# Trumped by context collapse

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**Trumped by context collapse: Examination of 'Liking' political candidates in the presence of audience diversity**

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**Abstract**

Harnessing social media such as Facebook is now considered critical for electoral success. Although Facebook is widely used by the electorate, few have 'Liked' the Facebook pages of the political candidates for whom they vote. To provide understanding of this discrepancy, the present paper offers the first investigation on the role of audience diversity on 'Liking' behavior, as well as its association with varying degrees of social anxiety that may arise from 'Liking' political candidates. A survey of potential voters who used Facebook preceding the 2016 Presidential Election was conducted (n=1027). Using the lens of Self-Presentation Theory, results found that for those who had not already 'Liked' Hillary Clinton or Donald Trump, their intention to do so before the election was negatively associated with the diversity of their Facebook audience. This relationship was mediated by their expected degree of social anxiety from 'Liking' the candidate. A comparison of audience diversity of participants who had 'Liked' a candidate vs. those who had not 'Liked' a candidate also showed that increased audience diversity hinders 'Liking'. This paper contributes to the knowledge of engagement with politicians through social media as well as the study of audience diversity more generally. Implications for managers are provided.

*Keywords; Social Media, Politics, Context Collapse, Social Anxiety, Facebook, Audience Diversity*

## 1. Introduction

Since Barack Obama was elected as the president of the United States in 2008, the Internet, and in particular social media, has been hailed as a critical component of winning elections (Cogburn and Espinoza-Vasquez, 2011; Wattal et al., 2010; Enli and Naper, 2016). This has drawn scholarly attention to understanding the antecedents of the success social media provides for candidates; with some findings concluding that it creates increased personalization of channel communication, greater interactivity and that it allows constant engagement (Kruikemeier, 2014; Larsson, 2016; Colliander et al., 2017). However, other studies urge caution with certain engagement strategies, such as the use of 'promoted' tweets (Boerman and Kruikemeier, 2016).

In recent years, Facebook has been under scrutiny over speculation that it creates an 'echo chamber' in which users are only exposed to political content that reinforces their view, this being the same view shared by the majority of their friends (Bakshy et al., 2015; Vaccari, 2012; Yang et al., 2017). Users' networks are largely populated by individuals similar to themselves, a phenomenon known as homophily (Wimmer and Lewis, 2010). It is Facebook's content distribution algorithms and the occurrence of peer-to-peer sharing within this network of homophily that gives rise to the so-called echo chamber.

Given the rhetoric that social media is the new stage for engaging voters, it is surprising that only a small proportion of the electorate who are Facebook users 'Like' the pages of political entities to which they are exposed on Facebook. For example, in July 2016 only 4.9 million people 'Liked' Hillary Clinton's Facebook page, a small percentage of the 163 million adults in the US who use Facebook (Gottfried and Shearer, 2016), especially considering that she won the popular vote (Krieg, 2016). Marder et al (2016) propose that this discrepancy may be partially explained

by the conspicuous nature of 'Liking' political entities (i.e. 'Liked' pages are largely visible to a user's network) on Facebook, as people shy away from visible affiliation so as not to cast a negative impression to others. However, this is somewhat juxtaposed with the notion of homophily and the echo chamber it creates. If users' friends share largely the same views as themselves, why is it that they do not show that they 'Like' a politician?

The present research aims to decipher whether this discrepancy between electorate Facebook users and the 'Likes' of politicians can be explained by the less considered heterophily within a user's network (i.e. the presence of individuals who do not share the same view as the user), that is, greater 'audience diversity'.

Political candidates grapple for 'Likes' and 'Followers' to allow for direct communication with the electorate newsfeeds (Gerodimos and Justinussen, 2015) and to garner the support of these large communities, as they are seen by others as a barometer for success (Graham, 2016). 'Liking' a page or 'following' an account are "crucial gateway behaviors" (Marder et al., 2016), with political candidates investing heavily in encouraging these to occur (Jivanda, 2014; Hawkins, 2015). The issue is that in general, without the use of privacy settings, the pages or accounts a user 'Likes' or 'Follows' are visible to their network. Considering whether to 'Like' Donald Trump could be worrying, as it may be perceived as acceptable or favorable to certain Facebook 'friends', but to others it may be unappealing. Technologies even exist to aid users in 'defriending' others who hold different political views to themselves (e.g. friendswholiketrump.com). However, recent research has found political disagreement does not significantly predict filtering opposing views of friends from newsfeeds (Yang et al., 2017).

Marder et al (2016) found that if 'Liking' political parties on Facebook is deemed to cast an overall negative impression to others, it is associated with increased anxiety and this reduces users' intentions to 'Like'. However, it is important to note that this prior research did not take into account audience diversity and explicitly calls for this to be done. The audience for a user's self-

presentation on social networks sites such as Facebook, is complex. It is likely to contain people who are known offline and others who are only known online. Amongst them will be individuals from a plethora of different contexts e.g. close friends, school-friends, acquaintances, colleagues and family (Binder et al., 2009). Such contexts may overlap and individuals within them are also likely to be interconnected with each other through the site. Furthermore, dependent on the extent to which the user adopts privacy restrictions, this audience may extend beyond articulated connections to include also friends-of-friends and the general public. This makes sites such as Facebook intriguing platforms for the investigation of the interplay between the self-presenter and the audience.

The focus of the present study is on audience diversity within social network sites, similarly known as 'context collapse'. It occurs when a user presents themselves simultaneously to others from different contexts. This is widely acknowledged as a novel facet of self-presentation through social media, and is important in understanding behavior in such platforms (Marwick and Boyd, 2011). The notion of self-presentation refers to the act of managing one's public image in front of an audience with the aim of instilling a desired impression (Goffman, 1978). Self-presentation on social media (i.e. the creation and maintenance of a digital persona) has been widely studied with regards to who and what users self-present online and the tactics used to manage these online personas (e.g. Oh and LaRose, 2016; Oeldorf-Hirsch et al., 2017; Zhao et al., 2008). However, only a small body of research has addressed the pervasive and nuanced issue of self-presentation in the presence of audience diversity (e.g. Binder et al., 2009, Marder et al., 2012). At present, no existing study has examined the impact of audience diversity on the crucial gateway behaviors (e.g. Liking a page) in the context of political candidates or brands, public figures and organizations more generally.

The present study contributes to this gap. Specifically, this study - based on a survey of the US electorate in the run up to the 2016 Presidential election - examines the impact of audience diversity on anxiety associated and intention to 'Like' a candidate's page. Furthermore, unlike previous studies that have only examined

audience diversity in relation to behavioral intentions (e.g. Kwon et al., 2015), the present research will contrast audience diversity between users who have 'Liked' pages with those who have not, providing stronger validation of the phenomenon under investigation. Self-Presentation Theory, first introduced by Erving Goffman (1978) in the field of sociology, but now well established in social psychology (e.g. Leary, 1995), will act as the theoretical lens of this paper. This conceptual foundation is adopted because social network sites such as Facebook are at core, technological self-presentation arenas where users create and maintain online representation through various tools that the sites provide (Zhao et al., 2008). Without such user-generated content contributing to users' self-presentations, public or semi-public sites such as Facebook would likely not exist.  The use of self-presentation theory here is akin to its use in other 'computers in human behavior' research that attempts to understand conspicuous behavior occurring in the presence of audiences (e.g. Walther, 2007; Marder et al., 2016). This is particularly the case with Marwick and Boyd's (2011) seminal article on context collapse that is central to the theoretical underpinning of the present study.

## 2. Literature Review

### 2.1 Self-presentation in the presence of audience diversity

Self-presentation is the act of managing the impressions one gives to others in order to instill a desired image in the minds of those others. Individuals will cater both verbal and non-verbal cues to achieve a preferred impression based on the perceived expectations, standards and values of their audience (Goffman, 1978). Leary and Kowalski (1997) state that when a person believes their presentation has, or will, become discrepant with the expectations of their audience, social anxiety will arise. Social anxiety differs from generalized anxiety in that it is strictly associated with the presence or possibility of interpersonal evaluation (Ibid). This situation is known as a self-presentational predicament (Leary, 1995). The intensity of social

anxiety is found to be positively related to the size of the discrepancy between the perceived presentation and audience standards (Higgins, 1987; Leary and Kowalski, 1997).

Social media, such as Facebook, provides a rich stage for self-presentation (Bareket-Bojmel et al., 2016; Brailovskaia and Bierhoff, 2016). However, a crucial difference exists for presenters in this domain compared with presenting in an offline domain, related to audience diversity. Offline, people segregate diverse audiences through the use of time and space, e.g. a person may present themselves as being a hard-nosed professional at work as expected by their colleagues, but when at home in front of their family, they present a softer side (Goffman, 1978). On Facebook 'context collapse' exists, i.e. when contexts that are normally separated offline (e.g. work vs. home) are collapsed into one arena (Marwick and Boyd, 2011). Marder et al (2012) suggest that this context collapse is key for creating heterophily in users' networks. Prior research from the field of psychology finds that public speaking in front of different audiences increases the feeling of social anxiety (Latané and Harkins, 1976). However, such audience segregation strategies used offline are largely ineffective when deployed through social media. Unless the users adopt privacy settings to segregate information flow between audiences - which most users do not (Brandztæg et al., 2010; Bright et al., 2015) - different audiences with different expectations may view their social media persona simultaneously (Lampinen et al., 2009; Binder et al., 2009). This has been discussed as making it difficult, if not impossible, to concurrently meet the expectations of all audiences at once (Marder et al., 2012).

Audience diversity within Facebook has been associated with increased tension within networks (Binder et al., 2009) and cases of social anxiety within relational dyads (Marder et al., 2012). Furthermore, it has been found to lead to increased intention by self-presenters to impression manage content linked to them online, either through self-censorship before the content is communicated, or afterwards through removal behaviors, e.g. deleting or de-tagging (Lampinen et al., 2009; Kwon et al., 2015). The outcome of this impression management, used to

avoid casting a negative image to one or more audiences, has been coined the 'lowest common denominator effect' (Hogan, 2010). This is where self-presenters ensure their online representation is concurrent with the expectations of their strictest audience. For example, an individual may wish to post right-wing statements to the majority of their friends who are also right wing, but as this is perceived to upset their mother who is more liberal, they choose not to post such comments. Thus, although networks are subject to homophily (Aiello et al., 2012), the lowest-common denominator effect asserts that it is the heterophily that guides behavior. This is supported by Marwick and Boyd (2011: p.13), who found Twitter to be a self-presentational stage where the "strictest standards apply".

*2.2 'Liking': a crucial gateway behavior*

'Liking' a Facebook page and following a Twitter or Instagram account are crucial gateway behaviors for brands, organizations and public figures to disseminate information organically, efficiently and cost-effectively to social media users (Gerodimos and Justinussen, 2015). This gateway act is valued highly by marketers who wish to maintain and build relationships with users (Hanson et al. 2010; Kudeshia et al., 2016; Macafee, 2013; Beukeboom et al., 2015). However, little is known about the antecedents and barriers to these behaviors. Prior research has found that users are motivated to 'Like' the pages of political entities for information and entertainment, as well as to project a positive image of themselves through this party affiliation being visible to their network (Macafee, 2013). In addition, people may 'Like' online content as a means of expressing their opinion (Porten-Cheé and Eilders, 2015).

According to Spiral of Silence Theory, their propensity to do so is positively associated with the congruence between their own opinion and the opinion within the overall climate (see Glynn, Hayes and Shanahan, 1997; Noelle-Neumann, 1974). However, if an individual perceives that their opinion is incongruent with the majority opinion, then in order to avoid social isolation they will tend to refrain from expression. (Ibid).

Marder et al (2016) found that Facebook users would show a greater intention to 'Like' a UK political party's page if their 'Like' was secret (i.e. not visible to others). Furthermore, they posit that it is this concern about self-presentation that explains the discrepancies between the number of Facebook users, the number of votes for a political entity, and the number of page 'Likes'. Approximately 67% (163 million) of the US adult population are active on Facebook (Gottfried and Shearer, 2016). Assuming there is no difference in voting propensity of Facebook vs. non-Facebook users, this is roughly half of those who voted in the US Presidential election, i.e. approx. 80 million individuals. However, in July 2016 when the pages were accessed by the author of the present paper, only 4.9 and 9.9 million people 'Liked' Hillary Clinton's and Donald Trump's pages respectively. Furthermore, a significant proportion of these are likely to have been international users not eligible to vote.

Marder et al (2016) provide valuable knowledge in helping to explain this discrepancy, i.e. that users are concerned about their self-presentation. Though this begs the question, 'why' does such concern occur if users exist in an echo chamber (as previously argued) where the political views they are exposed to are largely congruent with their own opinions and overall opinions in their network? Taken at face value, the climate of the echo chamber, coupled with knowledge of opinion congruence and expression, would suggest a reasonable degree of freedom to visibly affiliate with political entities aligned with the majority opinion of one's network, through 'Liking' their pages. However, the discrepancy highlighted suggests this may not be the case. We propose audience diversity (i.e. context collapse) as an explanation for the seeming lack of 'Liking' of political entities. Arguably, the simultaneous surveillance of a diverse audience, who are largely grounded in offline relationships (Zhao et al., 2008), complicates the endeavor of expressing an opinion that is congruent with that of the majority. This is because doing so may cause an undesired impression in the minds of certain audiences (e.g. employers), perceived to hold an opposing view, who hold social/economic value and who the individual thus wishes to impress.

The examination of audience diversity was neglected in Marder et al's (2016) study but called for in their discussion. Porten-Cheé and Eilders (2015) found that people are more inclined to express minority views online to unknown others, using their real names through a 'Like' button on social networks sites. Though this is a valuable finding, its generalizability to sites such as Facebook, where networks are largely known and diverse, is limited. Furthermore, Oeldorf-Hirsch and Sundar (2015) suggest that audience diversity may impact on the sharing of news stories on Facebook, and state that this aspect has not received much academic attention. Kwon et al (2014) provide initial support for the impact of audience diversity in the political context, finding that increased diversity is positively related to the level of caution when posting political content reported by college students. They too call for further research in this area, particularly with a more diverse sample as is especially crucial in the investigation of audience diversity. The importance of this phenomenon is further reinforced by employers' usage of social media in the recruitment process, to gain insight into applicants' political inclinations (Landau, 2013). Responding to the calls for further research, the present study examines the impact of audience diversity on 'Liking' political candidates' Facebook pages. It is the first study to contribute knowledge concerning the impact of audience diversity on crucial gateway behaviors, which is important for any organization, brand or public figure looking to increase engagement with their intended targets.

*2.3 Hypothesis development*

The presence of diverse, and possibly conflicting, audience standards has been found to result in a lowest-common-denominator presentation. In other words, a 'one size fits all' self-presentation maintained through self-censoring content in accordance with the standards of the strictest audience (Marwick and Boyd, 2011; Lampinen et al., 2009; Kwon et al, 2015). From this insight, the gap between the standards of the most lenient audience and that of the strictest audience represent the constraint on self-presentational freedom from multiple audiences. The present

research uses this intuition to measure audience diversity through the difference (i.e. the range) between standards of the most left wing and the most right-wing audiences. Understanding audience diversity in this way allows for the capture of the essence of the problem, that of heterophily in users' networks (see Marder et al., 2012). Consequently, given audience diversity has been associated with a constrained self-presentation, responding directly to the call by Marder et al., (2016) it is proposed that increased audience diversity will have a negative association with the intention to 'Like' a political candidate. In other words, people who are friends on Facebook with audiences who they perceive to hold a diverse range of political views, will have less intention to 'Like' a political candidate for fear of casting a negative impression to those with views incongruent to that candidate.

Thus:

H1: Greater audience diversity within a user's network (IV) is associated with a reduction in the intention to 'Like' a political candidate's Facebook page (DV).

Marder et al (2012) found audience diversity was associated with more instances of dyadic relational anxiety (i.e. where anxiety was either felt or not felt with regards to a certain audience). Oeldorf-Hirsch et al (2017) predicted that audience diversity (i.e. total number of audience groups friended) would have a positive effect on embarrassment (a mild form of the overarching concept of social anxiety) following a Facebook post, though they found no significant association. We propose their null finding may be due to lack of nuance in their audience diversity measure, as it is plausible that you could friend many types of audience, but that they could still be similar in their expectations. This supports the rationale for the use of the range in audience expectations as the independent variable within the present study. Although there have been some valuable initial insights in this area, no existing study has associated audience diversity within social media with intensity of anxiety. We propose that audience diversity is positively related to the intensity of social anxiety that would occur if a user 'Liked' a candidate's page. This is because increased audience diversity should raise the chance/size of self-presentation

discrepancies, as it is difficult to maintain a desired persona to audiences with heterogeneous expectations simultaneously (Leary and Kowalski, 1997; Latané and Harkins, 1976). Based on Higgins' (1987) well-established positive association between the size of a self-discrepancy and the intensity of emotion that this produces (more recently supported by Hardin and Laki, (2009); Bruch, Rivet, and Laurenti, (2000)), we propose the following: A greater range of audience expectations represents the possible presence of a larger self-discrepancy, as 'Liking' one candidate will be seen as more incongruent by opposing audience(s), thus heightening social anxiety.

Therefore:

H2: Greater audience diversity within a user's network (IV) is associated with an increase in the social anxiety felt if the user 'Likes' a political candidate's page (DV).

Extant research has largely asserted the overarching need for emotion to arise from a self-discrepancy before there is a behavioral response (Mandel et al., 2017; Atalay & Meloy, 2011; Cryder et al., 2008; Sela and Shiv, 2009; Carver and Scheier, 1990). If no emotion arises when a self-discrepancy exists, it would suggest a lack of regard for that specific self-discrepancy within the overall psyche, thus the individual has little motivation to amend their behavior (Higgins, 1987). Thus, social anxiety is known to mediate the relationship between self-presentational discrepancy and the motivation to impression manage. As a result, the more the social anxiety felt from a discrepancy, the greater the need for behavior to reconcile the discrepancy (Leary and Kowlaski, 1997). Hence, when people feel socially anxious in a social situation because they perceive they will not cast the desired impressions, this has been found to motivate them to withdraw from the social situation (Leary, 1995). Thus, it is proposed that social anxiety mediates the relationship examined by H1: an increase in audience diversity leads to a heightening of social anxiety that acts as the impetus for a reduction in the intention to 'Like'.

Thus:

H3: Social anxiety (M) mediates the relationship between audience diversity (IV) and intention to 'Like' a candidate's Facebook page (DV).

The above hypotheses examine behavioral intention. Although intention is an important measure, its validity is often criticized for being a weaker measure than assessing behavior that has already occurred (Venkatesh et al., 2008). Given that existing research into the effect of audience diversity on behavior has largely relied on intention measures (Marder et al., 2016; Kwon et al., 2015) or qualitative reports (Marwick and Boyd, 2011; Lampinen et al., 2009), there is a need to further validate the phenomenon through a larger scale study of occurred behavior. This research will aim to contrast the audience diversity of users who have already 'Liked' a candidate's Facebook page with those who have not, in order to support the findings of prior research and earlier hypotheses presented here. Based on the theorization that audience diversity constrains self-presentation (Marwick and Boyd, 2011), users who have 'Liked' a page should have a more homophilous (i.e. less diverse) audience than those who have not.

Therefore:

H4: Users who have 'Liked' a political candidate's page will have a less diverse audience than those who have not already 'Liked' a candidate's page.

## 3. Methods

*3.1 Participants and procedure*

To test the hypotheses, a survey was conducted with purposive sampling of eligible voters, who were also Facebook users during the 2016 US presidential election. Data collection occurred between 23rd August and 3rd September 2016 using Amazon Mechanical Turk, a commonly used tool in the study of computer human behavior (Rouse, 2015; Holden et al., 2013). Prior work supports the validity

of data acquired from this tool; including having reduced non-response bias and reduced risk of a contaminated subject pool compared to traditional web collection methods (Paolacci et al., 2010). Responses were restricted to those who resided in the US and had a validated track record in over 50 past surveys. In addition, the 'anti-ballot stuffing' setting was enabled on Qualtrics (the online survey tool adopted) to avoid multiple responses from the same participant.

The survey commenced with three qualifier questions: participants were only allowed to proceed if they were at least 18 years old, a member of Facebook and were eligible to vote in the upcoming 2016 Presidential election. Following this, participants answered questions related to the privacy settings they adopted, the audience they had friended, the political inclination of these and their own alignment with the views of the two candidates (Donald Trump and Hillary Clinton). Participants where then faced with the scenario of 'Liking' each of these candidates (the order of which was randomized). Participants were presented with the core measures of social anxiety and their intention to 'Like' the candidates' page. If, however, the respondent had already 'Liked' the page of either of the candidates, they skipped the questions on social anxiety and intention to 'Like' related to that candidate but were presented with the questions related to the other. To end the survey, participants were presented with measures for the remaining control measures and were asked for demographic information.

*3.2 Measures*

Pre-testing on the measures within the survey instrument was carried out in two stages on participants who were adult electorates who also used Facebook. First, cognitive interviewing, a method suggested by Collins (2003), was conducted with 5 participants. This involved the participants 'thinking out loud' while answering the survey in the presence of the researcher. Interviewees were encouraged to highlight any ambiguous questions, which the researcher then probed to understand the best way to reconcile the issue. Following careful consideration of the feedback from this round and subsequent amendments, the survey was piloted with a further

8 participants, who were asked to provide feedback on any issues via email directly to the researcher for further consideration. The pre-testing provided adequate validation for the measures below.

*Audience diversity* was measured and calculated based on an understanding of the lowest-common-denominator effect, i.e. that behavior is constrained by the standards of the strictest audience (Marwick and Boyd, 2011; Hogan 2010). It follows that the constraint of multiple audiences is the distance between the standards of the strictest audience and the standards of the most lenient audience. In the context of political orientation, it is the difference between the expectations of a user's most left-wing audience vs. the most right wing. This is akin with Kwon et al (2014), who based their measure of network diversity on incongruence of political ideologies within the network. In the present study, participants were first asked which audience types they had friended on Facebook (colleagues, close friends, partner, close family, extended family, people they know through their religion, general acquaintances). The selection of audience types was drawn from Marder et al (2012). If an audience type was friended, the participants then reported their perception of that audience's political orientation along a 7-point scale (very left wing – very right wing), adapted from Cohrs et al (2005). A range was then calculated by subtracting the score of the most right-wing audience from that of the most left wing. A higher score therefore represents a greater audience diversity.

*Social anxiety* was evaluated by asking participants how they would feel if others saw that they had 'Liked' the particular candidate's Facebook page. Previously used by Marder et al (2016), and originally adapted from Feldman (1995), the measure consisted of four-items reported along a 7-point scale (i.e. Calm - Tense, Relaxed -Anxious, Happy - Unhappy, Not Worried - Worried), Cronbach's α were >.07 for both political candidates. A higher score infers greater social anxiety.

*Intention to 'Like'* was measured through two-items questioning the likelihood that a participant would "Like the page" and "Receive updates from the candidate's campaign by Liking their page", answered along a 7-point scale (Very Unlikely - Very

Likely). Items were adapted from Bosnjak and Rudolph (2008), Cronbach's α were <.07 for both political candidates. A higher score infers greater intention to 'Like'.

*Control variables* were also measured to account for possible variation within the models. *Political orientation* was evaluated through Mehrabian's (1996) 7-item scale, reported along a 7-point Likert (strongly disagree - strongly agree), with Cronbach's α =.90, a greater score representing increased conservative orientation. *Alignment with candidate* was measured using three-items that question how much the participant's own vision for the US after the election mirrored that of the candidate. This was measured along a 7-point scale (Strongly disagree - Strongly agree), with Cronbach's α <.07 for both candidates. *Self-consciousness of revealing political inclination on Facebook* (FB Self-con) was measured with an adapted three-item version of the Fenigstein et al (1975) public self-consciousness scale (e.g. "My friends' and colleagues' opinions about me 'Liking' a candidate's Facebook page would cause me concern"). The measure involved a 7-point Likert (Strongly Agree - Strongly Disagree), with Cronbach's α =.94. A higher score for this represents a greater level of self-consciousness. *Facebook usage intensity* was evaluated by the Ellison et al. (2007) scale which involved seven items responded to along 7-point scale (strongly disagree - strongly agree), α = .80. A higher score is associated with greater usage intensity. A control variable to account for variation between the different candidates questioned was also examined, called *candidate* (1= Donald Trump, 2 = Hillary Clinton). *Gender* and *Age* were also used as controls. Descriptive statistics and factor loadings for variables are provided in Appendix 1.

## 4. Results

In total 1027 participants completed the survey. Participants who employed privacy settings to restrict visibility to pages they had 'Liked' were removed from the dataset (n= 37).  Of the remaining participants, 682 had not already 'Liked' either of the political candidates, therefore answered questions with regards to both political candidates, and provided 1364 data points (one point for each candidate questioned about). Only data from respondents who did not 'Like' either candidate was used to

test H1-H3. The remaining 308 respondents expressed that they had already 'Liked' either or both of the candidates, albeit the latter was uncommon (n = 10). There is arguably a case for excluding participants that 'Liked' both candidates, as this non-partisan nature seems unusual. However, this research maintains they should be included as a potentially important segment of undecided voters and/or political enthusiasts. H4 was tested by contrasting the 'Non-Likers' (n=682) against the 'Likers' (n=308). The sample consisted of 64% female, the mean age was 37.1 ($SD$ = 12.1), 59.7% of them were in full-time employment, 63% were graduates and, on average, they had 319 Facebook friends. The sample had a slight liberal leaning shown by a mean score of 3.50 ($SD$ =.1.38) on Mehrabian's (1996) political orientation scale, where the central point is 4.

*4.1 Hypothesis testing*

To test H1-H3, Preacher and Hayes' (2008) bootstrapped mediation model was run; a commonly used analytical technique within the field of study (see Croes et al., 2016; Peñarroja et al., 2015). The model was set up as follows: audience diversity was entered as the IV, social anxiety as the mediator (M) and intention to 'Like' as the DV. The following variables were entered as covariates: political orientation; alignment with candidate; self-consciousness of revealing political inclination on Facebook; Facebook usage intensity; candidate; gender and age. The direct effect (c) and total effect (c') represents the association with audience diversity and intention to 'Like', testing H1. The pathway (a) signifies the association between audience diversity and social anxiety, testing H2. For H3, the mediating effect of social anxiety within a possible relationship between audience diversity and intention to 'Like' is assessed through the indirect effect (a*b), which is presented as a bootstrapped confidence interval (see Zhao et al., 2010). The possible presence of multi-collinearity was checked for all regressions analyses; VIF statistics were all below 3.5, therefore satisfactory (Hair et al., 2011; Wasserman and Kutner, 1989). Appendix 2 provides bivariate Pearson correlations for the variables used in the mediation model.

Figure 1: The mediation model for audience diversity (IV), social anxiety (M) and intention to 'Like' (DV).


[See Figure 1 file]


The findings for H1-H3 are summarized in Figure 1 and detailed in Table 1. The results support H1, showing that increased audience diversity (i.e. an increased range in the political orientation of friended audiences) negatively predicts intention to 'Like', hence a significant direct and total effect ($p<.001$). Support is also found for H2; increased audience diversity is positively associated with social anxiety that would arise if a political candidate were 'Liked' ($p<.001$). Furthermore, H3 is supported; social anxiety is found to be a complementary mediator of the relationship between audience diversity and intention to 'Like' (LCI =-.024, UCI = -.004). Thus, when social anxiety is accounted for, the effect of audience diversity falls (-.098 to -.085) though remains significant ($p<.001$), (Zhao et al., 2010). In addition, certain control variables were significant within the regression models (see Table 1).


To further validate the impact of audience diversity on 'Liking' behavior and gain additional insight into the individual differences in control variables for Likers vs. non-Likers, a between-subject MANOVA was run. The primary DV was audience diversity, with the above control variables added as secondary DVs. The IV was whether the participant had already 'Liked' a candidate or not. Although caution must be taken with regards to the assumption of homoscedasticity when group sizes are unequal (Liked = 308, Not Liked =1364), the group sizes here are considered large, thus reducing the possible negative effects of inequality (Field, 2009). Overall, there was a significant difference in the DVs across individuals who had 'Liked' and who had not 'Liked a political candidate, *Pillai's Trace* F $_{(8,1663)}$ = 102.577, $p<.001$, Partial eta-squared = .330. Levene's test for equality of variance revealed violations for all variables apart from audience diversity and age ($p>.05$). Though ANOVAs analysis are relatively robust against violations of variance (Weerahandi, 1995; Ito, 1980); considering the unequal group size, a Kruskal–Wallis was run to provide

further validation for the between subject difference. The findings concurred with the MANOVA, therefore we proceeded with sufficient confidence, although some caution should be taken with interpreting the results here. In support for H4, audience diversity was less within the group who had already 'Liked' a political candidate versus those who had not 'Liked' a candidate ($p<.01$). Furthermore, certain control variables were found to be significantly different for 'Likers' vs. 'Non-Likers' (see Table 2).

Table 1: Results for regression models

| Mediator Model: Social Anxiety (DV) | | | | |
|---|---|---|---|---|
| F(8,1355) = 96.912, p <.001, Adjusted R-squared = .364 | | | | |
| | β | s.e | t | p |
| Audience Diversity | .060 | .020 | 3.091 | .002** |
| Alignment with candidate | -.417 | .024 | -17.643 | .000** |
| FB Self-con | .205 | .025 | 8.123 | .000** |
| FB usage intensity | .082 | .026 | 3.423 | .000** |
| Age | -.010 | .003 | -3.260 | .001** |
| Gender | .074 | .081 | .921 | .357 |
| Candidate | -.639 | .081 | -7.932 | .000** |
| Political orientation | -.107 | .030 | -3.632 | .000** |
| **Direct Effect Model: Intention to 'Like' (DV)** | | | | |
| F(9,1354) = 102.508, p <.001, Adjusted R-squared = .405 | | | | |
| | β | s.e | t | p |
| Audience Diversity | -.085 | .017 | -9.0944 | .000** |
| Alignment with candidate | .379 | .023 | 16.798 | .000** |
| FB Self-con | .035 | .022 | 1.553 | .121 |
| FB usage intensity | .035 | .022 | 1.567 | .117 |
| Age | -.007 | .003 | -2.755 | .006** |
| Gender | .091 | .069 | 1.316 | .188 |
| Candidate | -.091 | .071 | -1.373 | .170 |

| | β | s.e | t | p |
|---|---|---|---|---|
| Political orientation | .102 | .026 | 3.993 | .000** |
| Social Anxiety | -213 | .023 | -9.094 | .000** |

**Total Effect Model: Intention to 'Like' (DV)**

F(8,1355) = 99.012, p <.001, Adjusted R-squared = .369

| | β | s.e | t | p |
|---|---|---|---|---|
| Audience Diversity | -.098 | .017 | -5.647 | .000** |
| Alignment with candidate | .468 | .021 | 22.323 | .000** |
| FB Self-Con | -.009 | .022 | -.408 | .686 |
| FB usage intensity | .016 | .029 | .707 | .479 |
| Age | -.005 | .003 | -1.904 | .057 |
| Gender | .076 | .071 | 1.058 | .291 |
| Candidate | .039 | .071 | .540 | .590 |
| Political orientation | .125 | .023 | 4.768 | .000** |

Table 2. Results from one-way MANOVA examining differences in individuals who have already 'Liked' a political candidate vs. those who have not.

| | Not Liked | | Liked | | | | |
|---|---|---|---|---|---|---|---|
| | M | S.D | M | S.D | F | p | Eta-sq |
| Audience Diversity | 2.698 | 1.953 | 2.363 | 2.001 | 7.283 | .007** | .004 |
| Alignment with candidate | 2.647 | 1.805 | 5.517 | 1.454 | 679.207 | .000** | .289 |
| FB Self-con | 3.405 | 1.533 | 2.846 | 1.350 | 34.801 | .000** | .020 |
| FB Usage intensity | 4.55 | 1.489 | 5.192 | 1.248 | 49.347 | .000** | .029 |
| Age | 37.290 | 12.768 | 36.342 | 11.956 | 1.407 | .236 | .001 |
| Gender | 1.653 | .479 | 1.577 | .494 | 6.131 | .013* | .004 |
| Candidate | 1.500 | .500 | 1.558 | .497 | 3.437 | .064 | .002 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Political orientation | 3.245 | 1.399 | 4.630 | 1.287 | 253.361 | .000** | .132 |

## 5. Discussion

Responding directly to the call from Marder et al (2016), the findings demonstrate that the presence of audience diversity hinders the likelihood that users will enact the crucial gateway behavior of 'Liking' a political candidate. This is shown through a significant negative association of audience diversity with intention to 'Like' amongst users who had not already 'Liked' the candidates. The contrast of lower vs. higher audience diversity, respectively, for users who have already 'Liked' political candidates vs. those who had not, provides further validation of this phenomenon. In essence, the self-presentation of users exposed to simultaneous surveillance by different audiences who are perceived to hold heterogeneous expectations, is subjected to lowest-common denominator effect (see Marwick and Boyd, 2011; Hogan, 2010). Thus, following Leary (1995), in the presence of audience diversity, 'Liking' a political candidate is perceived not to be desirable to all audience members at once. Therefore a self-presentational predicament (falling below the expectations of an audience) is predicted to occur, if a candidate is 'Liked'. The outcome of this is impression management aiming to prevent the predicament from occurring. Choosing not to 'Like' would be an example of such impression management. It is a strategy akin with someone believing that if they spoke at a party they would say something embarrassing, and so preferring to remain silent (Leary and Kowalski, 1997). Thus in the presence of audience diversity, where self-presentational predicaments are almost certain, when it comes to political self-expression the best 'one-size fits all' strategy is not to 'Like'. This builds on Kwon et al (2014), who associate audience diversity with self-censorship of political posts, provoking further thought on the subject of the 'echo chamber' and the impact of homophily within networks. Thus, although users may receive political content that matches their political views and that of the majority of their connections, the potential for them to interact visibly with this content is constrained by the less

prominent hetereophily in their networks. Consequently, audience diversity may be viewed as a dampener of the popularly speculated 'echo chamber'.

Porten-Cheé and Eilders (2015) who portray general 'liking' of content (not specifically pages) as a 'low-threshold' mode of opinion expression, found that such 'liking' to express opinion to unknown individuals is higher for those who hold a minority opinion about climate change vs. the majority opinion (see also Glynn, Hayes and Shanahan, 1997; Noelle-Neumann, 1974). Extending this finding, the present study asserts the need to comprehend incongruence in audience members' opinions (or more precisely perception of these) when these audiences are known, as is generally the case with Facebook (see Zhao et al., 2008). Though the focus of this paper is on page 'Likes', here it is suggested that general 'Liking' of content is subject to the same effect, dependent on the degree to which individuals perceive this action to be visible on their network. Further research should however be undertaken to examine the extent to which the findings here are transferrable to general 'Liking' of political content beyond just pages.

In addition, the findings show a positive association between audience diversity and the level of social anxiety perceived to arise if a political candidate's page were to be 'Liked'. This finding supports Latané and Harkins (1976) who previously found people to be more anxious when public speaking in front of a diverse audience. The finding of the present study provides the first understanding of the magnitude of social anxiety felt in relation to audience diversity. This builds on prior work by Marder et al (2012), which found that increased diversity causes greater anxiety. Social anxiety was found to provide complementary mediation between audience diversity and intention to 'Like', suggesting the existence of other possible mediators (Zhao et al., 2010). The expectation (i.e. perceived probability) that 'Liking' a Facebook page would be seen by a certain audience is a potential mediator. Leary and Kowalski (1997) support this by proposing that impression management in the presence of a potential self-presentational predicament is a function of the expectancy that the situation will actually arise.

Beyond the core contribution of this study, it is important to discuss other significant relationships found with regards to the control variables used. This can help enhance understanding of the antecedents of 'Liking' political candidates' Facebook pages. Throughout all the analyses herein, the extent to which users perceived that a political candidate's vision for the US aligned with their own was a strong determinant of 'Liking' behavior. This supports the assertion that people are intrinsically 'self' motivated to 'Like' political parties on Facebook (see Ryan and Deci, 2000). Usage Intensity was positively related to social anxiety, supporting prior research that finds Facebook is used as a method of coping for individuals who suffer from anxiety (Clayton et al., 2013; Sheldon, 2008).

Furthermore, 'Likers' were found to be significantly more intense users than those who had not 'Liked' pages, providing validation for Vitak et al (2011), who found Facebook usage intensity significantly predicted political engagement on Facebook. However, no significant relationship was found between usage intensity and intention to 'Like'. This may suggest that only when Facebook intensity reaches a certain point (as it has with the 'Likers') that political engagement on Facebook will ensue. The following rationale is proposed. Higher intensity users receive greater value (e.g. social/economic benefits linked to online self-presentation and/or information and entertainment gains) from their usage. This usage can include the 'Liking' of political candidates (see Joinson, 2008; Ellison et al., 2007).

The potential value is traded off against imaginable drawbacks; a key one of which is the possibility of casting a negative image to others, i.e. a self-presentational predicament. Thus it is suggested here, that when intensity of usage is low to medium it follows that the gains from 'Liking' are outweighed by the costs. However for high intensity users, the opposite is true. Therefore it is proposed that a 'tipping point', associated with an individual's usage intensity, exists in the trade-off between potential gains and losses from visible interactions on Facebook. This 'tipping point' guides the decision of whether to enact a behavior or not.

Facebook self-consciousness was positively related to social anxiety, and those who had 'Liked' a page were significantly less self-conscious than those that had not. These finding are sustained by the well-established literature stating a positive relationship between self-consciousness and social anxiety (Leary, 1995; Leary and Kowalksi, 1997), explaining that in the presence of audience diversity, individuals who care less about how they are perceived by others will be more likely to 'Like' political candidates. However again, no significant relationship was found between Facebook self-consciousness and intention to 'Like'. The results suggest that both usage intensity and Facebook self-consciousness may be important in understanding 'Liking' behavior, but the exact association is yet to be determined. Further research should aim to provide a more nuanced understanding of the impact of these variables.

The findings further suggest that the more conservatively orientated a user is, the more likely they are to 'Like' a political candidate. However, the data also revealed higher levels of social anxiety associated with 'Liking' Donald Trump (a more right-wing candidate compared with Hillary Clinton; albeit arguably not a conventional main stream right wing candidate), even when political orientation is controlled. This paper proposes potential complex relationships between orientation of the user, perceived orientation of the candidate and visibility of 'Liking' to a user's network, to be considered through further research in the field. Lastly, age was found to have a negative association with social anxiety, as is supported by Bowker and Rubin (2009).

## 6. Implications

This research provides three core contributions. First, in response to the deficiency of knowledge on the effects of audience diversity on crucial gateway behaviors within social media, two forms of analysis conducted were critical. By examining the behavioral intention of 'non-Likers' and contrasting 'non-likers' with 'Likers', the empirical study found that audience diversity in users' networks hinders the likelihood that users will enact the crucial gateway behavior of 'Liking', in the

context of political candidates' Facebook pages. This was the result of the users' endeavor to avoid projecting an undesired image to particular sub-sets of their audience - those who users perceived would deem affiliation with the 'Liked' entity as incongruent with that subset's expectation.

Second, previous studies into context collapse have suggested that behavior is constrained in the presence of a diverse audience, although these studies have largely assessed behavioral intention. Albeit a valuable contribution, this body of research has lacked empirical validation examining actual behavior. The present investigation provides validation to this area of study through the contrast of the audience diversity of 'Likers' and 'non-Likers' examined herein, thus supporting that audience diversity as an inhibitor of behavior or similarly, as discussed by Marwick and Boyd (2011), the lowest-common denominator effect.

Last, contributing to the limited understanding of the emotional effect of audience diversity, the current research is the first to provide evidence of the association between audience diversity and the magnitude of social anxiety experienced when self-presenting through social media. The current study supports the assertions of self-presentation theory: that presenting to an audience with diverse expectations is a genuine and experienced concern for users, which requires impression management.

Overall the present study contributes to knowledge on 'Liking' Facebook pages. Although previous research had provided valuable understanding on what motivates consumers to 'Like', there was less comprehension of the barriers to this behavior. The importance of these barriers is supported by the aforementioned lack of 'Liking' in relation to political candidates. A deeper understanding of 'Liking' is provided by this paper through the finding that a key barrier to this action is the endeavor of users, in the presence of multiple audiences, to avoid casting an undesired impression in the minds of audience members. Researchers concerned with self-presentation in social network sites and 'Liking' pages, should consider audience diversity when examining the propensity of users to visibly interact with

digital self-presentational props such as 'Liking'. Specifically, future studies should consider first, that increased audience diversity hinders potential conspicuous behaviors. Second, that the impact of the former is likely to depend on the contentiousness of the potential visible affiliation. Audience diversity will be a greater hindrance if the page to be affiliated with a user's self-presentation is 'opinion splitting'. The 'Liking' of potentially divisive pages such those related to politics, ideology or sex, is expected to be impeded more by audience diversity than would less divisive pages, e.g. a supermarket or a celebrity chef), This is due to the greater anticipation with the former, that it will cause a self-presentational predicament with respect to a certain audience(s).

The findings of the study also present implications for political candidates, as well as site designers. For political candidates, or those who manage their social media persona, aiming to encourage more 'Likes' or 'Follows' to leverage the direct communication this allows, the following advice is provided. Based on the finding here (that the visible nature of 'Liking' in front of a diverse audience hinders the chance 'Liking' will occur), it is called into question whether 'Liking' is indeed the best 'call to action'. Instead, candidates/campaign managers should consider the call-to-action of 'sign up' within Facebook (i.e., the offering of further information by email, an inconspicuous means of direct communication to accompany sponsored posts as well as on the candidate's page itself). This will avoid the issue, evidenced by the present paper, of users who may wish to connect with the candidate, are interested in their social media posts, but choose not to as this would cast an undesired impression to their diverse audience.

Furthermore, the present research urges designers to consider the issue of audience diversity beyond the protection of users' social privacy (see Joinson et al., 2011) but that it impacts on the level of crucial gateway behaviors, and therefore the creation of direct communication channels for political candidates with connected users. Designers must consider methods that allow users to connect with candidates without this being visible and therefore, as found here, constrained by the expectation of a diverse audience. It is suggested that, in addition to providing a sign-up option as default on candidates' pages, designers also offer a prompt when

clicking 'Like' (or 'Follow') for this action to be very simply made visible or not visible to their audience. This should be promoted through the site's interface to users, as it is crucial that they have knowledge of this early on in their decision-making process leading up to clicking 'Like'. If they think this will always be visible to their audience, they may not even consider 'Liking' in the first place.

This study has a number of strengths, including: its use of a relatively large sample of the electorate in the run-up to an election; employment of a nuanced measure for audience diversity designed to address the core of the issue, which is diverse expectations (rather than the total number of audience subsets friended); and increased validity through examining both behavioral intention and behavior related to the same phenomenon. However, the research has several limitations. The specific context of political candidates' pages requires practitioners and researchers to exercise caution in generalizing the findings to other contexts (e.g., brands, organizations or pubic figures). Theoretically, the author sees no significant reason why the insights would not be transferrable to other contexts, but for those pages that represent less risqué or divisive entities than political candidates, the effect of audience diversity will presumably be lessened. Nevertheless, future research should examine further contexts in order to more clearly examine the contingency factors important to the findings here. Specifically, this should include contrasting Facebook pages of brands, organizations or public figures with differing levels of self-presentational risk that are associated with visible affiliation beyond the context of US politics. Furthermore, it is suggested that further studies consider experimental designs to reinforce the findings herein, and explore nuances within the diversity of users' networks that may alter 'Liking' behavior.

Although audience diversity was found to have a significant impact on intention to 'Like' and social anxiety, the effect was modest, which may be explained by its conceptualization. Following advice from a recent publication by Marder et al (2016b), it is suggested that future research should consider the strength of the audiences (i.e. value x standards) rather than just standards alone based on Marwick and Boyd's (2011) theorization. This research was further limited by the use of self-

report measures of anxiety level (see Podaksoff, 1986), so further work should consider experiments using physiological measures to validate the impact of audience multiplicity on social anxiety. Forthcoming studies into political expression on Facebook, should consider how nuances in the multi-dyadic web of opinion congruence (e.g. self vs. majority audience, majority audience vs. minority audience, self vs. minority audience) may shape expression behaviors such as 'Liking'. It is suggested that such research draw from Spiral of Silence theory. Lastly, the generalized nature of this research is limited to the US adult population and to the site Facebook. Future research should examine and contrast the findings here with users from other cultures and with different focal technologies (e.g. Instagram, Twitter).

## Conclusion

In conclusion, this paper provides valuable insight for researchers and practitioners into the effect of audience diversity on 'Liking' Facebook pages. This is that audience diversity hinders intention to 'Like' and is associated with social anxiety. Furthermore, not only does this research urge us to think beyond the popularly discussed echo chamber and homophily in order to comprehend a political phenomenon that exists within social media. It also considers the role of heterophily, coupled with the ubiquitous visibility provided by these technologies, in giving rise to emotion and guiding behavior in this domain.

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**Appendix 1**

| **Audience Diversity:** |
| --- |

"Please state to the best of your knowledge, the political leaning of the following different types of your Facebook 'friends'". A 7-point scale was adopted (Very left wing – Very right-wing) adapted from Cohrs et al (2005).

Audience diversity was calculated by finding the most right wing audience (i.e. the MAX value across the audiences) then subtracting the most left wing audience (i.e. the MIN value across the audiences).

| Item | Mean | S.D | n |
|---|---|---|---|
| Colleague | 3.829 | 1.495 | 882 |
| Partner | 3.611 | 1.908 | 742 |
| Close Family | 4.621 | 1.921 | 1235 |
| Extended Family | 4.643 | 1.660 | 1016 |
| Close Friends | 3.700 | 1.640 | 1315 |
| Known through religion | 5.251 | 1.918 | 295 |
| General Acquaintance | 3.851 | 1.235 | 1006 |

**Social Anxiety Scale:**

Please indicate how you would feel if your Facebook friends saw that you had 'Liked' the [Candidates'] Facebook page:

| | Hillary Clinton | | | Donald Trump | | |
|---|---|---|---|---|---|---|
| Items | Mean | S.D | Load | Mean | S.D | Load |
| 1. Unhappy - Happy | 4.771 | 1.660 | .751 | 5.423 | 1.739 | .800 |
| 2. Relaxed - Anxious | 4.393 | 1.747 | .924 | 5.182 | 1.803 | .948 |
| 3. Calm – Tense | 4.327 | 1.791 | .939 | 5.135 | 1.810 | .944 |
| 4. Not worried – Worried | 4.182 | 1.879 | .894 | 5.091 | 1.919 | .917 |

**Intention to 'Like':**

Scenario: Your 'Like' of the [X Candidates'] Facebook Page is visible to your friends. When you click 'Like' on the [X Candidates'] Facebook page it will be visible to your friends. Please indicate the likelihood you would do the following before the 2016 Presidential Election:

| | Hillary Clinton | | | Donald Trump | | |
|---|---|---|---|---|---|---|
| Items | Mean | S.D | Load | Mean | S.D | Load |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Click Like on the page | 2.040 | 1.588 | .916 | 1.803 | 1.545 | .925 |
| 2. Receive updates from the [X Candidates'] by Liking their page | 2.134 | 1.694 | .916 | 1.901 | 1.677 | .925 |

**Appendix 2**

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Audience diversity |  |  |  |  |  |  |  |  |  |  |
| 2. Facebook Self-con | .033 (.224) |  |  |  |  |  |  |  |  |  |
| 3. Facebook usage intensity | .059* (.029) | -.017 (.519) |  |  |  |  |  |  |  |  |
| 4. Political orientation | .056* (.039) | -.021 (.440) | .048 (.075) |  |  |  |  |  |  |  |
| 5. Candidate | .001 (.963) | .060* (.025) | -.004 (.870) | -.162** (.000) |  |  |  |  |  |  |
| 6. Age | -.144** (.000) | .052 (.053) | .071** (.009) | -.001 (.959) | -.005 (.862) |  |  |  |  |  |
| 7. Gender | .086** (.001) | -.043 (.111) | .172*** (.000) | -.101** (.000) | -.001 (.969) | .025 (.355) |  |  |  |  |
| 8. Social anxiety | .102** (.000) | .249** (.000) | .058* (.031) | -.182** (.000) | -.261** (.000) | -.106** (.000) | .034 (.201) |  |  |  |
| 9. Intention to 'Like' | -.123** (.000) | -.125** .000 | .042 (.120) | .263** (.000) | .120** (.000) | .024 (.370) | .027 (.317) | -.477*** .000 |  |  |
| 10. Alignment w/ candidate | -.031 (.250) | -.187** (.000) | .044 (.106) | .288** (.000) | .234** (.000) | .088** (.001) | .034 (.203) | -.540*** (.000) | .584*** (.000) |  |

Correlation Matrix for variables included to test H1-H3. P-values denoted within brackets underneath Pearson correlation coefficients (two-tailed). * p <.05, ** p<.01,