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Ideological group persuasion: A within-person study of how violence, interactivity, and credibility features influence online persuasion

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ABSTRACT

Ideological groups (both non-violent and violent) make extensive use of the Internet for recruiting and other purposes, yet little is known about the effectiveness of the influence of websites of differing ideologies on attitudes and behavior. Furthermore, although credibility and interactivity have been extensively studied in online settings, they have received scant attention with regards to ideological groups. Using a within-subjects design, this study explored how individuals' attitudes, emotional reactions, behaviors and behavioral intentions are affected by two separate websites, with one promoting a liberal ideology and one promoting a conservative ideology. Results indicated that individuals preferred the liberal ideology, that violent websites led to higher negative affect and lowered perceptions of credibility than the non-violent websites, and that violence decreased the likelihood of taking action. Additionally, high interactivity increased the salience of the credibility manipulations with regards to their impact on the likelihood of taking action.

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1. Introduction

The path to full membership and participation in extreme, even violent, ideological groups is typically not a sudden or spontaneous decision but a process of small, often imperceptible, steps (Blee, 2002). Contrary to common assumptions, many people who join extremist groups are not mentally ill (Victoroff, 2005; Waller, 2007), but become socialized through creating and maintaining relationships with ideological groups and their members, thus fulfilling social and psychological needs for the individual (Hogg, Meehan, & Farquharson, 2010; Mumford et al., 2008; Taylor & Louis, 2004). This process of socialization can be powerful in shaping values, beliefs, and actions, and can lead ordinary people to perform cruel and violent behaviors (Mogahaddam, 2005).

For radical ideological organizations, achieving their goals requires them to continuously recruit new members to perform necessary organizational functions, increase the resources of the organization, and raise public awareness for their cause (Scott,

2013). To recruit new members, extremist groups must be able to disseminate their message effectively to inform and persuade potential members. Although contact with extremist groups can occur in various forms, recent research conducted by the UK's Home Affairs Committee (2012) found that the Internet has surpassed universities, prisons, and religious institutions as the primary location for recruitment into ideological groups. This finding should come as no surprise, given that the creation of an online presence gives groups the ability to instantaneously recruit and organize large groups which are geographically dispersed while reducing the need for face-to-face communication and centralized leadership, all without regulatory interference (McCann, 2010). Of great importance, then, is understanding how ideological groups persuade individuals online. Although there are numerous website facets that may influence individuals, two that have received a great deal of attention are credibility and interactivity (Metzger, 2007; Metzger, Flanagin, & Medders, 2010; Sundar, 2004). However, there is a paucity of research on how they function on ideological websites. Therefore, the present study seeks to extend previous research on website features to ideological groups. Specifically, the aim of this study is to determine how credibility and interactivity manipulations influence outcomes important to violent and non-violent ideological groups. This study also seeks to further extend the research on website features by including websites of conservative and liberal orientations, given

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the fact that political polarization in the U.S. is becoming more pronounced between liberals and conservatives (Pew Research Pew Research Center, 2014) leading to conditions conductive for recruitment to extreme ideological groups (McVeigh, 2004).

1.1. Online ideological groups

Due to the widespread penetration and use of the Internet throughout the world, social contact with groups espousing various ideologies is easier than ever. The relatively low cost and ease of creating and maintaining a webpage and minimal hindrance from regulators and law enforcement make the Internet a fertile medium for groups which advocate extreme ideologies (McCann, 2010). An ideology has been defined as a set of beliefs, values, and goals that are socially shared and held by a group as inherently good and right (Blau, 1964; Mumford et al., 2008; Van Dijk, 2006). The prevalence and popularity of ideological groups is thought to be due to the structure the group offers for its members by providing clear guidelines for understanding lived experiences (Mumford et al., 2008). Ideological groups can be sources of understanding and clarity by providing these plausible explanations for disturbances in members' or potential members' lives. Extreme ideological groups and actions are especially attractive to individuals dealing with high uncertainty (Hogg & Adelman, 2013). The framework of shared meaning provided by an ideological group bolsters a member's sense of worth and identity through providing a sense of belonging and security through ideas, attitudes, and practices, by providing a community of like-minded and supportive individuals, and by outgrouping those who disagree with the ideology (Connelly et al., 2015; Hogg et al., 2010).

Important to the successful persuasion of prospective ideological group members are the environmental conditions surrounding the issue promoted by the ideological group. Recent research conducted by the Pew Research Center (2014) indicated that political polarization in the U.S. is becoming more pronounced between liberals and conservatives, making compromise difficult and increasing governmental gridlock. Despite evidence that both conservatives and liberals hold similar negative perspectives of each other, it is unclear whether extreme conservative messages influence message receivers in the same way as extreme liberal messages. Previous research has generally limited classification of ideological groups to violent or non-violent (Angie et al., 2011) or explored the reactions to only one extreme ideological message (G. Johnson et al., 2014). Additionally, although some research has been conducted investigating the components of ideological messages, which research provides important insight into the persuasive goals and tactics of extreme ideological groups, this research tends to be qualitative or ethnographic in nature (Angie et al., 2011), which limits the generalizability of the findings. For example, recent research has looked at credibility and persuasive features present on ideological websites (Dunbar et al., 2014), social identity processes used (Connelly et al., 2015) and the use of social media (Jensen et al., 2014). Although such studies provide clarification on what groups are currently doing to persuade individuals, they fall short of elucidating the effectiveness of such tactics. This is the first study to conduct a controlled comparison of two ideological websites holding extreme views on opposite ends of the political spectrum, allowing potential conclusions to be drawn regarding the differential effects of political ideology and website characteristics.

1.2. Conservative versus liberal ideology

Of the many ideologies that exist, political ideologies occupy a very prominent place in American society. The divide between liberals and conservatives is not new and not unique to Americans,

with the traditional "left" versus "right" dichotomy originating in France over two centuries ago (Jost, Federico, & Napier, 2009). Although the distinction between conservatives and liberals is complex, the main differences between the two schools of thought center around the concepts of change and equality, with conservatives being more resistant to change than liberals and with equality being more important to liberals than to conservatives (Jost, Glaser, Kruglanski, & Sulloway, 2003; Jost et al., 2009).

The differences between conservatives and liberals carry over into extremism. For example, McCann (2010) found that racial heterogeneity interacted with conservatism such that states that were politically conservative with high racial heterogeneity had more hate groups than conservative states with low racial heterogeneity. For liberal states, this pattern did not emerge. Given such differences between conservatives and liberals, and considering that extremism has historically existed among liberals as well as conservatives, it is important to know whether persuasive tactics on websites for conservative ideological groups affect individuals the same way as they do on liberal ideological websites. Previous research has shown that persuasive appeals to conservatives and liberals are most effective when framed to appeal to the values underlying the respective ideology (Kidwell, Farmer, & Hardesty, 2013), but there is a paucity of research on the persuasiveness of actual website features, such as credibility, interactivity and violence, on ideological websites.

1.3. Credibility

In their seminal work, Hovland and Weiss (1951) demonstrated that people who are perceived as highly credible have the ability to sway participants' opinions on a topic to a greater extent than those perceived as less credible. Subsequent research established that credibility is not merely one concept, but is constituted of several components including trustworthiness (Hovland, Janis, & Kelley, 1953), expertise (McGinnies & Ward, 1980), goodwill (Walthen & Burkell, 2002), enterprise/experience (Pornpitakpan, 2004), and authority and character (McCroskey, 1966). In reviewing 50 years of credibility research, Pornpitakpan (2004) point out that the main effects of nearly all studies suggest that high credibility sources are more effective in causing attitude change and behaviors desired by the communicator than are low credibility sources.

In researching credibility in online settings, Flanagin and Metzger (2007) found that different genres of websites (e.g., news, commercial, personal) are perceived to be more or less credible due to the qualities of each type of website. For example, commercial websites are considered less credible because the website sponsor stands to gain financially from only showing the positive characteristics of its product. Although credibility perceptions clearly vary depending on a website's genre, it is unclear whether credibility-enhancing features have differential effects for ideological websites, given that they contain content bearing on deeply-held beliefs and values that are likely more personally relevant and salient to viewers than the content of other persuasive messages.

Ideally, Internet users would critically evaluate each message to which they are exposed and logically weigh its strengths and weaknesses so as to ascertain whether the message is accurate. Unfortunately, in reality, Internet users are far less thorough in their determination of credibility. Researchers have suggested that website credibility is often determined based on heuristic cues that demonstrate the characteristics of the source (e.g., expertise, trustworthiness, credentials) and the message (e.g., currency, accuracy) (Walthen & Burkell, 2002). What is not known is how website cues – including credibility cues – function in an ideological context. However, given the robustness of the effects of credibility on

attitudes (Pornpitakpan, 2004), we predict that a website with more credibility cues will still be more impactful on attitudes and agreement than one with fewer cues. Therefore we hypothesize the following:

Hypothesis 1. Participants exposed to websites that contain a high number of credibility-enhancing cues are more likely to agree with the ideological position presented on ideological websites than participants exposed to websites with few credibility-enhancing features, regardless of ideological topic.

Considering that goals of ideological groups transcend the mundane decision making and message consumption typical of most commercial or news websites and instead attempt to appeal to the core identity of website viewers, these cues may influence participants differently than in other online environments. Furthermore, given the importance individuals attach to their ideological beliefs, viewing such websites is likely to evoke affective reactions. Additionally, other variables such as interest in the group and behavioral intentions – both of which are important to ideological groups seeking to recruit new individuals – may also be impacted. However, what is unclear is how credibility cues will influence such reactions. For example, seeing a website that has few credibility cues may be dismissed as irrelevant and may not cause any affective reaction or changes in behavioral intentions or interest in the topic. Alternatively, a group that appears to be lacking in credibility and that makes inflammatory statements may evoke a high degree of negative affect for the viewer of the website, since the viewer may think the group has no right to be making such claims due to their low credibility, thus leading to an increased intention to take action. Such judgments may be influenced by the ideology of a group. That is, an individual who holds politically conservative viewpoints may perceive credibility cues differently if they appear on a liberal website than if the same cues were used on a conservative website, necessitating the need for a within-subjects design to determine whether an individual is impacted the same way by two websites of differing political leanings. Accordingly we propose the following research question:

Research Question 1. Does website credibility influence key outcomes desired by ideological groups such as interest in the ideology, affective responses, and ideologically motivated behavior and behavioral intentions similarly across conservative and liberal ideologies?

1.4. Extremism and violence

Calling for violent action as a method of promoting an ideology often demonstrates a belief that all other routes of goal achievement are ineffective or inefficient (Mogahaddam, 2005). For many extremist ideological groups, fomenting feelings of anger, resentment, and outrage in group members and supporters is a vital component for inciting violent action. Such groups can be attractive to individuals facing high degrees of threat and uncertainty regarding their sense of self or identity due to the unique ability of such a group to provide individuals with the certainty they seek (Hogg & Adelman, 2013). Hogg and Adelman (2013) asserted that threats to an individual – including threats to their lifestyle, security and prosperity – "will strengthen identification with assertive radical groups...and may also weaken identification with less assertive moderate groups" (p. 441). Additionally, by directing feelings of threat at an outgroup, such extremist groups motivate followers to support their goals and enhance ingroup delineation and identification (Bandura, 2004; McCann, 2010).

Although violent ideological groups may be attractive to some, given their disregard for the law, and given that individuals in

America are socialized to respect the country's political system (Easton, Dennis, & Easton, 1969), a group advocating actions clearly in violation of the law will likely be viewed as being on the fringe of society and potentially less credible. Calls for violence and other related imagery are also likely to evoke disgust, fear, anger, and other negative emotions. Another explanation of the impact that violence may have is found in Social Judgment Theory (Sarup, Suchner, & Gaylord, 1991; Sherif & Hovland, 1961). Social Judgment theory proposes that when people are presented with persuasive messages that attempt to change established attitudes, their pre-existing attitudes act as an anchor against which new information is compared and evaluated (Hovland, Harvey, & Sherif, 1957). If a persuasive appeal seems to advocate for a position considered too distant from the anchor point, the persuasive argument falls within the zone of rejection and individuals dismiss it without giving it much more consideration. Such may be the case with violent ideological messages. However, it is unclear how viewing violent websites will influence other important outcomes. For example, viewing the website of a violent ideological group could cause an individual to avoid taking any sort of action due to fear of retribution from the group and to focus his or her interest elsewhere, or could motivate an individual to take action to stop the group. Thus, we propose the following:

Hypothesis 2. Participants exposed to ideological websites that contain messages promoting violence express (a) lower levels of agreement with the ideology, (b) stronger feelings of negative affect, and (c) lower perceptions of website credibility than those exposed to websites that do not promote violence, regardless of ideological topic.

Research Question 2. Does website violence influence ideologically motivated behavior and behavioral intentions similarly across conservative and liberal ideologies?

1.5. Interactivity

In the past decade, interactivity and the impact it has on computer users has received a great deal of attention. Liu and Shrum (2002) define interactivity as "the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized" (p. 54). Although there is some debate regarding how interactivity should be defined, others have posited theoretical conceptualizations to Liu and Shrum's (2002) definition, with the three core dimensions common across numerous theories being two-way communication, synchronicity, and control (Voorveld, Neijens, & Smit, 2011).

There is broad support in the literature indicating that interactivity is beneficial. One consistent finding is that higher interactivity is related to more positive attitudes toward the website (Chung & Zhao, 2004; Johnson, Bruner Ii, & Kumar, 2006; Sundar & Kim, 2005; Wu, Hu, & Wu, 2010). One explanation for this is that the positive attitudes toward the website are a result of the individual feeling in control as opposed to ignored and manipulated (Liu & Shrum, 2002). Interactivity also has been posited to facilitate learning (Cairncross & Mannion, 2001), increase cognitive involvement (Liu & Shrum, 2002), and increase message comprehension (Kim & Stout, 2010). Along similar lines, a greater ability to control content, order, and duration of exposure to information has been shown to increase various cognitive outcomes, such as retention of the content and the use of the information that was perceived (Ariely, 2010). However, interactivity can also increase the scrutiny given to websites and messages, potentially leading to less

favorable attitudes if the content does not meet the viewer's expectations (Sundar, 2007; Sundar & Nass, 2001).

Although websites that are higher in interactivity often lead to participants having more favorable attitudes toward the website, interactivity's influence may be different for ideological websites. One important variable that influences the impact that interactivity has on an individual is the level of involvement the individual has with the topic (Chung & Zhao, 2004; Liu & Shrum, 2009). Indeed, the prominent place that ideological beliefs hold in an individual's life may be the reason that Johnson et al. (2014) found that interactivity functions differently on such websites than has been shown on studies using more traditional realms like advertising. On ideological websites, interactivity may function as Liu and Shrum (2002) suggest, in that the increased feeling of control leads to positive perceptions of the website and the group. However, interactivity could function in other ways as well. For example, if the individual is already opposed to the ideology, the increased cognitive involvement afforded by interactivity could lead to greater scrutiny of the message and a greater ability to find weaknesses in the argument, leading to less persuasion than might have otherwise occurred had the website been lower in interactivity. Alternatively, a website low in interactivity may not meet the viewer's perceptions of what types of features a website should have, which could lead to less favorable attitudes toward the website (Metzger et al., 2010), potentially overshadowing any other effects of interactivity and resulting in less persuasion.

Because of the extremity of these websites and the ideological nature of the messages, it is also unclear how the interactivity manipulations will affect the participants' likelihood of taking action as well as their actual behaviors. The increased cognitive processing and scrutiny of the website by the participant could result in the participant having a stronger affective reaction (either positive or negative), thus motivating the participant to act. Alternatively, the low control afforded by the low interactivity websites could frustrate the participants, making them desire to act in order to regain a sense of control. Thus, the following research questions are proposed:

Research Question 3. Does website interactivity influence key outcomes desired by ideological groups such as agreement with the ideology, credibility perceptions, affective responses, and ideologically motivated behavior and behavioral intentions similarly across conservative and liberal ideologies?

There are numerous ways that credibility, interactivity, and violence could interact to influence the website viewers' experiences and reactions to the messages presented. Interactivity may be acting as a moderator, in that interactivity's primary influence is on making other aspects of the website more salient, whether that is the message itself or features of the website. Alternatively, high credibility may need to be paired with high interactivity for either feature to have an effect, given that a website that is high in interactivity features but low in credibility features may produce an expectancy violation. However, for the high violence website, the combination of high interactivity and credibility may itself result in an expectancy violation, given that violent groups are likely seen as fringe groups and unlikely to have either credible features or the means to build an interactive website. This expectancy violation could intensify the negative affect experienced when viewing a violent message. Additionally, the ideology presented on the website may impact how viewers interpret the messages presented, adding another level of complexity when trying to predict outcomes. Therefore, we are unsure how levels of violence, credibility and interactivity may influence outcomes across ideologies. Hence we propose the following research question:

Research Question 4. Do violence, credibility, and interactivity interact across conservative and liberal ideologies to influence key outcomes desired by ideological groups such as agreement with the ideology, interest in the ideology, credibility perceptions, affective responses, and ideologically motivated behavioral intentions?

2. Method

The sample for this study consisted of 218 individuals recruited from introductory psychology classes at a large university in the south central United States. The average age of participants was 19.3 ($SD = 2.67$), and 66% of the sample was female.

2.1. Study design

In order to evaluate the research questions and hypotheses, a $2 \times 2 \times 2$ repeated measures design was used, with each participant viewing two websites that differed in ideology. A repeated measures design was used in order to determine if the impact of websites on individuals is dependent on the ideology. By using a within-subjects design, we can determine whether the effects of liberal and ideological websites are the same for any given individual.

Facets of the websites that were manipulated consisted of credibility (high/low), interactivity (high/low) and violence (high/low). Although participants were randomly assigned to conditions, the two websites that each participant viewed were matched such that both websites were from the same condition (e.g., high credibility, high interactivity, and low violence for both the first and second website).

2.2. Website design

Two functioning websites – one for each ideology – were designed and constructed in partnership with a professional web developer. Websites were designed to be similar in structure and content to other ideological websites on the internet, as assessed through past work (Connelly et al., 2015; Dunbar et al., 2014; Jensen et al., 2014). For example, both websites included features such as an about page, FAQ and events page. For each ideology, eight separate versions of the website were created for the various combinations of manipulations. Websites were designed to be approximately parallel in structure and length and could only be accessed with an ID number (see Appendix A for sample screenshots).

2.3. Procedure

All data collection was conducted in campus computer labs and proctored by members of the research team. Upon entering the lab, participants were consented and given two unique ID numbers – one for each website, with both websites pertaining to the same experimental condition. After participants were consented, they were asked to enter their ID numbers into the online survey, allowing us to connect their survey responses to their website clickstream data. After the participants completed a battery of covariate measures, they were given a link to the first website (website order was counterbalanced across participants). Participants were instructed to spend 15–30 min reading the website thoroughly and were informed that they would be asked questions about the website afterwards. Participants then browsed the website and, when they were finished, completed a series of measures related to the website they had just viewed. Participants then watched an instructional video on a neutral topic

in order to minimize carryover from the first website to the second website. Upon completing the video, participants were given the link to the second website and the same browsing instructions. After browsing the website, participants filled out a battery of post-website measures and then were fully debriefed. In order to debrief the participants, the researcher read an information sheet to the participants informing them of the false information that had been presented on the website as well as suggesting legal ways to advocate for an issue. Additionally, participants had to successfully pass a short paper and pencil test assessing their understanding of the (un)truthfulness of the websites.

2.4. Manipulations

2.4.1. Ideology

Based on a survey of undergraduates, the topics of immigration and separation of church and state were chosen because participants found these topics to be important and participants held a wide range of views on the topics. The fictitious ideological groups created for these two topics were the Christian Liberty Foundation (CLF), which had as its mission the integration of Christianity into government and schools and thus was relatively conservative in nature, and the Immigration Freedom Coalition (IFC), which had as its mission more lenient immigration policies and better treatment of those immigrating to the United States and thus was relatively in line with liberal ideals. Data collection occurred from November 2012 until May of 2013, during a time when neither topic was overly prominent in the news.

2.4.2. Credibility

Credibility was manipulated through the facets of authority (McCroskey, 1966), character (McCroskey, 1966), expertise (Hovland et al., 1953), goodwill (Walthen & Burkell, 2002), experience (Hovland et al., 1953), quality of evidence provided and writing quality. The manipulations were such that the high credibility websites included descriptions and citations representing a high amount of the specific facets of credibility, while the low credibility website contained parallel content but with a low amount or absence of the various facets of credibility. In addition to keeping the credibility manipulations parallel between the high and low credibility conditions, an effort was also made to keep the manipulations as parallel as possible across ideologies. For example, on the high credibility website for both ideologies, each claim that was made was attributed to some prestigious university or organization (e.g., Pew Research Center), while for the low credibility websites each claim was followed by either a reference with less prestige (e.g., November 2012 CLF Newsletter) or no reference at all.

2.4.3. Violence

Violence was manipulated through the images as well as textual content. The high violence websites for both CLF and IFC included images of guns and conflict, while the low violence websites included parallel, nonviolent images. For example, the banner on the low violence CLF website included the image of a cross atop an American flag, while the high violence website included a handgun in addition to the flag and cross. Along with manipulating images, for the high-violence websites the text also suggested that the group was willing to engage in violent and extreme acts to support its mission, while the low violent websites promoted more peaceful solutions (e.g., advocating voting out ineffective politicians on the non-violent websites versus advocating violence against ineffective politicians on the violent websites).

2.4.4. Interactivity

Interactivity was manipulated through altering the navigability of the website as well as the two-way communication features (Liu & Shrum, 2002). The high interactivity websites included dropdown menus, opportunities to make comments and offer feedback, and clickable icons that enabled the viewer to sign up for a newsletter, register for events, request information, and follow or like the group on social media.[3] For the low-interactivity website, all of the same content was present but was not as easily accessible. For example, rather than there being separate pages for each topic on the website, they were organized into several lengthy pages (e.g., one page for all of the different issues discussed). In addition, in order to sign up for newsletters, request information, or register for events, all that was given was an email address, and there was no ability to interact with the links to social media websites.

2.5. Outcome measures

2.5.1. Attitude toward the ideology

Attitude toward separation of church and state and attitude toward immigration were assessed with parallel scales, both created by the authors. Both measures were included in the battery of measures administered prior to viewing the websites, for use as a covariate, and again immediately after the participant viewed the website for the corresponding ideology. For both measures, participants were asked to indicate, on a 5-point rating scale, the extent to which they agreed or disagreed with a set of statements regarding the ideology. Each of the two measures was divided into two subscales – interest in the ideology (Church/State: 4 items, Pre $\alpha = .78$, Post $\alpha = .83$; Immigration: 4 items, Pre $\alpha = .75$, Post $\alpha = .77$) and support for the ideology (Church/State: 10 items, Pre $\alpha = .90$, Post $\alpha = .90$; Immigration: 11 items, Pre $\alpha = .87$, Post $\alpha = .90$).

2.5.2. Perceptions of credibility

Perceptions of credibility were assessed using a measure from Johnson et al., 2014. Seven dimensions of credibility were assessed – argument quality (Fogg, 2003), writing quality (Fogg, 2003), goodwill (Walthen & Burkell, 2002), authority (McCroskey, 1966), character (Hovland et al., 1953) expertise/experience (Hovland et al., 1953) and extent to which evidence was provided on the website. Participants rated on a 7-point scale the degree to which they agreed or disagreed with statements about each credibility facet. There were five questions for each subscale, resulting in a total of 35 items (CLF: $\alpha = .96$, IFC: $\alpha = .97$). A sample item was "There is enough evidence to back up the claims made on this website."

2.5.3. Likelihood of taking action

The likelihood of taking action scales were based on a measure by Hughes et al. (2014), with one scale measuring likelihood of action regarding the separation of church and state and the other measuring likelihood of action regarding immigration. For each measure, participants were asked to indicate on a 5-point scale their agreement with statements indicating a desire to participate in certain ideologically based activities. Each scale was divided into three subscales – gathering information (12 items, Church/State $\alpha = .89$, Immigration $\alpha = .89$) expressing viewpoint (8 items, Church/State $\alpha = .87$, Immigration $\alpha = .87$) and taking political action (3 items, Church/State $\alpha = .67$, Immigration $\alpha = .71$). In the gathering information subscale, participants were asked to indicate their likelihood of gathering both pro and anti-ideology information. A sample item from the gathering information subscale was "Regarding immigration/separation of church and state, I would like to search the web for pro-immigration/separation of church and state information." Participants then answered the

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[3] In order to preserve experimental control, links did not actually take participant to external website, but rather elicited a message on the website thanking the participant for liking the group.

same question, but regarding likelihood of gathering information that was anti-immigration or anti-separation of church and state. For the likelihood of expressing viewpoint scale, participants indicated their likelihood of engaging in various actions enabling them to share their opinion on the topic. A sample item was "Regarding immigration/separation of church and state, I would like to try to encourage my family or friends to share my point of view." For the likelihood of taking political action scale, participants indicated their likelihood on voting for legislation and candidates who support the participant's position on the topics. A sample item from the taking political action was "Regarding immigration/separation of church and state, I would like to vote for a political candidate who agrees with my position."

2.5.4. Self-reported negative affect

State negative affect was assessed immediately after participants finished viewing the website using the negative affect questions from the Positive and Negative Affect Scale (PANAS) (Watson, Clark, & Tellegen, 1984). Participants were asked the extent to which certain adjectives described them at that point using a 5-point scale ("very slightly or not at all" to "extremely"). Sample adjectives for the scale include "distressed," "upset," and "irritable". Both scales demonstrated acceptable internal consistency (CLF α = .83; IFC α = .83).

2.5.5. Open-ended responses

As part of the set of post-website measures that participants completed after viewing each website, participants were asked to respond to two comments which they were told had been taken from the website. One comment was in agreement with the ideology (pro) and the other comment was opposed to the ideology (anti). Trained raters blind to condition rated each response on specific facets, and an agreement scale was calculated from these ratings. Agreement with the ideology was calculated by averaging ratings of how much the response agreed with the ideology, the extent to which the response included arguments from the website in favor of the group, and the extent to which the response used language and framing from the website (pro-CLF α = .84, anti-CLF α = .73, pro-IFC α = .91, anti-IFC α = .93). Before coding, raters were trained using frame-of-reference training (Bernardin & Buckley, 1981), after which, practice coding was completed until sufficiently high agreement was reached. Agreement levels were calculated while coding was going on and additional trainings were given as needed. Inter-rater agreement was calculated using r^*_{wg} (Lindell & Brandt, 1999), and final agreement levels were all greater than .70.

2.6. Covariates

2.6.1. Order effect

We controlled for which website participants saw first to account for any priming effects. Order was dummy coded, such that if participants saw the church/state website first, a value of 1 was assigned, and a value of 2 was assigned if they saw the immigration website first.

2.6.2. Conservatism

Given the nature of the websites, with one being more aligned with conservative ideals and the other with liberal ideals, an individual's pre-study conservatism was likely to influence their responses. For that reason, we assessed conservatism with a 22-item measure (α = .78) developed by Ray (1983). Participants were asked to indicate on a 7-point scale the degree to which they agreed with each statement, with half of the statements reflecting a liberal viewpoint and half a conservative viewpoint. Liberal items

were reverse-scored so that a higher score on the measure indicated a higher level of conservatism. A sample item was "People who show disrespect for their country's flag should be punished for it."

2.6.3. Average news engagement

With the attitudinal nature of the dependent variables in this study, and with the various claims made on the website, it was likely that those that are more engaged with current events would be affected differently than those who were not as aware of things transpiring in the world. With this being the case, we created a scale to measure average news engagement. The scale consisted of six items (α = .81) asking participants to indicate on a 5-point scale the extent to which they are affected by current events and pay attention to the news. A sample item is "To what extent do you feel like keeping up with the news and current events is important?"

2.7. Manipulation checks

The credibility manipulation check was a subset of the credibility measure. We created a credibility score using only those sub-dimensions of the credibility measure we actually manipulated. That is, we created a composite credibility score for the manipulation check using the participant's ratings of goodwill, external support, authority, character, and expertise. We did not include writing quality due to the fact that only the simulated comments posted to the website were manipulated for writing quality. An independent samples t-test revealed that those in the high credibility condition perceived greater credibility than those in the low credibility condition for the CLF website (low cred M = 3.45, SD = 1.16, high cred M = 3.86, SD = 1.15, $t(216)$ = −2.65, p = .009), but not for the IFC website (low cred M = 3.85, SD = 1.17; high cred M = 4.03, SD = 1.12, $t(216)$ = −1.13, p = .26). However, a closer inspection of the results showed an interaction such that when low in interactivity, the high credibility websites of both CLF and IFC were viewed as higher in credibility than the low credibility websites (CLF: low cred M = 3.49, SD = 1.05, high cred M = 4.00, SD = 1.05, $t(109)$ = −2.57, p = .012; IFC: low cred M = 3.71, SD = 1.10; high cred M = 4.10, SD = 1.10, $t(109)$ = −1.88, p = .062), but the manipulation check was unsuccessful for both websites when high in interactivity (CLF: low cred M = 3.41, SD = 1.28, high cred M = 3.72, SD = 1.25, $t(105)$ = −1.30, p = .198; IFC: low cred M = 4.00, SD = 1.23; high cred M = 3.95, SD = 1.14, $t(105)$ = .22, p = .828). Thus, interactivity affected the way credibility was perceived. Given that the credibility manipulations resulted in significant differences on the dependent variables, as discussed below, it appears that the high interactivity websites may somehow have masked the credibility manipulations in such a way as to make them harder to explicitly notice while still maintaining their effect on other variables of interest.

To verify that participants perceived the interactivity manipulations, we used an interactivity measure developed for this study based on Liu's (2003) items assessing control and two-way communication. An independent samples t-test revealed that those in the high interactivity condition perceived significantly more interactivity than those in the low interactivity condition (CLF: low interactivity M = 3.30, SD = .77, high interactivity M = 3.66, SD = .57, $t(216)$ = −3.88, p < .001, IFC: low interactivity M = 3.36, SD = .74, high interactivity M = 3.81, SD = .51, $t(216)$ = −5.15, p < .001). Perceptions of violence were assessed using a measure created by the authors that asks the participant the extent to which the group seemed willing to use violence and extreme means to accomplish its purposes. Those viewing the high violence websites perceived significantly higher violence than those viewing the low violence websites (CLF: low violence M = 2.81, SD = .81, high

violence $M = 4.10$, $SD = .88$, $t(216) = -11.27$, $p < .001$; IFC: low violence $M = 3.01$, $SD = .80$, high violence $M = 4.15$, $SD = .78$, $t(216) = -10.67$, $p < .001$).

2.8. Data analysis

Repeated-measures MANCOVAs were used to test the hypotheses and research questions. Using theoretical and empirical considerations to group the variables, three separate MANCOVAs were conducted – self reported attitudes toward the group/ideology (attitudes toward the ideology, negative affect and perceptions of credibility), likelihood of action/interest in the ideology (likelihood of expressing viewpoint, likelihood of taking political action, likelihood of gathering information and interest in the ideology) and agreement with the ideology as expressed in the responses to the comments (agreement with the ideology expressed in response to the pro-ideology comment and agreement with the ideology expressed in response to the anti-ideology comment). For the analyses, between-subject factors included credibility, violence, and interactivity with the repeated factor being the website ideology. Covariates that were included in all analyses included order effect, conservatism, average news engagement, baseline interest in the separation of church and state, baseline interest in immigration, baseline agreement with the pro-immigration ideology, and baseline agreement with the separation of church and state. Only covariates that were significant at the .05 level were retained.

3. Results

3.1. Self-reported attitudes

The covariates that were significant and were thus retained in the MANCOVA[4] assessing the self-reported attitudes included conservatism, baseline agreement with immigration, baseline agreement with the separation of church and state, baseline interest in the separation of church and state, baseline interest in immigration and conservatism. The between-subjects effect for violence was significant ($F(3,203) = 17.77$, $p < .001$, $\eta_p^2 = .21$). Follow-up univariate analyses revealed that participants viewed the violent websites as significantly lower in credibility ($F(1,205) = 34.52$, $p < .001$, $\eta_p^2 = .14$; low violence $M = 4.14$, $SE = .08$, high violence $M = 3.49$, $SE = .08$), and participants that viewed the violent websites reported significantly higher negative affect ($F(1,205) = 24.20$, $p < .001$, $\eta_p^2 = .11$; low violence $M = 1.65$, $SE = .05$, high violence $M = 2.01$, $SE = .05$). No significant differences were seen in attitudes toward the ideology ($F(1,205) = .14$, $p = .70$, $\eta_p^2 = .001$; low violence $M = 3.22$, $SE = .03$, high violence $M = 3.20$, $SE = .03$). Thus, 2a, which proposed that higher levels of violence would result in lower levels of agreement, was not supported. However, hypothesis 2b and 2c, which proposed that higher levels of violence would result in higher levels of negative affect and lower credibility perceptions, respectively, were supported.

The test of within-subjects effects revealed that the effect of website was significant ($F(3,203) = 8.32$, $p < .001$, $\eta_p^2 = .11$). Follow-up univariate analyses revealed that participants were higher in agreement with the ideology espoused by the immigration website ($F(1,205) = 14.03$, $p < .001$, $\eta_p^2 = .06$; CLF $M = 2.98$ $SE = .02$, IFC $M = 3.45$, $SE = .03$) and viewed the immigration web-

site as significantly higher in credibility than the pro-integration of church and state website ($F(1,205) = 13.09$, $p < .001$, $\eta_p^2 = .06$; CLF $M = 3.69$ $SE = .06$, IFC $M = 3.94$, $SE = .07$). No differences were seen for negative affect ($F(1,205) = .019$, $p = .89$, $\eta_p^2 = .000$; CLF $M = 1.85$ $SE = .05$, IFC $M = 1.80$, $SE = .04$). Due to the fact that neither the between nor the within effect for credibility was significant, hypothesis 1 was unsupported, given that it predicted that higher credibility would lead to increased agreement with the ideology.

3.2. Attitudes expressed in responses to comments

The covariates that were retained in the MANCOVA assessing the attitudes expressed in response to the comments included conservatism, baseline agreement with immigration, baseline agreement with the separation of church and state, baseline interest in the separation of church and state, and conservatism. The results mirrored those of the self-report MANCOVA, in that the between-subjects effect for violence was significant ($F(2,203) = 7.59$, $p = .001$, $\eta_p^2 = .07$) and the within-subjects effect for website was significant ($F(2,203) = 3.77$, $p = .025$, $\eta_p^2 = .04$). Follow-up univariate analyses revealed that in their response to the pro-ideology comment, participants viewing the violent websites indicated higher disagreement with the ideology than those viewing the non-violent websites ($F(1,204) = 13.50$, $p < .001$, $\eta_p^2 = .06$; low violence $M = 1.94$ $SE = .05$, high violence $M = 1.70$, $SE = .05$). However, no differences were seen in their response to the anti-ideology comment ($F(1,204) = .76$, $p = .39$, $\eta_p^2 = .004$; low violence $M = 1.74$ $SE = .05$, high violence $M = 1.80$, $SE = .05$). Thus, hypothesis 2a, which proposed that higher violence would result in less agreement, was partially supported.

We also did follow-up univariate analyses for the within-subject effects for website, and found that on the pro-ideology comment, individuals indicated greater agreement with the pro-immigration ideology than the pro-integration of church and state ideology ($F(1,204) = 5.85$, $p = .016$, $\eta_p^2 = .03$; CLF $M = 1.72$ $SE = .04$, high violence $M = 1.92$, $SE = .05$). No differences were observed for the anti-ideology prompt $F(1,204) = 1.91$, $p = .017$, $\eta_p^2 = .01$; CLF $M = 1.56$ $SE = .03$, IFC $M = 1.97$, $SE = .05$.
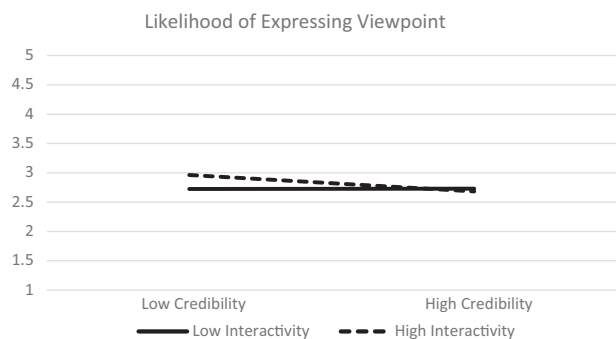
3.3. Likelihood of action/interest

The covariates that were retained in the MANCOVA assessing the likelihood of action included baseline agreement with immigration, baseline agreement with the separation of church and state, baseline interest in the separation of church and state, baseline interest in immigration, news engagement and conservatism. Between subject effects revealed that violence was significant ($F(4,201) = 2.97$, $p = .02$, $\eta_p^2 = .06$), as well as the interaction between interactivity and credibility ($F(4,201) = 2.60$, $p = .04$, $\eta_p^2 = .05$). Follow-up univariate analyses showed that individuals who viewed the violent websites were less likely to take political action ($F(1,204) = 10.60$, $p = .001$, $\eta_p^2 = .05$; high violence $M = 3.43$ $SE = .06$, low violence $M = 3.71$, $SE = .06$) and to express their viewpoint ($F(1,204) = 6.09$, $p = .014$, $\eta_p^2 = .03$; high violence $M = 2.67$ $SE = .06$, low violence $M = 2.89$, $SE = .06$). No significant difference were seen for gathering information ($F(1,204) = .15$, $p = .07$, $\eta_p^2 = .001$; high violence $M = 3.18$ $SE = .06$, low violence $M = 3.21$, $SE = .06$) or for interest in the ideology ($F(1,204) = .13$, $p = .72$, $\eta_p^2 = .001$; high violence $M = 3.92$ $SE = .04$, low violence $M = 3.94$, $SE = .04$).

For the interaction effect, follow-up univariate analyses showed that the interaction effect for expressing one's viewpoint seemed to be driving the significant MANCOVA analysis ($F(1,204) = 2.61$, $p = .11$, $\eta_p^2 = .013$), since taking political action and gathering information were non-significant (taking political action: $F(1,204) = .92$, $p = .34$, $\eta_p^2 = .004$; gathering information: $F(1,204) = .883$, $p = .35$,

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[4] For all three MANCOVAs, box's test was significant, which tests the assumption that the observed covariance matrices of the dependent variables are equal across groups. Thus, the assumption was violated. Additionally, the assumption of equality of error variances was violated for negative affect for IFC and for agreement with the pro-IFC prompt. However, for each analysis, results under with the sphericity assumed assumption, the Greenhouse-Geisser correction, the Huynh-Feldt correction, and the Lower-bound correction were the same.

Likelihood of Expressing Viewpoint

Fig. 1. Interaction of credibility and interactivity on likelihood of expressing a viewpoint across ideologies (between-person).

$\eta_p^2 = .004$; interest: $F(1,204) = .80$, $p = .37$, $\eta_p^2 = .004$). For likelihood of expressing viewpoint, pairwise comparisons showed that for individuals viewing the low credibility website, those viewing the high interactivity website indicated a marginally higher likelihood of expressing their viewpoint ($p = .06$, low credibility, low interactivity $M = 2.72$, $SE = .09$; low credibility, high interactivity $M = 2.96$, $SE = .09$) (see Fig. 1). No significant differences were found for the within-subjects effect on the MANCOVA.

Given the above findings, the answer to research questions 1 and 3, which respectively ask whether credibility and interactivity influence key outcomes, is that they do not influence the outcomes we assessed. The results also show that both ideologies resulted in similar effects, as evidenced by the lack of within-subjects effects, thus answering research questions 2 and 4, which inquired about the differential effects across websites.

4. Discussion

The findings in this exploratory study highlight several ways in which violence, credibility factors, and interactivity influence perceptions of and responses to ideological websites. The majority of the findings can be broken down into three basic sections – preference for ideology, the negative effect of violence, and the interaction between credibility and interactivity.

First, regarding ideology, individuals displayed a clear preference for the pro-immigration ideology espoused by IFC over the pro-integration of church and state ideology espoused by CLF, even after controlling for pre-attitudes. Participants expressed higher agreement with pro-immigration viewpoints on the survey and in response to the pro-immigration prompt. Participants also viewed the IFC websites as more credible. This finding is very interesting, considering that the mean score on the 7-point conservatism scale was 4.27 ($SD = .64$). That is, overall, participants were more conservative than liberal. However, it is also interesting to note that participants were more in agreement with the policies advocated by IFC than with the CLF policies even before viewing the website (IFC $M = 3.33$, CLF $M = 2.94$, $t(217) = -4.93$, $p < .001$). These pre-attitudes may have made them more open-minded to the views expressed on the IFC website. Alternatively, it may have to do with the fact that the separation of church and state is an issue that has been discussed for centuries, while immigration is a more recent issue.

Second, violence had a very negative impact on user reactions across ideologies. Individuals who viewed websites high in violence felt higher negative affect, viewed the websites as less credible, and expressed less agreement with the ideology in response to the pro-ideology prompt, suggesting that, overall, violent websites elicit negative reactions in individuals. As proposed earlier, this finding can be explained by social judgment theory (Sarup et al., 1991; Sherif & Hovland, 1961), in that the violent messages are falling within the zone of rejection of the individuals for our mainstream student population. Given the rise of terrorist groups such as ISIS successfully using blatant violence to recruit like-minded individuals, this is an important finding, in that it shows that for most individuals this tactic is perceived in a negative way.

Although blatantly violent persuasion appeals may not endear a group to individuals, they nevertheless seem to be influencing individuals' actions, or at least planned actions. Individuals who viewed the high violence websites were less likely to take political action and to express their viewpoint on the issue. This finding is noteworthy given the need to take action to combat the violent terrorist groups that have appeared in recent years, and suggests that such extreme violence may actually hinder individuals from taking political action against the groups. One explanation for this finding is that participants who viewed the violent websites simply disregarded the website on account of the extreme nature; thus, they were not influenced significantly by the arguments and did not perceive a greater need to take any kind of action on the topic. Another explanation is that viewing the violent websites made individuals hesitant to take action against the ideology for fear of some type of retribution by the group. Whatever the explanation may be, these findings suggest that with the rise in violent, extremist groups there should be increased efforts made to educate the public on political actions that they can take and to encourage them to take those actions to counter extremism.

A third key finding is how interactivity moderates the effect of the other variables. Specifically, our findings suggest that high interactivity may have strengthened the effect of the credibility manipulation. One reason for this conclusion could be, as Liu and Shrum (2002) propose, that higher interactivity websites lead to increased cognitive involvement with the website. For likelihood of expressing viewpoint, the low credibility, high interactivity IFC website produced the highest likelihood of action, suggesting that the effects of lower credibility were magnified when viewed on the high interactivity website. One possible reason why low credibility (as opposed to high credibility) and high interactivity produced the strongest results is that the increased scrutiny that high interactivity caused resulted in a greater awareness that the source may not have been trustworthy and consequently merited closer inspection. Callister (2000) argues that historically, individuals were granted credibility on the basis of credential or merely by the fact that a published work existed, since the perception was "only those with something of merit to say are published, or put on the air, or allowed to teach" (p. 412). He goes on to explain how much more complicated it is to determine credibility in online settings, given the fact that anyone can publish online, as opposed to print sources which have a vetting process. Perhaps, then, when individuals viewed the high-credibility website, they adopted a more heuristic view of credibility than when viewing the low-credibility website. Because of the lack of traditional credibility cues on the low-credibility website, those viewing that website may have processed the website more deeply in order to determine whether or not to believe what they were reading, leading to an increased need to speak up or out about the topic and more of an affective reaction.

It is interesting to note that there were no significant within-subject effects. One of the purposes of this study was to determine whether the effect of ideological websites is influenced by the specific ideology. Other than finding that individuals preferred the IFC ideology over the CLF ideology, our findings suggest that credibility and interactivity function similarly across ideologies with respect to the variables measured in this study.

4.1. Strengths and limitations

One clear strength, but also one clear limitation, is the sample that was used, given that the sample was mainstream college

students. While it may be argued that our population was not an "at risk" population, it is noteworthy that youth are a prime target for recruitment for hate groups (Blazak, 2001). Furthermore, even though the majority of the individuals studied are unlikely to join a hate group at this point, given the gradual steps taken on the path to full membership in such groups (Blee, 2002), it is important to note how less-vulnerable individuals react to such websites. Another limitation is the controlled nature of the study. Individuals coming across a website while browsing the internet on their own computer may process websites differently than those asked to do so in a laboratory setting, and consequently their

reactions may be different. However, the control afforded by the experimental design for this study outweighed the potential confounds that would have arisen through other designs. Furthermore, the control of the laboratory environment allowed us to increase the ecological validity by creating real websites for violent ideological groups for the participants to view.

4.2. Future research

Additional research is needed which looks at varying degrees of extremity of websites. There are many ideological websites that

Fig. 2. Screenshot from the homepage of the high violence, high interactivity, low credibility website for CLF. While individual was viewing the homepage, the large image towards top of page transitioned among the seven images directly below it.

Fig. 3. Screenshot from homepage of the low violence, low interactivity and high credibility website for CLF. Large image did not transition among images directly below it.

explicitly condemn violence, while, at the same time, preach extreme hatred toward groups of people. Considering the findings in this study, explicitly violent websites are viewed negatively by individuals and likely are ineffective in starting the average individual on the path to membership in such groups, while websites with the same amount of hatred but condemning violence may be more effective at starting individuals down such a path. Furthermore, qualitative research is needed in order to explore the individual differences and experiences of website viewers as they process such websites.

5. Conclusions

Individuals sampled had a clear preference for the liberal-leaning, pro-immigration ideology over the more conservative, anti-separation of church and state ideology. Additionally, the violent websites seemed to be reprehensible to the participants, given the impact violence had on various outcomes, including taking political action. The interactive effects of the variables suggests that highly interactive websites that are low incredibility may have a particularly salient impact. A key implication of the findings is that individuals need to be encouraged not to be driven to inaction when confronting messages of violent, extremist groups.

Author note

William Taylor, Genevieve Johnson, and Alisha Ness are Ph.D. students in the Department of Psychology at the University of Oklahoma. Michael Ault and Bobby Rozzell are Ph.D. students in

Fig. 5. Screenshot from the low violence, low credibility and low violence website for IFC. Large image did not transition among images directly below it.

conclusions contained herein are those of the authors and should not be interpreted as necessarily representing the official policies or endorsements, either expressed or implied, of NSF or the U.S. Government.

Appendix A

See .

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W.D. Taylor et al./Computers in Human Behavior 51 (2015) 448–460

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