, was interesting to study. Loujain being arrested was an expected conclusion on social level (i.e., much like in the case of Manal Al-Sharif who was arrested and jailed for 10 days in 2011 for driving and challenging social conventions [13]). However, turning the case into an act of terrorism was not expected. Here, we asked the question: to what extent do the opinions of men and women differ? Does going beyond expectations triggers anger, shock, or support? Are there any justifications provided regarding these sentiments? How do women perceive other women’s actions?

Sample collection
Given the time limit of Twitter API, we used Topsy [10] to access tweets that were from 25 December 2014 - 4 January 2015 by using the described hashtag above. Tweets that were ads or unrelated to the issue were ignored leaving us with a total number of 523 tweets.

We asked two colleagues (a female and a male who were fluent in Arabic and understood the Saudi dialect) to help categorize the content. That allowed us to decrease the discrepancies in understating the meaning of each tweet and to avoid any form of bias. We coded each tweet according to: 1) the identity of the user (i.e., female
(F)/ male (M)/ news source (NS)/ or not available (NA)) based on a combination of identifiers (name, profile picture, self-reference, etc.), and 2) the content of the tweets (i.e., support/ humor/ providing reasons/ news/ shock/ asked for confirmation, and opposition). The categories were not predefined and were created as more content was read. Each tweet was classified into one or more category.

### Analysis and results
The total number of females and males was close (283 and 212 respectively) with 27 cases that could not be genderized (N/A) and only one news source (NS) (Table 1).

#### Table 1 Coding Categories of frequencies and percentages of users’ opinion on Loujain’s case among males and females

<table>
<thead>
<tr>
<th></th>
<th>F (N=283)</th>
<th>M (N= 212)</th>
<th>N/A (N=27)</th>
<th>Total (N=522)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count of</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Support</td>
<td>194</td>
<td>68.6%</td>
<td>120</td>
<td>56.6%</td>
</tr>
<tr>
<td>Reasons</td>
<td>157</td>
<td>55.5%</td>
<td>137</td>
<td>64.6%</td>
</tr>
<tr>
<td>Humour</td>
<td>111</td>
<td>39.2%</td>
<td>63</td>
<td>29.7%</td>
</tr>
<tr>
<td>Shock</td>
<td>69</td>
<td>24.4%</td>
<td>27</td>
<td>12.7%</td>
</tr>
<tr>
<td>Opposition</td>
<td>26</td>
<td>9.2%</td>
<td>42</td>
<td>19.8%</td>
</tr>
<tr>
<td>News</td>
<td>20</td>
<td>7.1%</td>
<td>38</td>
<td>17.9%</td>
</tr>
<tr>
<td>Needs confirmation</td>
<td>35</td>
<td>12.4%</td>
<td>12</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Surprisingly, a wide gap did not exist between males and females who provided supportive messages. Around 68.6% of females were supportive of Lougain, of which 60% of them gave explanations (e.g., “In 2015, when a female drives her car to facilitate her mobility, it is considered a crime. A very advanced level of misery” and “In humanitarian issues and with family waiting for their daughter, say something good or keep silent”), 37.1% of them used humor (e.g., “After some years, the world will produce a comedy movie called ‘Kingdom of Saudi Arabia’” and “One hears this news and thinks she has an RPG [a gun] and starts killing [laugh]”), 23.2% were shocked (e.g., “People, I can’t believe it, did she cross the border with a car or a tank? Please tell me” and “Wtf is wrong with this country!!”), 1.5% needed confirmation as well (e.g., “why this silence from her family? Only Alya [Loujain’s sister] talked. To where have her father and fiancé disappeared?”). On the other hand, around 56.6% males were supportive, of which 69% gave reasons (e.g., “Loujain, your crime is being a free woman”, and “She defends her right and the rights of Saudi women”), 40% were humorous (e.g., “If they caught her riding a mule, they would arrest her and charge her for being alone with an unrelated male”), 10% shocked (e.g., “This is extremism!”), and 3.3% provided news (e.g., “She was referred to the ‘Specialized Criminal Court4’ because it was not the judge’s specialty in the original court”).
Unlike with supportive tweets, there was a significant difference between male and female condemning messages. Around 9.2% females explicitly condemned Loujain and opposed driving for women in which 69% of them gave explanations (e.g., “The veil ban in France was accepted, why not the ban on driving?” and “We are annoyed with her stories. She wants to make history out of nothing”), and 30.8% used humor as a way of degrading Loujain’s social status and making fun of her.

Males expressed more opposition (19.8%), of which 59.5% gave explanations (e.g., “Loujain is mostly despised by the majority of the citizens, and [the ministry of] interior has condemning evidence, she [Loujain] imprisoned herself”) and 19% were humorous (e.g., “A woman in a car is as equal as an explosive in the car, both are a crime [smile]”).

Note that there are around 22% females and 23.6% males who didn’t express explicit support or opposition. Their tweets were mostly either asking for a definition of terrorism or circulating reasons for her arrest (e.g., “Charges are: 1) incitement to Saudi Arabia, 2) discredited the nation and its employees, and 3) did not wear a hijab” and “achieved goals in a way that contradicts traditions and social conventions”[quoted from a legal text accompanying a picture].

DISCUSSION
The purpose of this study was to determine the effects of social media use in the MENA region on issues that are specifically related to women and how the online society differs in its perception among its members. We specifically examined one of the controversial issues in the Saudi society that currently concerns women.

The results showed that there are indeed active Saudi women who are social media savvy. They ask for practical orders like to limit the number of foreign chauffeurs, they want to save their time when commuting to work or school, and have female police officers dealing with women’s issues. They are comparing the ban on females driving to the ban of girls’ education decades ago, or the contradiction of speech vs. actions of those who oppose women driving. The women were using practical and informational approach compared men when it comes to discussing women issues in the social media sphere. Leading Saudi Twitter male users dominate the social opinion, and they are against women driving. The main reasons for this opposition are: a) not to promote western values, b) it is a form of forbidden liberty, 3) it is a form of disobedience to the ruler, 4) leads to sins and social disturbance, 5) it is important to preserve women’s honor, modesty and virtue, and 6) it is imperative to keep the socio religious rule of men as guardians of women. Comparing those reasons to the reasons given in Loujain’s case, we concluded that male support might rely on impulsive ideas and the sense of protectiveness and justice in extreme cases, but the support is lessened and is more bound by social conventions in a broader spectrum. However, results show that men tend to be sympathetic with cases like that of Loujain. They refuse harsh treatment and injustice to women even if the women’s actions defy conventions. Moderate male social activists, such as user @hnsfiranalmalki, oppose the extremists in their distrust of women, or their degradation of women’s values in society.

Furthermore, the analysis revealed a significant portion of women who are against driving. Those women help to propagate the opposing tweets for the same reasons of opposition as mentioned above. In addition, they believe that they [themselves] are being “treated like princesses and...
queens” (i.e., they do not need to do their errands because males do them instead). This shift from women vs. men to society vs. society and women vs. women (as in the hashtag #WomenAgainstWomenDriving) was clear in Loujain’s case. However, one might observe that change is in fact happening in slow motion. One male user said: “She [Loujain] is fighting for her rights and the rights of Saudi women, alas, those whom she defends are satisfied with eating [snacks]”.

The circumstances that are happening now in Saudi Arabia (e.g., the change in the government, war against Houthis in Yemen) have contributed to the issues related to women (i.e., driving, and appointing male guardians) being overlooked. Also, these opinions might be limited to the people who choose to tweet about the issue. Even though Twitter represents the online community in its social sense, the people who interact with it might have different perceptions, which might sometimes lead to fake identities. Women, or men who advocate for women, might have to use non-gendered self-identifications that can allow them more freedom and protection from possible social unpleasantness online [20].

On a technical level, Twitter API limits the collection of the number of allowed tweets in both time and volume [1]. Moreover, Topsy [10] returned search results that are relevant but not entirely real-time data or useful in different time spans as the tweets are archived. Nonetheless, the data gave us a clear understanding of the public opinion regarding women’s issues during an unsupervised online interaction. This particular format allowed for more space and substantial freedom in expressing opinions as compared to survey results or study groups.

On an academic level, we currently are working on collecting data about interesting observations resulted from this study: 1) the role of moderators (middle players) and 2) the global perspective. By using text-mining techniques, we hope to reveal compelling answers to questions related to Saudi girl's self-identity in local and global setting and how they used education, technology, and wealth to empower themselves and the others in the online sphere. We also aim to achieve better results and clearer explanations on the online social interaction including the change of public opinion regarding women’s stance over time.

**CONCLUSION**

Social media channels have helped to increase the bond among online societies on a large scale. For Arabic women, those channels were, at times, the only way that they could communicate their opinions, emotions, support, and struggle outside of the traditional media. After four years of revolutionary use of social media in the MENA region, it is still a relatively new area of study. The importance of such studies relies on many factors, including: social interaction and networking; marketing and business; politics and freedom; the medical sphere and health; education and safety, as well as public awareness, education, and safety, to name a few of the implications of such studies.

Women, in particular, seem to be struggling between stating and demanding their rights while preserving their social values and their responsibilities as citizens, who are bound by various rules and regulations. Twitter has allowed a degree of safety for Saudi women, by, for example, allowing them to interact online and by giving them space where they could present their cases to other users. However, the factors that currently surround the online social atmosphere have limited that interaction, and as a result, women’s issues have been abandoned. However,
given the successful, although limited examples, of women in neighboring countries (e.g., Egypt, Tunisia, and UAE) and the boom in the Saudi girls’ high level of education, we can forecast a slow but imperative change in society’s online as well as offline conventions.

REFERENCES


