Opinions on the Internet:

Social Influence and Political Decision Making Processes on Social Media

Research Thesis

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By

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Abstract

Much scholarship has been produced to explain how one's social identity affects political attitudes and behaviors (Phillips and Carsey, 2013). The majority of this scholarship has focused on heuristics and the party identification model to explain how people form political identities and make political decisions (Scholz and Pinney, 1995; Carmines and Huckfeldt, 1996, Mondak, 1993; Greene, 1999; Iyengar, Sood and Lelkes, 2012). But this scholarship fails to recognize that as society begins to interact more digitally through social media, acquisition of information becomes a social activity (Baek et al., 2012). This study focuses on the impact of social influence on political decision making. This study's primary goal was to demonstrate that decisions compelled by psychological discomfort brought on by social influence motives can cause an individual to compromise politically to ease their cognitive burden.

Social networking sites provide a particular setting of interest for this experiment, in that, individuals are more likely to talk about politics through an online format than through face-to-face interactions (Baek et al., 2012). The experimental design simulated an online social media environment, placing participants under a psychological strain between belonging and being distinct. This is intended to replicate the complex social reality that social media users experience on such platforms as Facebook. The results of this experiment suggest that individuals are significantly likely to conform to digital peer groups when discussing some political topics, while many moderate views disappeared, leading to a more polarized political environment.

Introduction

Studies of identity politics have overlooked the psychological needs of belongingness and distinctiveness, favoring instead explanations of heuristics or party identification (Scholz and Pinney, 1995; Carmines and Huckfeldt, 1996, Mondak, 1993; Greene, 1999; Iyengar, Sood and Lelkes, 2012). Social psychology literature, on the other hand, has found optimal distinctiveness to be critical to identity formation (Baumeister and Leary, 1995; Brewer and Pickett, 1999; Leonardelli, 2010). Belongingness is a fundamental psychological process defined as the innate human necessity to form and maintain social relationships (Baumeister and Leary, 1995). Put simply, humans need to feel like they belong, and if they do not, they will actively seek to change whatever is keeping them from belonging. This psychological need is simultaneously balanced by the theory of optimal distinctiveness; the motivation to feel unique from their in-group, but at an optimal level that can satiate both needs (Brewer, 1991). After finding over-conformity in one's group, the psychological need to be unique is triggered and pushes back in order to feel distinct from the group. These two processes attempt to find balance: being like the group enough that one feels like they belong, but feeling different enough that one's desire to be unique is not compromised (Brewer, 1991; Leonardelli, 2010).

With this in mind, it stands to reason that individual's political identities are greatly shaped by those around them. Both the heuristics and the party identification model concede on this argument – political behavior is subject to external forces, but what forces exactly? Heuristics and the party identification model would say that an individual's political decisions are based on arbitrary perceived values in the choice

itself, such as the gender, race, or political party of a candidate for elected office. This may well have been the case in the past, where individuals consumed most of their political information privately, from print or television news, and there was a social taboo on discussing politics (Eliasoph, 1998). But today, social media has revolutionized the way information is shared across societies (Graber, 2009; Bromly, 1995), and its pervasive nature makes it an especially important tool to study in the digital age; individuals no longer consume their political information privately, nor do they abide by the taboo barring the open sharing of political opinions. Currently, individuals are more likely to talk about politics through an online format then through face-to-face interactions, allowing for the public to be saturated with political discourse at exceptional rates, making acquisition of information a social activity (Baek et al., 2012).

The politicized nature of social media discourse can have detrimental effects on the democratic process: a recent poll has demonstrated the ability of political social media posting to exacerbate stress levels for users (APA, 2016). Nearly 4 in 10 adults say that political and cultural discussions on social media cause them stress (APA, 2016). These data are troubling because research has shown high levels of stress can lead to disengagement as a means of coping and relieving stress (Carver and Connor-Smith, 2010) – and in this case, civic disengagement could prove to be detrimental to the democratic process. This is no small group, either: over 61% of all American voting age adults use a social media site, with Facebook being the most popular with over 1 billion daily active users, each user dedicating an average of 50 minutes daily, or more than one-sixteenth of the average user's daily waking time (Bargh and McKenna, 2004; Lenhart et

al., 2010; Thusoo et al., 2010; Facebook, 2016; Zuckerberg, 2016; Steward, 2016). This massive segment of the global population, therefore, is subjected to the psychological stress afflicted by politicized social media postings. The very nature of *social* media sites makes them a prime space in which social influence can thrive. Research has shown that these sites have an entirely performative component, revolving around self-presentation as a means to belong to groups (Seidman, 2013).

What effect does social influence (specifically, optimal distinctiveness) have on an individual's political identity and decision making when the individual is increasingly exposed to their peer group's views in a digital format (social media)? I expect that exposure to one's peer group view in a digital format will cause individuals to change their views to minimize social discomfort brought on by the pressures of social influence. This experiment tested for two hypotheses: (1) if individuals are exposed to the views of their peer group in a digital format, and those views are different from their own views, individuals change their own view to better fit in with the group, and (2) if individuals are exposed to the views of their peer group in a digital format, and their views are too similar to the individuals views, the individual will change their own view to relieve the psychological discomfort of being too similar. With the combination of these two hypotheses, this research provides a basis for two significant claims. First, the more one interacts with society digitally, thus increasing their exposure to peer group political views, the more likely they are to accept pro-attitudinal information and conform to their in-group. This is also supported by opinion convergence research, suggesting that people who politically align on a given topic are likely to become more agreeable about said

topic after conversing (Sunstein, 1999). Second, frequency of political fractionalization will increase to maintain optimal distinctiveness (herein: *thought ghettos,* the seeming fragmentation of American political identities into many minority political identities). This claim is supported by optimal distinctiveness theory which suggests that individuals prefer membership to a smaller group because their feeling of inclusion to a group and differentiation from greater society provides a unique set of circumstances which satiates both needs (Brewer 1991).

Heuristics and the party identification model are incomplete in assessing how one's political opinions and decision making play out in real world situations. This is because the exclusion of social influence creates an environment that is not reflective of reality, meaning that, in reality, the political information one consumes and the opinions one forms and shares are not removed from the effects of social influence. The major distinction here is the difference between asking, "What do people similar to me like?" and "What do my friends like?" This distinction at first may seem small, but the latter option, revolving around an individual's peer group, allows for the sorts of anomalies that heuristics and the party identification model often fail to fully explain, such as extreme party shifting. Extreme party shifting is easily explainable through social influence, such as an individual joins a new social group with different political views and changes their views to better fit in with this new group. Social influence is typically avoided like the plague in research on political behavior, often seen as a hindrance on research subjects expressing their unobstructed "true" opinions that they would otherwise hold under normal circumstances (Fisher, 1993). But how could this be? In real world situations,

individuals are almost always subjected to social influence when expressing political opinions except in a few unique situations, such as voting or taking a survey. If this is just second nature to us as humans, changing ones expressed view in accordance to the social situation that surrounds us, it may well be a closer approximation of reality to allow for social influence to take part in research on public political behavior.

Therefore, the social influence approach to political decision making will provide scholars with a more accurate way to think about and approximate how and why citizens form their unique political identities and make political decisions in the 21st century and will attempt to provide citizens with a better understanding of the social influence mechanisms at work around them, hopefully aiding those citizens in remaining impregnable to external manipulation. The current state of mass media literature posits that, supplied with knowledge of the bias and manipulative effects of the media, the mechanisms of manipulation become less effective on citizens (Scheufele and Tewksbury, 2006). Being informed is fundamental for the democratic model to function correctly, and therefore this new approach is vital to the polity and scholars alike.

Background

Social Identity and Politics

There are numerous descriptions for what constitutes a social identity. A synthesized, straightforward definition has been developed and accepted into the scholarship. That is, "An identity is just a social category, and to have a particular

identity means to assign oneself to a particular social category or perhaps just to be assigned to it by others." (Fearon, 1999). The definition details two hard criteria that are both necessary for something to constitute a social category: (1) it must have implicit and/or explicit rules of membership and (2) what is called "content" of a social category, or a set of characteristics thought to be typical of members of any social category (Fearon, 1999).

This description goes on to define two classifications under which identity can be categorized (although not mutually exclusively): personal identity and social identity (Fearon, 1999). The former, personal identity, is an introspective approach to the question "who am I?" and is thought and spoken about entirely as an internalized understanding of the self (Fearon, 1999). The latter, social identity, is the way that one's sense of self is modified or expressed in the context of greater world around the self, usually thought of as rather roles or types of self (role: mother, taxi driver; type: nationality, ethnicity) (Fearon, 1999).

This study operates with the understanding that personal identity is interchangeable with *predisposition* (Zaller, 1992), and that social identity is the outward projection and manipulation of a person's predisposition. The formation of a social identity depends entirely on an individual's psychological intake of the contextual world around them, and this intake is filtered by optimal distinctiveness. Put another way, personal identity is the answer to "who am I?" whereas social identity is the call to "who

do I want to be?" The answer to this latter question varies, and ones intake of information varies accordingly.

When a social identity introduces a political dimension, unique social challenges arise. Political identities maintain a primordial element, meaning individuals think of their political identity as static and innate as religion or gender (Phillips and Carsey, 2013). Working from this theory, social identity and psychological attachment to a political group can have a meaningful social outcome; as religious identity is used to mobilize sects, and gender to promote feminism, political identity is tapped by outside forces to elicit emotional reactions. This is not to belabor the obvious, but rather to restate the instrumentalism of social identity and the deep attachments at stake with an individual's psychological state (Phillips and Carsey, 2013).

Optimal Distinctiveness and Social Media

The psychological need to belong and need to be distinct from a group has been shown to be major factors in social identity formation (Baumeister and Leary, 1995; Brewer, 1991). Belongingness is defined as "the innate human need to form and maintain social relationships" (Baumeister and Leary, 1995), and distinctiveness is defined in diametric opposition to the former, as the motivation to feel unique from an in-group (Brewer, 1991). Optimal distinctiveness states that these two are in near-constant struggle within the self to find a balance to satiate both needs (1991). When considering the consequences of social identity politicization, these two motivational needs, although

seldom acknowledged by political science literature, have potentially significant implications towards individual political behavior.

There is a robust correlation between one's social in-group and positive attitudes towards that group (De Cremer and Van Gut, 1999; Gaertner and Dovidio, 2000; Kramer and Brewer, 1984). Conversely, individuals tend to hold prejudices against those groups in which they do not have the opportunity to belong, fostering animosity amongst different in-groups (Baumeister and Leary, 1995). Optimal distinctiveness theory plays a role into which social category the self is pushed towards (Brewer, 1991). Additionally, optimal distinctiveness theory suggests that individuals prefer membership in smaller groups, because their feeling of inclusion to a group and differentiation from greater society provides a unique set of circumstances which satiate both needs (1991).

Social media users dedicate an average of 50 minutes daily, or more than one-sixteenth of the average user's daily waking time, using social media, and it is this exceptional presence of social media in the daily lives of the typical American citizen (Zuckerberg, 2016; Steward, 2016; Duggan, 2015; *Pew Research Center*, 2013), that reinforces the importance of research on the role of social media as an identity and self-esteem building mechanism, as well as its impact on decision making processes. Social media sites are used as a way of propping up self-esteem and to compensate for social gratification that users are not receiving in face-to-face social group interactions (Barker, 2009).

The Sociometer Theory explores the functionality of self-esteem as a motivator and predictor of social behavior, explaining that one can expect humans to act in ways that promote their own self-esteem (Leary, 2000; Leary, 2005). This theory suggests that the desire to promote self-esteem can drive social behavior, undermining the argument favoring heuristics as the primary driver of political decision making (Leary, 2005). In other words, people do not short cut through information, as would be argued by heuristics, but would rather make decisions based on promoting their self-worth. Belongingness and self-esteem can be thought of autonomously, but it may be more productive to consider these qualities as strong correlates of the other (Gailliot and Baumeister, 2007). Specifically, one's self-esteem responds strongly to inclusion and exclusion outcomes, which constitutes the entire nature of belongingness theory (Leary, 2000). In this way, social media sites are absolutely critical to the expected outcomes of social belongingness in that they provide an ideal forum for engineering self-esteem in a way unique from traditional forms of media or social interactions. Public events can bolster self-esteem in ways unlike private events (Leary, 2000) – which is the very nature of social media sites, as participating in social media is a social activity, and therefore a public event.

Dual Process Theory, Thought Ghettos and Social Media

Previous studies have discussed the likelihood of Facebook friend group political diversity, finding self-reported liberals and conservatives were both more likely to be friends with other liberals and other conservatives (Bakshy and Messing, 2015).

Additionally, opinion convergence has been studied, suggesting that people who politically align on a given topic are likely to become more agreeable about said topic after conversing (Sunstein, 1999). Sunstein uses the example of global warming: if two people agree that global warming is a serious concern, they are more likely to support more severe measures to prevent global warming after speaking with one another. Combine this with increased political group fractionalization, due to the suggestion that membership to a smaller group uniquely satiates the need to feel included in a group yet different from them at the same time (Brewer, 1991) and a prime space for thought ghettos is forged in the crucible of social media.

Thought ghettos, or the seeming fragmentation of American political identities into many minority political identities, are one of the crucial long-term interests of this research. Americans have settled socially on identifying as conservative and liberal, or in terms of party affiliation, Republican or Democrat respectively (Gallup, 2015). This completes the need for belongingness to a social group of one's political identity. However, satiating a need for distinctiveness is trickier while maintaining an in-group status. How does one sustain being same and different at the same time? Rather than switching social identity (party or ideology) – which is theoretically possible but unlikely in most cases due to the psychological discomfort of being rejected by the group, as it would go directly against one's previous personal identity – Americans have begun to adopt increasingly extreme political positions (Pew Research Center, 2014). Thought ghetto refers to a fractionalization of political placement, creating smaller factions of larger political wings, and hardening of one's identity in the echo chamber of one's

personal social media (Brewer 1991; Phillips and Smith, 2006; Sunstein, 1999) which

become progressively more difficult to escape as time goes on. In this case, political

thought ghettos form increasingly fractionalized and intolerant groups across the political

spectrum; libertarians, nationalists, socialists, social democrats, green party-ist,

communists, etc.

The R.A.S. model (Zaller, 1992) along with the theory of on-line processing

provides a framework in which the formation of thought ghettos occurs. The R.A.S. –

receive, accept, sample – model states that, when people consume information, they first

receive, and then must choose to *accept* or reject said information, and finally, if

accepted, they can then *sample* from to form opinions on-the-spot when the topic is

salient, meaning that most people do not have true existing opinions about most political

matters. Rather, they construct opinions on-the-spot when they are asked to express an

opinion or a topic is salient (Zaller, 1992) or at least for people with low political

sophistication. On-line processing theory however, suggests that individuals who are high

in political sophistication encounter new information and store it in memory, they use it

to update a summary attitude and when asked their opinion, they simply retrieve the

summary attitude, not the specific pieces of information that contributed to it (Lodge,

McGraw and Stroh, 1989). This difference in political sophistication, and the

psychological processing consequential to each thought accumulation, is telling of the

composition of group dynamics.

Essentially, there are two kinds of individuals that constitute social groups and it is these two differences that mediate the consumption and flow of information: the opinion leader and those subordinate to the opinion leader (Lazarsfeld, Berelson and Gaudet, 1944). Opinion leaders are individuals who are high in political knowledge and have real opinions based on summary attitudes, While subordinates are individuals who are low in political knowledge and form their opinions on-the-spot based on salient information, the influence of the opinion leader, and their idea of what is socially acceptable to the group (Lazarsfeld et al., 1944; Lodge, McGraw and Stroh, 1989; Zaller, 1992; Leary, 2005 Baumeister and Leary, 1995; Brewer, 1991). The opinion leader and the subordinates constitute two distinct means of information processing, as found in recent psychology research emphasizing the importance of dual processing: system 1, which involves rapid, sometimes irrational, judgements that manifest themselves into automatic and effortless thought, and system 2, which is characterized by conscious, effortful reflection and calculation (Kahneman, 2011). Most members of the public, according to duel process theories, typically employ system 1 reasoning without resorting to more effortful system 2 processing (Kahan et al., 2012), explaining the over saturation of social groups with the archetypal 'leaders and followers', or opinion leaders and subordinates.

Optimal distinctiveness, in conversation with dual process theory, contributes to how individuals process information and drives identity formation, judgements, and decision making. If someone is highly motivated by social influence, that person is much

more likely to arbitrate the information they receive, not only from the group, but in response to what is acceptable to the group.

Americans are already more likely to consume news that agrees with them (Arceneaux, Johnson and Cryderman, 2013; Arceneaux and Johnson, 2015; Stroud, 2010; Mutz, 2001). In terms of psychology, this demonstrates the need to belong as citizens tend to follow news that intensifies their feeling of membership to an identity-based political group. Zaller was looking at traditional news sources at the time of his work with the R.A.S. model, however, and could not have predicted the flux of information obtainment embedded with social media use. Compared to the time of *The Nature and Origin of Mass Opinions*, today's generation of politically active citizens are constantly bombarded with social and political identities via social networking sites (Papacharissi, 2010).

This paper intends to highlight the relationship between social media and optimal distinctiveness and builds upon the existing literature on political thought models by integrating more contemporary psychological understanding of cognition and behavior. Existing arguments would say individuals are driven by heuristics or party identification (Scholz and Pinney, 1995; Carmines and Huckfeldt, 1996, Mondak, 1993; Greene, 1999; Iyengar, Sood and Lelkes, 2012), but this research attempts to further question *why* identity is expressed in this behavioral fashion. Optimal distinctiveness theory subscribes that the expression of political identity is a product of one's friend group, but not solely because it can be assumed (heuristically) that all members of the group share that

particular political identity, but as a means of solidifying group membership. Put simply, people accept new information because it agrees with their prior dispositions, but their prior dispositions only agree with new information because social influence manipulates one's ability to intake new information with a bias of agreement towards the opinion of their in-group.

People need to belong to a group, so they accept the frame of whichever social group they wish to gain membership to, in order to fulfill that need (Brewer and Pickett, 1999). This distinction may at first seem small, but it is vital to our understanding of the human thought process. There is no evidence that Americans organize their political belief systems around ideology. Most Americans cannot articulate political ideological principals, show little evidence of consistency among their political attitudes, and show little evidence of stability in their attitudes over a relatively short period of time (Campbell et al., 1960; Converse, 1964). That is to say, people do not form their political opinions because they *ideologically* match up with them, but because they are consistent *socially*. The culmination of these theories is what constitutes a thought ghetto. 'Ghetto' is not too strong a term, either – the very nature of this phenomenon depends on the hardening of social identities to a degree that becomes nearly impossible to escape (Transue, 2007; Reicher, 2004), especially when this hardening is motivated by the need for inclusion to one's in-group (Baumeister and Leary, 1995). The binding sense of self one has to a politicized social identity can inveigle an individual to a complete loss of autonomy to the sake of the group. Thought ghettos manipulate the political behavior of its members into conformity; this is where the telling impact of social media originates.

The main goal of this research was to evaluate the question: what effect does social influence have on an individual's political identity and decision making when the individual is increasingly exposed to their peer group's views in a digital format (social media)? I expect that exposure to their peer group's view in a digital format will cause individuals to change their views to minimize social discomfort brought on by the pressures of social influence. This experiment tested for two hypotheses: (1) if individuals are exposed to the views of their peer group in a digital format, and they are different from their own views, individuals change their own view to better fit in with the group, and (2) if individuals are exposed to the views of their peer group in a digital format, and their views are too similar to the individuals views, the individual will change their own view to relieve the psychological discomfort on being too similar. With the combination of these two hypotheses, this research provides a basis for two significant claims. First, the more one interacts with society digitally, thus increasing their exposure to peer group political views, the more likely they are to accept pro-attitudinal information and conform to their in-group. This is also supported by opinion convergence research, suggesting that people who politically align on a given topic are likely to become more agreeable about said topic after conversing (Sunstein, 1999). Second, frequency of political fractionalization will increase to maintain optimal distinctiveness (herein: *thought ghettos,* the seeming fragmentation of American political identities into many minority political identities). This claim is supported by optimal distinctiveness theory which suggests that individuals prefer membership to a smaller group, because

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their feeling of inclusion to a group and differentiation from greater society provides a unique set of circumstances which satiates both needs (Brewer 1991).

Method

Procedure

This study was conducted through Qualtrics in a controlled lab setting consisting of a pre-test, experiment, and post-test. The pre-test consisted of 15 policy questions where participants were prompted to respond to a political statement with their level agreement or disagreement followed by 10 political knowledge questions, to gauge the participants' personal level of political knowledge (Appendix). The experiment consists of two treatments and a control group, in which participants interacted digitally with two confederates who acted as a proxy of a participant's peer group. The first treatment tested for the belongingness hypothesis, the second for the distinctiveness hypothesis, and the control provided a standard for comparison of the treatments and their effectiveness. At the conclusion of the study, participants were asked to respond to a post-test, which included questions aimed to measure their personal need to belong, to be distinct, the same policy questions as in the pre-test and the experiment, their levels of social media use, need for cognition, need to evaluate, and demographics.

Sample

Participants were recruited in accordance with the standard procedures of the Ohio State University Political Science voluntary subject pool. A total of 73 participants were

recruited (approx. 24 students for each treatment). Students in undergraduate courses were imparted of the opportunity to participate in a research study for extra credit and the opportunity to receive $50 in the form of an Amazon gift card, graciously funded by the financial support of The Decision Sciences Collaborative.

Measurement/Instrumentation

Pre-Test

A pretest was given at the beginning of the experiment to establish baseline opinions on the two dependent variable policy questions along with 13 other policy questions so that participants could recall their prior responses less saliently, answers were given on a 7-point Likert scale. There were also 10 questions of political knowledge given in order to assess individual levels of political knowledge. This was given exactly the same to all three conditions.

Experiment

During the experiment, First, The two treatment groups were told they were going to interact with a group of their peers before playing the cooperative game at the end of the study. They were then brought into the interactive digital window and shown the answers of both group members before being able to answer. In the control condition, however, participants were just told to answer a few more questions and were never told their answers would be shared with anyone. All three conditions were asked the same four questions in this portion of the study: the two DV policy questions from the pre-test and two apolitical questions.

Post-Test

In the post-test, participants in all groups were asked standard demographic questions, questions about social media usage, the same DV and additional policy questions from the pre-test, and scaled items for need for cognition, need to evaluate, need to belong, and need to be distinct. The scales measuring the need for belongingness, need for uniqueness, need for cognition and need to evaluate (Leary, Kelly, Cottrel and Schreindorfer 2005; Snyder and Fromkin 1977; Cacioppo and Petty, 1982; Jarvis and Petty, 1996) are the gold standard used for this type of psychological research. Since there are a number of other reasons why individuals may or may not change their opinions to belong or to be distinct from a peer group, this study uses standard and widely used measures to control for individual differences in social media usage, and political knowledge from Pew Research Center and the General Social Survey.

Detailed Study Procedures

At the beginning of the study, participants were given a pre-test to establish their baseline opinions on a set of policy questions (see Appendix). They were asked to give their opinion on a 7-point Likert scale of agreement. All participants were informed that they were involved in an experiment with two other participants, who were in fact hypothetical confederates programmed to respond according to the experimental treatment. An interactive digital window was designed through which the groups shared their own responses and saw the responses of others in the group. The group (one active participant, two confederates) was provided with adequate information to convince the

participant that the group was comprised of their peers. The group was informed of an economic game that would be played amongst the group after the experiment, in which the participant could earn up to $50 in the form of an Amazon gift card if they cooperated well during the game. Additionally, groups were told that cooperation is necessary to receive the financial incentive and that only the majority portion of the group working together during the game would be eligible to receive the financial incentive. The monetary incentive and cooperative task are necessary to this experiment in that these provide an *investment* to the task at hand, attempting to mimic real-world conditions of relationship-incentives. In real-world group relationships, there are stakes to disagreeing (jeopardizing the relationship, starting an argument, etc.), and the Amazon gift card, while a crude supplement for emotional attachment, at least provides a comparable investment to the relationship between the participant and the confederates. After the position-sharing phases of the experiment, the groups were informed that the game was no longer necessary, but that participants were entered to win $50 Amazon gift cards.

Participants were randomly assigned to one of two treatments or the control group. In the two treatments, the participant and confederates were prompted to share their personal position on the same social and economic policy questions present on the pre-test by way of a 7-point Likert scale of agreement. The confederates always responded first and the participant always last, and the participant saw both confederates' responses before they were able to respond. In the control group however, participants were never told they would, nor did they, interact with their group in the interactive digital window in order to avoid an outcome affected by social influence. The first treatment tested for

the belongingness hypothesis: via the interactive digital window, the confederates expressed a view that agreed with each other, but was different from the participant's view, as indicated by the participant's responses to the DV policy questions on their pre-test. Groups were asked to also share two apolitical viewpoints. The second treatment tested for the distinctiveness hypothesis. This treatment was set up much the same as the first, but the confederates expressed the same position as the participant on the DV policy questions, as indicated by the participant's pre-test, and also shared two apolitical viewpoints. In the control group, the participants were asked to respond to the two DV policy questions and the two apolitical questions but did not interact with the confederates. They were still told about the game and their group exactly the same as in the two treatments. In this way, all that varied between the treatment and control conditions is sharing of opinions with the group.
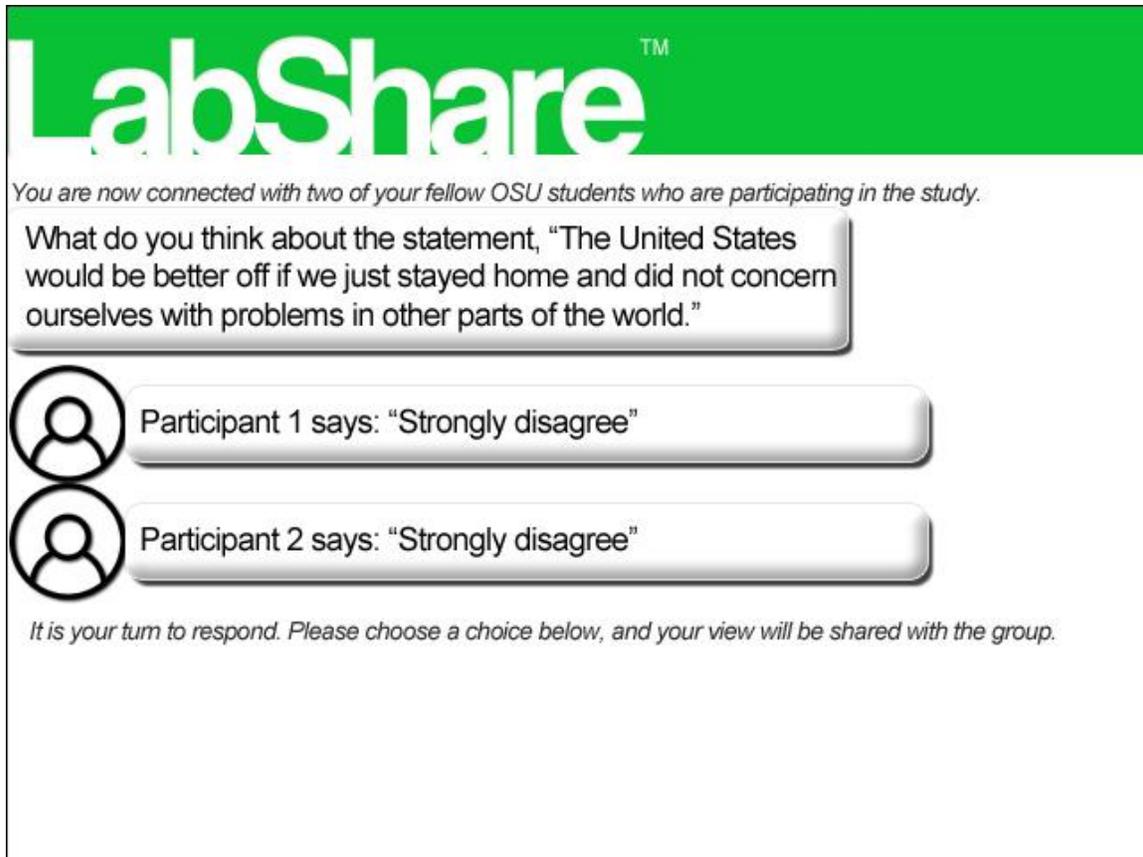
Example of the interactive digital window

Following the experimental treatments, participants were given a post-test in which they answered questions aimed to measure their personal need to belong, to be distinct, the same policy questions as on the pre-test and in the experiment, as well as their levels of social media use, need for cognition, need to evaluate, political knowledge and demographic characteristics.

To bring these treatments back to the primary two questions – that is, can social media cause people to re-evaluate their political position, and if so, is this reorientation a result of social influence? – One must consider the expected outcomes of each treatment scientifically. When an individual is confronted with members of a peer group that does

not share his or her opinion, I expect that individual will change their opinion to conform to the group. When an individual is confronted with members of a peer group that does share his or her opinion that individual will change their opinion to maintain a feeling of distinctiveness. The impact of these expectations varies depending on an individual's need for belongingness and uniqueness; these scales have been included in the experiment to determine whether the impact of the treatments is stronger for those higher in the need to belong or be unique. Likewise, individual differences in need for cognition and political knowledge (or misinformation) mediate an individual's political mobility.

Internal and External Validity

The random assignment of recruited participants to different treatment groups warrants a high degree of internal validity (experimentation being the gold standard for internal validity and causal inference). External validity – the ability to generalize the results from any given study to different populations, settings, times, and procedures – is an issue with any study, and ultimately only knowable through replication. Special care has been taken to maximize external validity in this particular study by creating realistic stimulus materials and using other measures that have been successfully used in other studies with other participant populations.

Data Analysis

The data analysis was conducted following four particular expectations: (1) computing reliable measures of multi-item scales; (2) calculating absolute difference

scores for the public and private sharing of opinions; and (3) running univariate analysis of variances to determine significance in opinion change between conditions.

Absolute difference scores were calculated in the following way, what will herein be referred to as "public behavior change." This absolute difference score was computed by taking the time 2 responses (T2), when participants responded in their groups, subject to social influence, and subtracting their time 1 (T1) score, or their initial, uninhibited view from the pre-test (T2-T1). To produce an absolute difference score, this score is then taken and squared to eliminate the negatives, and then the square root of the product is taken to achieve an absolute value.

Results and Discussion

I began by checking for efficacy of the manipulation, meaning participants were asked to recall the answers earlier provided by their confederate partners. The vast majority were able to correctly recall both confederates' answers, indicating that participants had consciously observed their group's views, although the percentage of participants correctly identifying their group's views from earlier in the experiment was higher for questions of foreign policy (93.8%) than for questions of economic policy (70.8%).

Economic Policy Items

A univariate between subjects' ANOVA was conducted to compare the effects of social influence on the public behavior change in belongingness, distinctiveness, and

control conditions on the economic policy item. Results indicated a significant effect of social influence on public behavior for items of economic policy attitudes at the p<0.05 level for all three conditions [F (2, 72) = 3.2, p = 0.047]. Comparisons using the Dunnett two-tailed test indicated that the mean score on economic policy for the belongingness condition (M = 0.63, SD = 0.77) was marginally higher than the control condition (M = 0.29, SD = 0.62) (MD = 0.33, p = 0.11). However, the distinctiveness condition (M = 0.2, SD = 0.41) did not significantly differ from the control condition (M = 0.29, SD = 0.62) (M D=-0.09, p = 0.82). The analysis also controlled for a number of covariates (e.g., political party, political knowledge, and scaled items for personal differences in need for belongingness, need for distinctiveness, need for cognition, and need to evaluate). The analysis found a significant cause for difference of between-subjects effects across all the conditions was social influence condition (F = 2.97, p = 0.05) and a marginal significance level of difference relating to the distinctiveness scale (F = 3.59, p = 0.06).

A new variable was computed to assess the direction of this change in opinion for the belongingness group. This new variable re-categorized the scores into three groups: those who help on to their preexisting views (Hold View), those who differed and became more extreme in there preexisting belief (Differ), and those who conformed to be more like the group (Conform). In the belongingness group 42 percent conformed, while only 8 percent differed from their group, and the remaining 50 percent held onto their original view. Meaning for items of economic policy, participants were much more likely to conform than differ from their groups. Taken together, these results suggest that social influence not only affects political opinions about economic policy when publically

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discussed with our peers, but that this social influence is much more likely to result in conformity than differentiation of individual opinions. Opinions stayed relatively stable in the distinctiveness condition, where the group view was homogenous when presented, and in the control condition where individuals were not subject to peer social influence and always reported opinions privately. Opinions did shift significantly in the belongingness group, where the individuals' views were opposed to that of the group, resulting in conformity when presenting opinions publically on economic policy items.

Furthermore, these opinion changes on economic policy items tended to hold when the participants returned to sharing opinions privately. A Pearson Correlation was computed to assess the relationship between the participants' shared public view on the economic policy item, reported during the experiment (T2) and their view reported privately during the post-test (T3) across all three conditions. There was a robust, positive correlation across all three conditions [$r = 0.96$, $n = 72$, $p < 0.01$]. I then compared this correlation to the correlation between T2 and T3 responses [$r = 0.96$, $n = 72$, $p < 0.01$] and to the correlation between responses T1 and T3 [$r = 0.92$, $n = 72$, $p < 0.01$] using a Fisher r-to-z transformation to see if the correlations are significantly different. This analysis concluded that the T2 to T3 correlation was significantly different from the T1 to T3 correlation ($z = 2.09$, $p = 0.04$). This same analysis was conducted on just the same analysis on just the belongingness condition, producing a T2 to T3 correlation [$r = 0.93$, $n = 24$, $p < 0.01$], and a T1 to T3 correlation [$r = 0.88$, $n = 24$, $p < 0.01$]. Using a Fisher r-to-z transformation, concluded that the two correlations were also marginally different ($z = 1.321$, $p = 0.19$). Taken together, this means that an individual's views from T2, when

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participants were influenced publically by social influence, are more predicative of their privately held views at the conclusion of the experiment at T3, than their original, preexisting view coming into the experiment at T1. Individuals tended to hold their views more strongly that were influenced by the group than their initial view coming into the experiment. This finding suggests that political social influence has long standing effects on individual views, consistent with the first hypothesis that individuals would conform on policy positions in order to better fit in with their peer group and to relieve the psychological discomfort of ostracization.

Inconsistent with our second hypothesis, however, I did not find significant levels of opinion shifts to be distinct from an over-conformed group in the distinctiveness condition (M = 0.20, SD = 0.41) compared to the control condition (M = 0.29, SD = 0.62; p = 0.61). Only 20 percent differentiated from the group while 80 percent conformed on items of economic policy. This was not completely unexpected, as differentiation from an overly-conformed group can be difficult in practice and can be psychologically uncomfortable, thus was expected to happen at much lower rates than conformity outcomes. In a larger sample, I would expect to see these results for differentiation to become significant.

Foreign Policy Items

A univariate between subjects ANOVA was conducted to compare the effects of social influence on public behavior change in belongingness, distinctiveness, and control conditions on the foreign policy item. There was not a significant effect of social

influence condition on public behavior change [F (2, 72) = 0.74, p = 0.48]. However, when controlling for a number of covariates (e.g., political party, political knowledge and scaled items for personal differences in need for belongingness, need for distinctiveness, need for cognition, and need for evaluation) the analysis found a significant cause for difference of between-subjects effects across all the conditions was party ID (F = 7.36 p = 0.01). A Pearson Correlation was conducted to determine the relationship between party identification and public differences scores on the foreign policy item. The analysis concluded that greater party identification of "Democrat" was associated with a higher public difference score on foreign policy items[r = 0.178, n = 72, p = 0.132]. These results suggest that our preexisting political opinions can affect our likelihood to conform and differentiate when publically discussing items of public policy with our peers, and that Democrats in particular may be more likely to conform to better fit in with their peers in a digital environment when discussing foreign policy, although these results were only marginally significant. The largest difference scores were once again observed, once again, for the belongingness condition (M = 0.54, SD = 0.96), while observing very little shifts in opinion at all in the distinctiveness (M = 0.38, SD = 1.28) and control conditions (M = 0.21, SD = 0.42). Although the difference in means is not significant, the pattern of the means is consistent with the results on the economic policy item. A Dunnett two-sided test was conducted to compare both treatments to the control. The analysis determined that there was no significant difference between the belongingness and control groups (MD = 0.33, p = 0.38) and no significant difference between the distinctiveness and control groups (MD = 0.15, p = 0.80) Furthermore, in the

belongingness group, 21 percent conformed, while 13 percent differed from their group, and 66 percent held onto their original view. In the distinctiveness group only 12 percent differentiated from the group while 88 percent conformed on items of economic policy, meaning, for items of foreign policy, participants were not much more likely to conform than differ from their groups, although the trend towards conformity was still present.

A Pearson Correlation was computed to assess the relationship between the participants' shared public view on the foreign policy item, reported during the experiment (T2) and their view reported privately during the post-test (T3) across all three conditions [r = 0.87, n = 72, p <0.01]. I then compared this correlation to the correlation between responses T1 and T3 [r = 0.96, n = 72, p < 0.01] using a Fisher r-to-z transformation to see if the correlations are significantly different. This analysis concluded that the T1 to T3 correlation was significantly different from the T2 to T3 correlation (z = 3.41, p < 0.01). The same analysis was then conducted on just the belongingness condition, producing a T2 to T3 correlation [r = 0.89, n = 24, p < 0.01], and a T1 to T3 correlation [r = 0.92, n = 24, p < 0.01]. Using a Fisher r-to-z transformation, concluded that the two correlations were not significantly different (z = 0.52, p = 0.60). Participants were more likely across the all three groups to revert back to their original, preexisting opinion, than to accept and conform to the group view. This finding suggests that opinions on items of foreign policy may be less malleable by social influence than items of economic policy.

Polarization and Social Influence on Social Media

To test the hypothesis that online interactions may lead to polarization and fractionalization of political attitude groups, the answers on the policy items were divided into 4 groups: 1) Extreme view, containing the strongest two levels of agreement and disagreement from both ends of the Likert scale (i.e., ratings of 1 and 7); 2) Firm view, containing the next two levels of agreement and disagreement inward from the Likert scale (i.e., ratings of 2 and 6); 3) Moderate view, containing the next two views closest to the middle of the Likert scale (i.e., ratings of 3 and 5); and 4) Neutral view, containing the middle answer of the Likert scale (i.e., rating of 4). This was done for both T1 and T3 admissions of opinions on both the economic and foreign policy items. On the economic policy item (see table 1), the percentage of participants responding with an extreme view decreased form T1 (34.2%) to T3 (31.9%), the percentage of participants responding with a firm view increased form T1 (37%) to T3 (40.3%), the percentage of participants responding with a moderate view increased form T1 (24.7%) to T3 (27.8%), and the percentage of participants responding with a neutral view decreased form T1 (4.1%) to T3 (0%).

Table 1

Economic Policy Item Extremity Percentage Differences

	Extreme	**Firm**	**Moderate**	**Neutral**
Time 1	34.2%	37%	24.7%	4.1%
Time 3	31.9%	40.3%	27.8%	0%

As for the foreign policy item (see table 2), the percentage of participants responding with an extreme view decreased form T1 (24.7%) to T3 (18.1%), the

percentage of participants responding with a firm view increased form T1 (34.2%) to T3 (44.4%), the percentage of participants responding with a moderate view decreased form T1 (38.4%) to T3 (36.1%), and the percentage of participants responding with a neutral view decreased form T1 (2.7%) to T3 (1.4%).

Table 2

Foreign Policy Item Extremity Percentage Differences

	Extreme	Firm	Moderate	Neutral
Time 1	24.7%	34.2%	38.4%	2.7%
Time 3	18.1%	44.4%	36.1%	1.4%

While the results were not significant, there was a clear trend towards a hollowing of the middle and more polarization in views at the end of the experiment across both policy items.

Along with these results, a Pearson Correlation was computed to assess the relationship between participants' need to belong, assessed by the Need to Belong Scale (Leary et al., 2013), and if the participant reported using social media. There was a significant positive correlation between the two variables, such that usage of social networking sites was associated with greater need-to-belong scores [r = 0.27, n = 72, p = 0.02]. Correlations were also done on the relationship between social media use and need-for-distinctiveness scale [r = -0.18, n = 72, p = 0.12], need-for-cognition scale [r = -0.067, n = 72, p = 0.58], need-for-evaluation scale [r = -0.17, n = 72, p = 0.15], and political knowledge [r = -0.00, n = 73, p = 0.99]. These findings suggest there is a unique connection between social media usage and a high individual need to belong. To assess

this further, a new variable was created to split the continuous variable of time spent on social media per day into low usage (less than 60 minutes per day) and high usage (more than 60 minutes per day). A Pearson Correlation was computed to assess the relationship between participants' need to belong, and high or low social media usage per day. There was a marginally significant, positive correlation between the two variables [$r = 0.21$, $n = 72$, $p = 0.08$], adding to the pervious point that greater usage of social networking sites was associated with greater need-to-belong scores. Taken together, these finding suggests that greater social media usage may lead to a higher individual need to belong, in line with our earlier expectation that the more one interacts with society digitally, the more likely they are to conform to their in-group.

A simple linear regression analysis was conducted (see table 3 below) to determine the relationship between individuals who self-reported changing or repressing their own views to better fit in on social media and need to belong, need to be distinct, need to evaluate, need for cognition, social media use per day, both public difference scores, political party identification, political ideology, political knowledge. The analysis found a significant relationship between self-reported changing or repressing of views and more time spent on social media per day, individual need to belong, and political ideology and a marginally significant relationship to foreign policy public difference scores. These results suggest that those who repress or change their views on social networking sites are also more likely to spend more time on social media per day, are more likely to have a higher need to belong, are more likely to hold a conservative ideology, and are less likely to differ from the group on foreign policy. The results

concerning social media use per day and belongingness are in line with the first

hypothesis, namely, that if individuals are exposed to the views of their peer group in a

digital format, and they are different from their own views, individuals will change their

view to better fit in with the group. The results suggesting a relationship between

conservative ideologies and repressing or changing your views on social media suggest

that in the overwhelmingly liberal world of social media, it may be difficult for

conservatively minded individuals to voice their views without negative repercussions.

Table 3

Predictors of Repression /Change of Views on Social Media to Better Fit in

Variables	Self-reported changing or repressing of views to better fit in on social media		
	Model 1 B	B	95% CI
Time on Social media per day (minutes)	0.264**	0.001	[0.00, 0.01]
Need to belong	0.318**	0.117	[0.01, 0.23]
Need to be distinct	0.098	0.055	[-0.13, 0.24]
Need for cognition	0.014	0.007	[-0.13, 0.14]
Need to evaluate	-0.109	-0.044	[-0.15, 0.06]
Public difference scores on Foreign Policy	-0.235*	-0.103	[-0.22, 0.02]
Public difference scores on Economic Policy	-0.128	-0.084	[-0.26, 0.09]
Political Knowledge	0.05	0.011	[-0.05, 0.07]
Party Identification	0.231	0.109	[-0.08, 0.3]
Political Ideology	-0.418**	-0.215	[-0.42, -0.01]
R^2	.171		
ΔR^2	.022		

Note. N = 67. CI = confidence interval. *$p < .1$. **$p < .05$.

Discussion

There was a clear trend towards conformity demonstrated in this experiment in the belongingness condition. Furthermore, participants tended to hold their publically changed view stronger than their initial predisposition, indicating that the opinion change observed was more than a simple matter of self-presentation. There were insignificant changes in opinion in the distinctiveness condition however, indicating the difficulty in differing from the group for many. The initial question I began with was: what effect

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does social influence have on an individual's political identity and decision making when the individual is increasingly exposed to their peer group's views in a digital format (social media)? I expected that exposure to their peer group's view in a digital format will cause individuals to change their views to minimize social discomfort brought on by the pressures of social influence, For this claim, my analysis found significant evidence. This experiment tested for two hypotheses: (1) if individuals are exposed to the views of their peer group in a digital format, and they are different from their own views, individuals change their own view to better fit in with the group, and (2) if individuals are exposed to the views of their peer group in a digital format, and their views are too similar to the individuals views, the individual will change their own view to relieve the psychological discomfort on being too similar. For the first hypothesis analysis found significant supporting evidence, for the second however, the results were insignificant.

This experiment used an abstract representation of social media and online interactions; the intent was to create an environment similar to that of social media. With this in mind, there are some real-world implications to the results of this study; that is, the biases created by social influence and conformity on social media. This study was conducted with the participation of undergraduate college students of an average age of about 20 years old, some of the heaviest users of social media (Greenwood et al., 2016). In line with this, 95.9% said they use social media, of that 98.6% have been using social media for more than a year, with 84.3% accessing their social networking sites more than once a day, on average dedicating 120 minutes per day to browsing social networking sites. When asked about their activities on social networking sites 81.4 % said they post

or share content relating to politics or political issues, with 15.7 % claiming they do so most of the time. 98.6 % claim their friends on social networking sites post or share political content with 21.4% stating their friends do so most of the time. Restated, America's youth spends 1/8 of their waking hours perusing social media, even though when asked how often they disagree with something their friends post about politics a resounding 91.4% claim they do some of the time, with 17.1% admitting that they disagree with their friends most of the time. Yet, still so much time is spent on social media, even though 47.5% admit to receiving a strong negative reaction when they post content relating to politics. But perhaps the most concerning and relevant to this study are the 25% who reveal that they have repressed or changed their views on social networking sites so not to offend or better fit in with their friends, with 17.6% of that confessing they do so most of the time. Yet 91.8% still discuss politics with their friends, with 11% claiming they do so always, while 20.5% reveal they disagree in these types of discussions most of the time. These shocking statistics reveal the ever-present nature of social media in the daily lives of young people and have significant repercussions as a result of this study. Repressing or changing your view to conform or better fit in with a group of your peers is not only disheartening, but fundamentally opposed to the democratic process.

It is important to first be aware of the power of social influence on social networking sites and how it affects our decision making processes and views of the world. But just knowing of the importance of social influence and its effects on our judgement and decision making is often not enough to curb the effects of this powerful

bias. For this there are some behavioral solutions that one can implement into their daily life to avoid unwanted social influence. 1) Make yourself open to diverse social groups and remain open minded to differing opinions (Fisher and Ellis, 1980); allow yourself to see and understand the other side; the best way to change or give up a belief is to critique your own judgment. 2) Assume the logical opposite of your beliefs and see how well the data fit (Gilbert, 1991). In practice, this should translate to less social pull to conform to the group or be distinct from it, thus relieving some the psychological discomforts of group dynamics, while also having the added benefit of avoiding the tendency to polarize when speaking with people who agree with you (Sunstein, 2002).

Appendix

General Instructions

In this study, you will be asked to do three things:

The first is to answer a series of questions asking your views about a variety of political, social, and personal issues. Please answer these questions as honestly as possible.

In the second part of the study, you will interact with a group of your peers also participating in this study. You will engage in a cooperative game with this group at the end of the study, in which you will have the opportunity to earn up to $50 based on the number of tasks your group is able to complete. This game requires cooperation with your peers, so you will need to work together in order to complete the tasks.

Finally, in the third part of the study, you will be asked to answer a variety of questions about various personal characteristics and experiences.

Dependent Variable Policy Questions

- (Foreign Policy Item) The United States would be better off if we just stayed home and did not concern ourselves with problems in other parts of the world.
- (Economic Policy Item)The government should provide fewer services, even in areas such as health and education, in order to reduce spending.

Examples of Additional Policy Questions

- Controlling inflation is more important than controlling unemployment.

- If economic globalization is inevitable, it should primarily serve humanity rather than the interests of trans-national corporations.

- "From each according to his ability, to each according to his need" is a fundamentally good idea.

Instructions Prior to Experiment

As was noted earlier, in the end of the study you will participate in an economic game with your group, in which you will have the opportunity to earn up to $50 based on the number of tasks your group is able to complete. This will be a cooperative game in which you will need to work together in order to complete the tasks. Only the participants working together will be able to complete the task and thus receive the cash incentive.

But first, so that you can learn a little bit about your group in this study before interacting in the game, you will share some of your opinions on some of political and social matters with each other. We will begin the opinions of the other participants, and then you will be asked to share your views..

Examples of Political Knowledge Questions

- Who is the current minority leader of the U. S. Senate?

- Whose responsibility is it to determine whether a law is constitutional or not?

- Which Party currently holds a majority of seats in the House of Representatives?

Examples of Apolitical Questions

- Over the long term, technological advances will result in most people living better lives than they do now.

- If my child wanted to pursue a career as a professional athlete, I would encourage them to do so.

Examples of Social Media Questions

- Do you use social networking sites? (Such as Facebook or Twitter)

- In a typical day, about how much time do you spend using social networking sites?

- How much of what you post or share is related to politics or political issues?

- When you yourself have posted something political on a social networking site, have you ever gotten a strong negative reaction from a friend or someone who follows you?

- Have you ever repressed and/or changed your own views so not to offend and/or to better fit in with your friends on a social networking site?

Examples of Need for Cognition Scale Questions

- I prefer complex to simple problems.

- I like to have the responsibility of handling a situation that requires a lot of thinking.

- I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

Examples of Need to Evaluate Scale Questions

- I enjoy strongly liking and disliking new things.

- I often prefer to remain neutral about complex issues.

- I have many more strong opinions than the average person.

Examples of Need to Belong Scale Questions

- I try hard not to do things that will make other people avoid or reject me.

- I seldom worry about whether other people care about me.

- My feelings are easily hurt when I feel that others do not accept me.

Examples of Need to be Distinct Scale Questions

- It bothers me if people think I am being too unconventional.

- I find it sometimes amusing to upset the dignity of teachers, judges and "cultured" people.

- When I am in a group of strangers, I am not reluctant to express my opinion publicly.

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