

Running Head: IDEOLOGICAL WEBSITES

Fear appeals, message processing cues, and credibility in the websites of violent, ideological, and
non-ideological groups

Norah E. Dunbar, Shane Connelly, Matthew L. Jensen, Bradley J. Adame, Bobby Rozzell, &
Jennifer Griffith, H. Dan O'Hair

Abstract

Ideological groups use the Internet to deliver their messages unhindered by the constraints of traditional media. We examined how ideological groups promote their worldview through their websites. Using the elaboration likelihood model (ELM), this research used trained coders to examine the websites of non-ideological groups ($n = 37$), non-violent ideological groups ($n = 36$), and violent ideological groups ($n = 32$) for credibility, persuasion processing cues, and interactivity factors. Results of this study found that the websites of violent ideological groups use more fear appeals, were less interactive, and were the least credible of the three groups. All three groups used more central cues than peripheral suggesting they focused on evidence for their arguments rather than emotion.

Keywords: Internet; Websites; Ideology; Violence; Group Dynamics; Credibility; Persuasion

Given their broad audience and relative ease of dissemination, new media sources, such as websites, blogs, and YouTube channels, are fertile ground for the proliferation of ideological groups and their messages especially because they lack the regulation of traditional media (Heath & O'Hair, 2008; Matusitz & O'Hair, 2008). Any person with access to the Internet can gather material from a variety of sources, create a website to deliver their message to a target group, and interact with other like-minded individuals in synchronous or asynchronous formats. Ideological groups are those with strongly held values that form a mental model for how they interpret events in the world (Mumford et al., 2008). Ideological groups representing a variety of worldviews have a presence on the Internet, such as those supporting particular political beliefs, religious beliefs, or social movements. These worldviews also differ with respect to direct or indirect sanctioning of violence in support of ideological beliefs and goals. For example, the American Society for the Prevention of Cruelty to Animals' website provides clear evidence of its philanthropic approach to peaceful animal advocacy, while the Animal Liberation Front's website documents why and how it commits acts of violence (e.g., laboratory liberations, threats against animal researchers) in support of its ideology. Non-ideological groups typically share general beliefs, knowledge, or norms, but do not share a persistent, underlying ideological framework (Byrne et al., 2013).

Although ideological groups are increasingly turning to online forums, there is little research on how ideologically motivated groups maintain and promote their worldviews through their websites. Gathering data through interviews or through other methods is difficult due to these groups' limited accessibility (Glaser, Dixit, & Green, 2002). In the past, these groups had to be sought out offline, resulting in limited data collection that can take months or even years (Skitka & Sargis, 2006). Additionally, data on ideological groups typically focuses on hate

groups or other violent ideological groups. This leaves a large gap in our understanding of non-violent and pro-social types of ideological groups (see Byrne et al., 2013 for an exception).

Recently, some scholars have applied content analysis methods to examine ideological groups with an online presence. For example, using thematic content analysis, McNamee, Peterson, and Peña (2010) identified four types of goals common across a variety of hate groups. Angie et al. (2011) revealed a number of differences in the psychological processes used by ideological groups that sanction violence compared to ideological groups that do not, while Byrne et al. (2013) contrasted various website characteristics for violent and non-violent ideological groups. However, much more research is needed to improve our understanding of the advocacy used in these messages. We know little about the extent to which the online messages of ideological groups are credible, persuasive, and interactive, when compared to those of non-ideological groups. Nor do we know how website design features are influenced by the level of violence advocated by ideological groups. The purpose of this research is to examine the interactivity and the persuasive strategies used by ideological and non-ideological groups, whether condoning violence or not, and the credibility of their website messages and the websites' structural features. To this end, we used the elaboration likelihood model (ELM; Petty & Cacioppo, 1986) to explore the persuasive features used by the groups in their messages.

Elaboration Likelihood Model

Petty and Cacioppo (1986) argue that persuasion occurs through central and peripheral routes. This dual-processing channel of persuasion refers to the degree of cognitive effort (or message elaboration) employed by the receiver of a persuasive message to form attitudes on various issues, objects, and people. The central route is used when individuals actively elaborate on and process the message being presented. Alternatively, the peripheral route relies on simple

cues in the persuasion context to make a quick decision about the advocated position, involving little active elaboration of the message. Thus, attitude changes induced under the peripheral route are less persistent (Petty, Cacioppo, & Schumann, 1983).

Some have criticized the ELM by saying it precludes multi-channel processing (e.g. Stiff, 1986), but Petty, Kasmer, Haugtvedt, and Cacioppo (1987) argue that these concerns are unfounded. While the ELM proposes a trade-off between the central and peripheral routes, this does not mean that individuals cannot be simultaneously influenced by processing messages using both the central and peripheral routes. For example,

At high levels of elaboration, a person may still notice and have a positive reaction toward the beautiful person selling the household appliance on television; however, this peripheral cue should have less impact on the person's attitude toward the appliance than it would at lower levels of elaboration. (Booth-Butterfield & Welbourne, 2002, p. 163)

Furthermore, the ELM proposes that certain cues, such as source attractiveness, can take on multiple roles and is capable of influencing attitudes through the central as well as peripheral route (Booth-Butterfield & Welbourne, 2002).

Message designers, like those who build websites, can use certain features that capitalize on the peripheral or central processing of their audience. The most commonly studied peripheral cue has been the credibility of the source (e.g. Jones, Sinclair, & Courneya, 2003; Petty, et al., 1983; Wu & Shaffer, 1987; Zhu, Xie, & Gan, 2011) but credibility can also function as a central processing cue if it causes the audience to pay more attention to the message itself. A number of other peripheral cues have also been identified in previous research as having an influence on message consumers including the personal relevance of the argument (Igartua, Cheng, & Lopes, 2003; Petty, Cacioppo, & Goldman, 1981), cosmetic, non-substantive features of an

advertisement (Schumann, Petty, & Clemons, 1990), the number of arguments presented (Petty & Cacioppo, 1984), and the congruency of the message with the target's self-concept (Chang, 2002). For example, in a study of Internet banner advertisements, Cho (2003) found that the effects of peripheral cues associated with the cogency of the argument (size or animation of the ad) were more pronounced for those with low involvement with the product being advertised. In addition, Xu and Sunder (2012) found that interactivity, defined as the presence of a "cluster of functional features" (p. 2) that allow the user to interact with the website, functioned as a peripheral cue that afforded a rich sensory experience which promoted favorable attitudes towards the website from the user. Interactivity, in turn, shaped positive website user attitudes towards the product and the user's intent to purchase that product. Other studies have found that features such as the aesthetic qualities of a website as well as the site's feedback opportunities, the accuracy of the website's information, the information's relevance, the timeliness of the information, and the ease of use of the website all can influence users peripherally (Maurer & Cook, 2011; van Birgelen, Wetzels, & van Dolen, 2008).

Certain features of websites can influence users' central and peripheral processing. For example, Rains and Karmikel (2009) found that central processing of message characteristics and structural features of the website both positively influenced perceptions of website credibility meaning credibility can function both as a predictor variable that affects attention to the source as well as an outcome variable that is affected by the features of the website. When they introduced the variable "web-use orientation," they found little difference between those who were searching for specific information (high motivation users) and those who were surfing (low motivation users) in whether central processing cues or peripheral cues influenced their perceptions of the website's credibility. Website features (such as the navigation menu, privacy

policy, links to external sites, and third-party endorsements) had just as much positive influence on searchers as it did on surfers. The authors suggest this may be because the six message characteristics (i.e. quotes, statistics, etc.) they used in the study served as peripheral cues for surfers, causing them to have a positive assessment of the websites' credibility. Thus, both the peripheral and central cues can have an effect on even the casual viewers of a website even though the ELM suggests that low motivated users will not be affected by central cues. In our case, we follow a similar orientation toward credibility and treat it not as a peripheral cue but as an outcome of the features of the website.

For the present study, one of the key peripheral cues of interest is that of the interactivity provided by the website. Although there are different definitions of interactivity in the literature, we follow Liu and Shrum's (2002) definition: "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). In addition, we specify the same three dimensions of interactivity that they identified: active control, two-way communication, and synchronicity. *Two-way communication* is reciprocal communication between groups and users as well as users and other users. *Active control* is the degree to which voluntary action directly influences the user's experience. *Synchronicity* is defined as the degree to which the users' input into a site and the responses they receive are simultaneous-- indicating how quickly the website processed and supplied information (Liu & Shrum, 2002). We made these decisions based on research examining how website interactivity affects the satisfaction with the website, customer loyalty with consumer websites, and the credibility of the information contained within the website (Flavián, Guinalú, & Gurrea, 2006; Fogg et al., 2002).

Violent and Non-violent Ideological Groups Online

Previous work has suggested that the type of group itself, and not just the types of messages they craft, will also affect website viewers. One key variable differentiating ideological groups is whether or not violence is sanctioned or promoted as a means to achieve the group's goals. Violence may even be an integral part of the system of ideological beliefs (Moghaddam, 2005). In general, violent ideological groups are defined as groups of individuals united by a specific set of values that either openly condone violence or have been linked to multiple acts of violence (Angie, et al., 2011). These groups also tend to be identified by their alignment with an extremist ideology that is used to justify the aggressive acts they pursue. This ideology then promotes certain psychological processes of group members that are thought to be contributors to a group's susceptibility to violence (Angie, et al., 2011; Mumford, et al., 2008). These include social categorization practices that emphasize ethnic outgrouping, dehumanization of outgroup members, and fostering a sense of ideological and moral righteousness through group feelings of superiority (Angie, et al., 2011; Glaser, et al., 2002; Hewstone, Rubin, & Willis, 2002; Moghaddam, 2005; Mumford, et al., 2008; Post, Ruby, & Shaw, 2002; Stahelski, 2005).

Violent groups may have more malevolent reasons for being drawn to new media, and research demonstrates that new media can also be used for cyberterrorism (Matusitz & O'Hair, 2008; Stanton, 2002), intimidation, and written attacks (Dampousse & Smith, 2002), as well as for tactical purposes such as communicating methods and targets of attacks (Levin, 2002). For example, Stanton (2002) describes a scenario where intelligent computer programs, or bots, are used by terrorist groups to interact with users and spread propaganda online. The bots could infiltrate legitimate special interest groups and use fear tactics to make the legitimate groups appear to be more in line with extremist positions. The use of media by violent ideological

groups begs the question of how new media are used differentially between violent and nonviolent ideological groups.

A previous study of how ideological groups use websites to promote their ideals and causes showed some interesting differences between violent and non-violent ideological groups (Byrne et al., 2013). Non-violent ideological websites, compared to violent ones, had a wider variety of information, including viewpoints that were non-committal or even opposed to the ideals espoused by the group. Information on these sites was rated as more educational than that on violent websites, suggesting higher credibility. Violent ideological websites had less variety of information, incorporated media that was more emotionally evocative, and generated greater volume of pro-group information than either the non-violent or non-ideological sites, all of which suggest a greater reliance on peripheral cues.

In order to test the relationships between group type, website credibility, interactivity, and peripheral or central processing of the users, we posit the following hypotheses:

H1: Websites that are viewed as more credible will also be viewed as higher in website interactivity (e.g., two-way communication, synchronicity, and active control).

H2: Websites from violent ideological groups will generate (a) more cues that encourage peripheral processing and (b) fewer cues that encourage central processing.

H3: Violent ideological groups will use fewer credibility tactics (e.g., site credibility and structural credibility) in their websites than non-violent ideological groups or non-ideological groups.

Fear Appeals in Online Messages

In studies of message persuasion, especially among violent groups, one common message form is the fear appeal. Fear is a negatively-valenced emotion, accompanied by a high level of

arousal (Witte & Allen, 2000). Fear is generally aroused when a situation is perceived as both threatening, either physically or psychologically, and is uncontrollable (Nabi, 2002b). It is especially likely that violent groups will use fear appeals, although the impact of fear appeals on the credibility of websites is not well understood. In other research, the effects of fear on cognitive processing of messages has suggested that, although moderator variables such as familiarity with the topic and trait anxiety have an effect on the impact of fear on cognitive processing, fear generally promotes peripheral processing and reduces an audience's ability or willingness to elaborate on the message through central processing (Hale, Lemieux, & Mongeau, 1995; Nabi, 2002a). In a study specifically testing the ELM using fear-inducing messages, Hale et al. found that participants who received a low-fear message engaged in more central processing while participants who received a high-fear message engaged in more peripheral processing. Thus, it is likely that the violent groups, in addition to using more fear appeals than the non-violent groups, may prefer tactics that encourage peripheral processing rather than central processing because that would require less message elaboration and could spur more action from their audience. To test these predictions, we offer the following hypotheses:

H4: The use of fear-inducing messages will be (a) positively related to cues that encourage peripheral processing, (b) negatively related to cues that encourage central processing, and (c) negatively related to the use of credibility (e.g., site credibility and structural credibility).

H5: Websites from violent ideological groups will generate more fear appeals than websites from non-violent ideological and non-ideological groups.

Interactivity

In terms of website interactivity, Byrne et al. (2013) found that user control and sophistication of website functionality were highest for the non-violent ideological sites

compared to other types. Interestingly, all ideological websites incorporated or referenced more new media (links to videos, online newspapers, twitter, etc.) and more traditional media (e.g., newsprint, TV) than non-ideological websites. We predict that groups espousing violent ideologies will have the lowest interactivity ratings because they may desire less interactivity than less controversial groups because inviting interactivity opens them up to increased challenges and criticisms from the outside. They may desire more control over their message rather than an interactive dialogue. Closed forums, membership requirements, and required registrations all limit the interactivity of the website and are more likely to be used by groups espousing a violent ideology than those who do not. Byrne et al. (2013) found that violent ideological group sites were more difficult to access, featured more explicitly defined rules and regulations, as well as less user control over online settings, content, and information than non-violent groups. These findings lead us to the following hypothesis:

H6: Websites from violent ideological groups will be lower in website interactivity (e.g., two-way communication, synchronicity, and active control) than websites from non-violent ideological groups or non-ideological groups.

Method

Website Selection

Categorization of group websites into ideological and non-ideological types required an iterative process. We began with lists of groups that had been included in previous studies (e.g., Angie, et al., 2011; Byrne, et al., 2013; McNamee, et al., 2010) and then categorized the groups as violent, non-violent, or non-ideological. First, in order to be a “group” website, the group must meet face-to-face and/or have local chapters, include an outreach feature for recruiting new members, or facilitate user-to-user communication in some manner (e.g., message boards, blogs,

private messages, email contacts, etc.). Sites without any of these features may promote views or ideas without any real group existence. In order to ensure a broad appeal for our study, we also selected only groups with a national or international scope rather than those that targeted a specific community, state, or region.

Second, we differentiated between ideological and non-ideological groups. Ideological groups articulate a collective mental model about group outcomes, goals, and group-relevant events. Thus, based on previous work by others (Byrne, et al., 2013; McNamee, et al., 2010; Mumford, 2006; Mumford, et al., 2008; Van Dijk, 2006), groups that (a) articulated a rigid mental model based on negative events of the past, (b) tied interpretation of events singularly to this mental model, (c) focused on a few, core transcendent goals largely centered on a return to a past idealized state, and (d) rejected all beliefs that were not congruent with their mental model were classified as ideological. All groups were rated by three coders using benchmark rating scales. In order to distinguish between ideological and non-ideological groups in a standardized manner, an overall mean for each group was computed using all of the inclusion criteria. Then means were transformed into Z-scores. Groups with a Z-score greater than 1.00 were classified as ideological, and groups with a Z-score less than -1.00 were classified as non-ideological. Examination of Z-scores showed that 12 of the 119 groups rated did not cleanly fall into a single category and therefore were removed from consideration. Additionally, face validity of group types was also taken into account to ensure that ratings matched overall impressions of the groups' ideological/non-ideological standings. Two groups received ratings that were incongruent with overall perceptions, showing ideological tendencies in some areas of the website while remaining non-ideological in nature regarding other criteria and thus did not fit distinctly within one category. These groups were also removed from consideration for coding.

Third, following the methodology of Angie et al. (2011) we differentiated between groups that were considered violent vs. non-violent. Websites were considered to be related to a violent group if the website itself condoned or celebrated acts of violence, the website was affiliated with a group known to condone violence, the website/group members have been linked to two or more acts of violence, or the website has been classified as such by a reputable third party (such as the Southern Poverty Law Center, PEW, Gallup, RAND, the Terrorism Research Center, the Anti-Defamation League, the Terrorism Project, or the Memorial Institute for Prevention of Terrorism). In total, 105 groups were retained for coding with 68 groups categorized as ideological (violent = 32, nonviolent = 36) and 37 groups categorized as non-ideological. The final list of selected websites is included in an online appendix.

Development of Content Coding Rating Scales

Coding scales were developed from previous literature for each of the main variables in the study. Composite scales were created from these items to measure perceptions of the website including site and structural credibility, central and peripheral processing, fear appeals, and website interactivity. Each scale item was rated on a 5-point scale where 5 indicated a high presence of a perceptual measure and 1 indicated a low level of that measure. For example, the fairness of the site was defined as “the extent to which a group attempts to appear objective and balanced” and was measured on a five-point scale ranging from 1 which was labeled “information is one-sided. Discounts alternative perspective with no argumentative justifications” to 5 which was labeled “offers references and links to alternative perspectives. Information is balanced.”

In general, raters adhered to a “surfing” perspective when seeking out information on constructs of interest (Rains & Karmikel, 2009). Many studies using content analysis to examine

website features and content have focused on the homepage or in specific areas of a group's website (e.g., Gerstenfeld, Grant, & Chiang, 2003). However, given the demonstrated utility of exploring beyond one area to find construct-relevant information (Byrne, et al., 2013), evidence that ideal website design proceeds to at least a second level (Symonenko, 2006), and our need to find specific information about groups, coders searched for construct-relevant information to the second level of the group's website. Additionally, in some cases construct-relevant information (e.g., contact information) was beyond the second level. If it was apparent that this objective information was available on the website, coders were instructed to seek it out.

Credibility. Credibility was examined with two scales: site credibility and website structural credibility. *Site credibility* was defined as the extent to which the website attempts to appear as if providing credible content (Flanagin & Metzger, 2000). Based on previous research on credibility (McCroskey & Teven, 1999; McCroskey & Young, 1981) we coded for several factors commonly associated with source credibility and combined them into a single composite measures. This five-item scale ($\alpha = .91$) contained the items: trustworthiness, fairness, expertise, goodwill, and currency (recency). *Structural credibility* refers to the structural composition of websites (Hong, 2006). This six-item scale ($\alpha = .76$) contained items such as site organization, website architecture, presence of privacy policy, overall cleanness and presence of contact information.

Persuasion. The central and peripheral processing cues were coded on each website. *Peripheral processing* is defined as the extent to which cognitive processing relies on shallow, superficial cues rather than reasoned argument (Petty & Cacioppo, 1981). This nine-item scale ($\alpha = .86$) contained items such as amount of color on the website, use of images, use of celebrities, use of bold headlines, use of attractive people, and site attractiveness. *Central Processing* was

defined as the extent to which the website facilitates deep processing that requires cognitive effort (Petty & Cacioppo, 1981). This four-item scale ($\alpha = .73$) contained items such as argument length, number of arguments, and amount of counter-arguments.

Fear Appeals. Fear appeals were defined as the extent to which attitude formation is shaped through the use of fear (Kline & Mattson, 2000; Witte, 1992). We coded for the amount of fear-inducing graphics or images and the use of fear in textual content. The coders also rated the overall use of fear appeals in the website on a holistic level. The overall fear ratings were highly correlated with the use of text ($r = .96$) and the use of images ($r = .77$), so the overall fear rating was excluded and only text and image ratings were included in the fear appeals composite variable ($\alpha = .76$).

Website Interactivity. Website interactivity was examined with three scales: two-way communication, active control, and synchronicity. *Two-way communication* ($\alpha = .92$) was defined as the ability for reciprocal communication between groups and users as well as users and other users (Liu & Shrum, 2002). This five-item scale consisted of items regarding feedback gathering effectiveness and facilitation of two-way communication. *Active control* ($\alpha = .88$) was defined as the degree to which voluntary action directly influences the user's experience (Liu & Shrum, 2002). This four-item scale contains items regarding the consistency between visitor actions and visitor experience. *Synchronicity* ($\alpha = .95$) was defined as the degree to which the users' input into a site and the responses they received were simultaneous (Liu & Shrum, 2002). This five-item scale contained items regarding how quickly the website processed and supplied information.

Coder Training and Agreement

Six graduate students in communication and psychology (two teams of three) completed training in order to become familiar with coding procedures, variables of interest, and potential rating errors that are likely to occur during the coding process. Upon completion of this training, judges were presented with coding material selected for its breadth across the types of groups on which to practice applying the benchmark ratings scales for each dimension. After completing this task independently, the judges discussed their ratings of each dimension. When discrepancies arose, clarification and feedback on the dimensions was provided and discussion would continue until consensus was reached regarding application of the dimensions in those cases. Several weeks of practice coding were necessary for all judges to reach adequate inter-rater agreement.

During the coding process, each team of coders was randomly assigned to rate either the predictors or the criteria for the coding assigned that week. The team assigned to rate predictors never rated criteria for the same week. As such, in the duration of the study, teams gained experience rating both criteria and predictors but coders never rated both for a given website. This procedure was used to avoid common source bias. During the coding process, weekly meetings were held to evaluate agreement between coders in each group and deficiencies were addressed. When low agreement was obtained, coders were re-trained and the websites were re-coded. Coding took approximately four months. The inter-coder agreement was calculated with an r^*_{wg} which estimates the degree of interchangeability of raters (Lindell & Brandt, 1999). In short, this measure refers to the degree to which ratings made by coders are nearly identical (Kozlowski & Hattrup, 1992). We used r^*_{wg} given the high level of interchangeability and lack of variability in judgments made by the coders. Estimates of inter-rater reliability may not be applicable in this instance because situations in which coders do not exhibit variability in ratings

may result in artificially suppressed inter-rater reliability values (Stemler & Tsai, 2008; Tinsley & Weiss, 1975). Inter-coder agreement was acceptable for all measures including site credibility ($r^*_{wg} = .68$), structural credibility ($r^*_{wg} = .80$), peripheral processing cues ($r^*_{wg} = .75$), central processing cues ($r^*_{wg} = .68$), fear ($r^*_{wg} = .71$), two-way communication ($r^*_{wg} = .67$), active control ($r^*_{wg} = .76$), and synchronicity ($r^*_{wg} = .70$).

Results

H1 predicted that websites from groups that are viewed as more credible will also be viewed as higher in website interactivity (e.g., two-way communication, synchronicity, and active control), using more peripheral processing cues, and using fewer fear tactics. A series of bivariate correlations, reported in Table 1, revealed that both the site and structural credibility scales were positively related to the two-way communication and active control available but that the credibility variables were not related to synchronicity. These results are consistent with H1a. The correlations also demonstrate the link between both site and structural credibility and central and peripheral processing. In addition, both peripheral processing and central processing were also positively associated with credibility. As Table 1 demonstrates, central and peripheral processing cues were not parallel but were positively correlated with one another as well as credibility. Contrary to H4a and b, the correlations in Table 1 reveal that the use of fear appeals was not correlated with either greater peripheral cues or fewer central cues present in the website. The use of fear appeals was negatively correlated with both site and structural credibility, consistent with H4c.

To reduce the number of tests being conducted, H2, H3, H5, and H6 were tested with a single MANOVA for the group type (violent ideological, non-ideological, or non-violent ideological) on the amount of central and peripheral processing cues as well as the number of

fear appeals, the website interactivity variables, and the credibility ratings. The omnibus test was significant Wilks' $\Lambda = .28$, $F(16, 176) = 9.71$, $p < .001$, $\eta^2 = .47$. H2 predicted that websites from violent ideological groups will use (a) more peripheral processing cues and (b) fewer central processing cues than non-violent ideological groups or non-ideological groups. The results revealed significant differences on central, $F(2, 95) = 10.36$, $p < .001$, $\eta^2 = .18$, and peripheral cues, $F(2, 95) = 5.33$, $p = .006$, $\eta^2 = .10$, that suggest that the violent, ideological group used the fewest central processing cues as well as the fewest peripheral processing cues. The means and standard deviations are presented in Table 2. Tukey HSD post-hoc comparisons between groups reveal that for both central processing and peripheral processing, the violent ideological groups were significantly different from both the non-ideological and the non-violent, ideological groups ($p < .01$) but that the non-ideological and the non-violent, ideological groups did not differ from one another on either central ($p = .09$) or peripheral cues ($p = .96$). These results support H2b but are not consistent with H2a. The significant positive correlation between central and peripheral cues seen in Table 1 suggests the two types of cues are operating in a similar manner rather than in opposite ways. Further, a series of paired samples t-test for each group type were all significant at the $p < .01$ level which suggests that the means found in Table 1, showing higher means for central compared to peripheral processing for each group type, were significantly different from one another. Each type of group used more central cues than peripheral cues in their messages.

H3 predicted that websites produced by violent ideological groups will use fewer credibility tactics (e.g., site credibility and structural credibility) than those from non-violent ideological groups or non-ideological groups. There were significant differences between the groups on the site credibility scale, $F(2, 95) = 53.06$, $p < .001$, $\eta^2 = .53$, and the structural

credibility scales, $F(2, 95) = 21.37, p < .001, \eta^2 = .31$. The means and standard deviations are presented in Table 2. Tukey HSD post-hoc comparisons between groups reveal that for both credibility measures, the violent ideological group was significantly different from both the non-ideological and the non-violent, ideological groups ($p < .01$). The non-ideological and the non-violent, ideological groups also differed from one another on site credibility ($p < .01$) but not on structural credibility ($p = .67$). These results support H3.

For fear appeals (H5), we examined the text and images that were meant to incite fear and found significant differences between the groups, $F(2, 95) = 28.32, p < .001, \eta^2 = .37$. The means and standard deviations are presented in Table 2. Tukey HSD post-hoc comparisons between groups reveal that all three group types were significantly different from one another ($p < .01$). These results support H5.

H6 predicted that the violent ideological group would have lower website interactivity than non-violent ideological groups or non-ideological groups. There were significant differences between the groups for synchronicity, $F(2, 95) = 5.41, p = .006, \eta^2 = .10$, active control, $F(2, 95) = 7.20, p = .001, \eta^2 = .13$, but not for two-way communication, $F(2, 95) = 2.06, p = .13$. The means and standard deviations are presented in Table 2. Tukey HSD post-hoc comparisons between groups reveal that for both synchronicity and active control, the violent ideological groups were significantly different from both the non-ideological and the non-violent, ideological groups ($p < .05$) but that the non-ideological and the non-violent, ideological groups did not differ from one another on either synchronicity ($p = .76$) or active control ($p = .83$). The results are consistent with H6.

Discussion

The purpose of this research has been to explore the Internet-based influence strategies used by ideological, violent ideological and non-ideological groups as well as the perceived credibility, and interactivity of their websites. Using the ELM (Petty & Cacioppo, 1986) as a theoretical frame, websites from various groups, both ideologically and non-ideologically-based, were selected and systematically coded for the communicative content of their websites. Differences between groups that espouse violent and non-violent ideologies were also explored. A novel contribution of this approach is to also compare the violent and non-violent ideological groups to non-ideological groups which have rarely been studied before (see Byrne et al. 2013 for a notable exception).

Overall, the results indicate the strategies used by these groups to persuade and enhance perceptions of credibility differed significantly based on the orientation of the group. Although the websites from all three of the group types relied on central cues more than peripheral cues, violent ideological groups were perceived as less credible, used the highest quantity of fear appeals and were rated lowest, overall, on website interactivity compared to non-violent ideological and non-ideological groups' websites.

The violent ideological groups studied here exist on the fringes of society and espouse a message that violates generally accepted attitudes and behaviors. Even if a potential message receiver agreed with some part of a message (i.e. that abortion is morally wrong), the insinuations of violence and use of fear tactics likely suggest to most rational viewers that the group is far too extreme in their beliefs to be considered a credible authority on the subject. Moreover, related research has demonstrated that messages perceived to communicate too high a level of fear could result in message rejection, leading to, among other outcomes, source derogation (c.f. Witte, 1992, 1994). In this case, source derogation probably manifested in

decreased perceptions of credibility, especially in the site credibility ratings. However, even more objective ratings of credibility such as the organization of the site and the presence or absence of a privacy policy in the structural credibility ratings revealed lower credibility for the violent groups compared to their non-violent groups suggesting that the websites created by these fringe elements are lacking credibility on a variety of metrics.

Related to perceived credibility are the ratings of interactivity. Here again, the notion that violent groups exist on the fringes of society provides a likely explanation as to why their websites were consistently rated as less interactive. Virtually anyone can register a domain name and publish a website and some research has suggested that even extreme groups can develop technologically sophisticated websites with multimedia content (Qin, Zhou, & Chen, 2011). However, developing a user-friendly, interactive website which has the ability to communicate effectively to a diverse audience requires that the group backing the website desires interactivity as a goal. Consistent with the findings of others in this area who found that violent groups have more strict controls over online membership (Byrne, et al., 2013), the less interactive websites might reflect a desire on the part of the extremist groups to have tight control over their content and who can comment on it or communicate with the group. One unfortunate implication of this is that more prominent violent ideological groups that possess sufficient resources to develop interactive websites could improve their credibility. More research is needed to examine this issue.

Regarding the use of central and peripheral persuasive cues, we found that violent ideological groups would use fewer centrally based cues than non-violent ideological and non-ideological groups. Unexpectedly, the analysis also revealed that violent ideological groups used the fewest peripheral cues in their attempts to persuade and bolster credibility. All three of the group types

used fewer peripheral than central cues. This finding is interesting because the ELM recommends the use of either the central or peripheral route to achieve successful persuasive outcomes, whereas here, the violent ideological groups in question used the fewest amount of both types of persuasive cues. Although it is unknown whether or not content developers for any of the groups have formal training in persuasive message design, and thus would have little to no knowledge of the ELM or other persuasion theories, the pattern evident here that demonstrates that all groups are using central cues more than peripheral ones is cause for further analysis.

The consistency with which violent groups were found to use the fewest amount of both central and peripherally based cues suggests that these groups may feel their message is universal, or possesses some transcendent quality that does not require persuasive tactics to engender acceptance. Rather, it appears that these groups function as if their ideology need only be disseminated to an audience, and that those receiving the message will internalize and accept their truth, based on their messages. Recall that ideological groups are those that function from a rigid mental model, which frames their view of the world. If these violent groups are convinced that their message is grounded in truth, they may also believe that crafting a persuasive message is unnecessary and does not need to be interactive in order to be effective.

That the violent groups were also perceived as the least credible by the coders is further evidence that they may believe in the transcendence of their messages. If the group members believe their message is based in universal truth, then the content on their websites should consistently support their construction of the world and its events. When violence is part and parcel to the ideology, the resulting messages are sure to fall outside of the generally acceptable attitudes and behaviors of society. Since these groups use significantly fewer persuasive cues, their intentions may be to speak to an audience that is already, to some degree, sympathetic to

their message and beliefs. Thus, in accordance with the results presented here, a viewer whose beliefs are not as extreme as those of the group would likely perceive their message as less credible and is also unlikely to be persuaded. Further research is required to examine this dynamic, but the results indicate violent groups present a message that is consistently different in form and function from both their non-violent ideological counterparts and non-ideological groups. If violent groups are speaking to audiences that already agree with the message, the group is likely already perceived as credible and there is no need to focus on persuasion of what they see as self-evident truths.

Finally, the results from H6 support the observation that websites produced by violent ideological groups are artifacts of organizations with little interest in creating a dialogue with their audience; violent ideological groups were rated significantly lower on measures of two-way communication, synchronicity and active control. These variables were served as indications of the level of two-way communication possible with the group, how quickly the website appears to process information and how much control over the experience the user perceives when on the site. Features such as these are directly related to the sophistication and interactivity of the website, both of which require resources in the form of either advanced programming knowledge or the financial ability to pay for such services (Green & Pearson, 2011; Lewis, Williams, Neighbors, Jakicic, & Marcus, 2010). Extreme groups who do have the financial backing to develop sophisticated websites are nonetheless choosing to make their sites less interactive.

Another possibility for the violent ideological groups' comparatively lower levels of perceived interactivity is that these groups may wish to restrict the amount of information available to the general population. While these groups maintain a web presence for various purposes, their violent tendencies may cause them to restrict the amount of information available

to unvetted users by purposefully creating a website with limited interactivity. While this strategy may be useful in protecting the groups from outside interference, it may undercut the purpose of maintaining a website in the first place.

Limitations

This study was a first look at a large number of websites from organizations with various ideological orientations but is not without its limitations. For example, we did not control for the size, age, or location of the organizations or the type of organization (i.e. religious, environmental, social, etc.). We were limited to the information provided by the organizations on their websites and not all organizations gave information on their websites about the size of their group, how long they had been in existence, or where they were physically located. Future researchers might want to do additional research on these organizations to see if the sophistication of the websites is linked to the size of their membership or other variables. Because our coders were English language speakers, we also included only English language websites even though we attempted to include websites with international roots rather than just U.S. based organizations. Other researchers should examine the extremist websites in other languages, not only those available in English. Finally, we used coders who were trained to make objective ratings of credibility features of the websites but the coders may have been affected differently than real viewers of the website would have been. Future research could examine the naturalistic reactions of audiences who are vulnerable to the influence of ideological groups (Thoroughgood, Padilla, Hunter, & Tate, 2012) or even experimentally manipulate the credibility features of violent and non-violent website messages to evaluate the reactions to them by naïve viewers. In addition, many of the websites from groups known to advocate violent acts did not do so specifically on their public websites. Research examining the websites of terrorist groups

or others who do advocate violence more openly might offer more insight into those groups than our study has offered.

Conclusion

The findings presented fill an important void in the current literature on the powerful nature of on-line communication. As websites become richer and more accessible, understanding how groups represent themselves and disseminate their messages will become increasingly important. As the results of this study demonstrate, violent ideological groups differ from non-violent ideological and non-ideological groups in more than just their worldview. The increased use of fear and the decreased use of interactivity of the violent groups suggest they have different persuasive purposes and are using different forms of persuasive messages than the non-violent groups. We hope that this research examining the differences in their public messages will spur future researchers to examine in more depth how these groups function in society, how they recruit new members, and perhaps most importantly, how their violent actions can be prevented before they happen.

References

- Angie, A. D., Davis, J. L., Allen, M. T., Byrne, C. L., Ruark, G. A., Cunningham, C. B., . . . Connelly, S. (2011). Studying Ideological Groups Online: Identification and Assessment of Risk Factors for Violence. *Journal of Applied Social Psychology, 41*(3), 627-657.
- Booth-Butterfield, S., & Welbourne, J. (2002). The elaboration likelihood model: Its impact on persuasion theory and research. In J. P. Dillard & M. Pfau (Eds.), *The persuasion handbook: Developments in theory and practice* (pp. 155-174). Thousand Oaks, CA: Sage.
- Byrne, C. L., Nei, D. S., Barrett, J. D., Hughes, M. G., Davis, J. L., Griffith, J. A., . . . Mumford, M. D. (2013). Online ideology: A comparison of website communication and media use. *Journal of Computer-Mediated Communication, 18*, 137-153. doi: 10.1111/jcc4.12003
- Chang, C. (2002). Self-congruency as a cue in different advertising-processing contexts. *Communication Research, 29*(5), 503-536. doi: 10.1177/009365002236193
- Cho, C. (2003). The effectiveness of banner advertisements: Involvement and click-through. *Journalism and Mass Communication Quarterly, 80*, 623--645.
- Damphousse, K. R., & Smith, B. L. (2002). The Internet: A Terrorist Medium for the 21st Century. In H. W. Kushner (Ed.), *Essential readings on political terrorism: Analyses of problems and prospects for the 21st century*. Lincoln, NE: University of Nebraska Press.
- Flanagin, A. J., & Metzger, M. J. (2000). Perceptions of Internet Information Credibility. *Journalism and Mass Communication Quarterly, 77*(3), 514-540.
- Flavián, C., Guinalú, M., & Gurrea, R. (2006). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & Management, 43*(1), 1-14.

- Fogg, B. J., Soohoo, C., Danielson, D., Marable, L., Stanford, J., & Tauber, E. R. (2002). How do people evaluate a web site's credibility? Results from a large study, from <http://ottoyuen.com/library/articles/HowPeopleEvaluateWebSiteCredibility.pdf>
- Gerstenfeld, P. B., Grant, D. R., & Chiang, C. P. (2003). Hate online: A content analysis of extremist Internet sites. *Analyses of social issues and public policy*, 3(1), 29-44.
- Glaser, J., Dixit, J., & Green, D. P. (2002). Studying hate crime with the internet: what makes racists advocate racial violence? *Journal of Social Issues*, 58(1), 177-193.
- Green, D. T., & Pearson, J. M. (2011). Integrating website usability with the electronic commerce acceptance model. *Behaviour & Information Technology*, 30(2), 181-199. doi: 10.1080/01449291003793785
- Hale, J. L., Lemieux, R., & Mongeau, P. A. (1995). Cognitive processing of fear-arousing message content. *Communication Research*, 22(4), 459-474.
- Heath, R., & O'Hair, H. D. (2008). Terrorism: From the eyes of the beholder. In D. O'Hair, R. Heath, K. Ayotte & J. Ledlow (Eds.), *Terrorism: Communication and rhetorical perspectives* (pp. 17-42). Cresskill, NJ: Hampton Press.
- Hewstone, M., Rubin, M., & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology*, 53(1), 575-604.
- Hong, T. (2006). Contributing factors to the use of health-related websites. *Journal of health communication*, 11(2), 149-165.
- Igartua, J. J., Cheng, L., & Lopes, O. (2003). To think or not to think: Two pathways towards persuasion by short films on AIDS prevention. *Journal of Health Communication*, 8, 513-528.

- Jones, L. W., Sinclair, R. C., & Courneya, K. S. (2003). The effects of source credibility and message framing on exercise intentions, behaviors and attitudes: An integration of the elaboration likelihood model and prospect theory. *Journal of Applied Social Psychology*, 33(1), 179-196. doi: 10.1111/j.1559-1816.2003.tb02078.x
- Kline, K. N., & Mattson, M. (2000). Breast self-examination pamphlets: A content analysis grounded in fear appeal research. *Health Communication*, 12(1), 1-21.
- Kozlowski, S. W., & Hatstrup, K. (1992). A disagreement about within-group agreement: Disentangling issues of consistency versus consensus. *Journal of Applied Psychology*, 77(2), 161.
- Levin, B. (2002). Cyberhate: A Legal and Historical Analysis of Extremists' Use of Computer Networks in America. *American Behavioral Scientist*, 45(6), 958-988.
- Lewis, B. A., Williams, D. M., Neighbors, C. J., Jakicic, J. M., & Marcus, B. H. (2010). Cost analysis of Internet vs. print interventions for physical activity promotion. *Psychology of sport and exercise*, 11(3), 246-249.
- Lindell, M. K., & Brandt, C. J. (1999). Assessing interrater agreement on the job relevance of a test: A comparison of *CVI*, *T*, *r_{WG(J)}*, and *r*_{WG(J)}*. *Journal of Applied Psychology*, 84(4), 640-647.
- Liu, Y., & Shrum, L. (2002). What is interactivity and is it always such a good thing? Implications of definition, person, and situation for the influence of interactivity on advertising effectiveness. *Journal of advertising*, 53-64.
- Matusitz, J., & O'Hair, H. D. (2008). The Internet and terrorist networks. In D. O'Hair, R. Heath, K. Ayotte & J. Ledlow (Eds.), *Terrorism: Communication and rhetorical perspectives* (pp. 383-407). Cresskill, NJ: Hampton Press.

- Maurer, S. D., & Cook, D. P. (2011). Using company web sites to e-recruit qualified applicants: A job marketing based review of theory-based research. *Computers in Human Behavior*, 27(1), 106-117. doi: 10.1016/j.chb.2010.07.013
- McCroskey, J. C., & Teven, J. J. (1999). Goodwill: A Reexamination of the Construct and Its Measurement. *Communication Monographs*, 66(1), 90-103.
- McCroskey, J. C., & Young, T. (1981). Ethos and credibility: The construct and its measurement after three decades. *Central States Speech Journal*, 32, 24-34.
- McNamee, L. G., Peterson, B. L., & Peña, J. (2010). A call to educate, participate, invoke and indict: Understanding the communication of online hate groups. *Communication Monographs*, 77(2), 257-280.
- Moghaddam, F. M. (2005). The staircase to terrorism: a psychological exploration. *American Psychologist*, 60(2), 161.
- Mumford, M. D. (2006). *Pathways to outstanding leadership: A comparative analysis of charismatic, ideological, and pragmatic leaders*: Lawrence Erlbaum.
- Mumford, M. D., Bedell-Avers, K. E., Hunter, S. T., Espejo, J., Eubanks, D., & Connelly, M. S. (2008). Violence in Ideological and Non-Ideological Groups: A Quantitative Analysis of Qualitative Data. *Journal of Applied Social Psychology*, 38(6), 1521-1561.
- Nabi, R. L. (2002a). Anger, fear, uncertainty, and attitudes: A test of the cognitive-functional model. *Communication Monographs*, 69(3), 204-216.
- Nabi, R. L. (2002b). Discrete emotions and persuasion. *The persuasion handbook: Developments in theory and practice*, 289-308.
- Petty, R. E., & Cacioppo, J. T. (1981). *Attitudes and Persuasion: Classic and Contemporary Approaches*. Dubuque, IA: Wm. C. Brown.

- Petty, R. E., & Cacioppo, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion. *Journal of Personality and Social Psychology*, *46*(1), 69-81. doi: 10.1037/0022-3514.46.1.69
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer-Verlag.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology*, *41*(5), 847.
- Petty, R. E., Cacioppo, J. T., & Schumann, D. (1983). Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, *10*, 135-146.
- Petty, R. E., Kasmer, J. A., Haugtvedt, C. P., & Cacioppo, J. T. (1987). Source and message factors in persuasion: A response to Stiff's critique of the Elaboration Likelihood Model. *Communication Monographs*, *54*, 233-249.
- Post, J. M., Ruby, K. G., & Shaw, E. D. (2002). The radical group in context: 1. An integrated framework for the analysis of group risk for terrorism. *Studies in Conflict and Terrorism*, *25*(2), 73-100.
- Qin, J., Zhou, Y., & Chen, H. (2011). A multi-region empirical study on the internet presence of global extremist organizations. *Information Systems Frontiers*, *13*(1), 75-88.
- Rains, S. A., & Karmikel, C. D. (2009). Health information-seeking and perceptions of website credibility: Examining Web-use orientation, message characteristics, and structural features of websites. *Computers in Human Behavior*, *25*(2), 544-553.

- Schumann, D. W., Petty, R. E., & Clemons, S. (1990). Predicting the effectiveness of different strategies of advertising variation: A test of the repetition-variation hypotheses. *Journal of Consumer Research*, *17*, 192-202.
- Skitka, L. J., & Sargis, E. G. (2006). The Internet as psychological laboratory. *Annual Review of Psychology*, *57*, 529-555.
- Stahelski, A. (2005). Terrorists are Made Not Born: Creating Terrorists Using Social Psychological Conditioning. *Cultic Studies Review*, *4*(1), 30.
- Stanton, J. J. (2002). Terror in cyberspace: Terrorists will exploit and widen the gap between governing structures and the public. *American Behavioral Scientist*, *45*(6), 1017-1032.
- Stemler, S. E., & Tsai, J. (2008). Best practices in interrater reliability: Three common approaches. In J. W. Osborne (Ed.), *Best practices in quantitative methods* (pp. 29-49). Thousand Oaks, CA: Sage.
- Stiff, J. B. (1986). Cognitive processing of persuasive message cues: A meta-analytic review of the effects of supporting information on attitudes. *Communication Monographs*, *53*, 75-89.
- Symonenko, S. (2006). *Exploring patterns in website content structure*. Paper presented at the Information Architecture Summit (Learning, Doing, Selling). , Vancouver, Canada.
http://iasummit.org/2006/files/177_Presentation_Desc.pdf
- Thoroughgood, C. N., Padilla, A., Hunter, S. T., & Tate, B. W. (2012). The susceptible circle: A taxonomy of followers associated with destructive leadership. *The Leadership Quarterly*, *23*, 897-917.
- Tinsley, H. E., & Weiss, D. J. (1975). Interrater reliability and agreement of subjective judgments. *Journal of Counseling Psychology*, *22*(4), 358.

- van Birgelen, M. J. H., Wetzels, M. G. M., & van Dolen, W. M. (2008). Effectiveness of Corporate Employment Web Sites: How Content and Form Influence Intentions to Apply. *International Journal of Manpower*, 29(8), 731–751.
- Van Dijk, T. A. (2006). Ideology and discourse analysis. *Journal of Political Ideologies*, 11(2), 115-140.
- Witte, K. (1992). Putting fear back into fear appeals: The extended parallel process model. *Communication Monographs*, 59, 329-349.
- Witte, K. (1994). Fear Control and danger control: A test of the extended parallel process model (EPPM). *Communication Monographs*, 61, 113-134.
- Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education & Behavior*, 27(5), 591-615.
- Wu, C., & Shaffer, D. R. (1987). Susceptibility to persuasive appeals as a function of source credibility and prior experience with the attitude object. *Journal of Personality and Social Psychology*, 52(4), 677-688. doi: 10.1037/0022-3514.52.4.677
- Xu, Q., & Sundar, S. S. (2012). Lights, Camera, Music, Interaction! Interactive Persuasion in E-commerce. *Communication Research*. doi: 10.1177/0093650212439062
- Zhu, D., Xie, X., & Gan, Y. (2011). Information source and valence: How information credibility influences earthquake risk perception. *Journal of Environmental Psychology*, 31(2), 129-136. doi: 10.1016/j.jenvp.2010.09.005

Table 1. Website Classification Results

*(a) Violent Ideological Groups**

1. Aggressive Christianity Missionary Training Corp (ACMTC)	18. Alpha 66
2. Americans for Truth About Homosexuality	19. Anarchist Federation
3. Animal Liberation Front (ALF)	20. Earth Liberation Front
4. Army of God (AOG)	21. English Defence League (EDL)
5. Aryan Nations	22. Ezzdeden Al-Qassam Brigade (Hamas)
6. Creativity Movement	23. Institute for Historical Review
7. Heterosexuals Organized for a Moral Environment (HOME)	24. Jewish Defense League (JDL)
8. Klu Klux Klan (KKK)	25. Kingdom Identity Ministries
9. League of the South	26. National Alliance
10. National Democratic Front	27. National Association for the Advancement of White People (NAAWP)
11. National Socialist Movement	28. Operation Rescue
12. People for the Ethical Treatment of Animals (PETA)	29. Power of Prophecy
13. Sovereign Citizens	30. Prairie Fire Organizing Committee
14. The Barnes Review (TBR)	31. Westboro Baptist Church (WBC)
15. The Imperial Klans of America	32. Negotiation is over (NO)
16. United for a Sovereign America (USA)	
17. Volksfront	

(b) Nonviolent Ideological Groups

1. Americans United	20. American Baptist Church
2. Center for Bioethical Reform (CBR)	21. American Civil Liberties Union (ACLU)
3. Christian Exodus	22. Coalition to Stop Gun Violence
4. Friends of the Earth	23. Coffee Party
5. Hadassah	24. Council of Conservative Citizens
6. Independent American Party	25. Earth First
7. Libertarian Party	26. Freedom from Religion Foundation
8. Mormon Church	27. Federation for American Immigration Reform (FAIR)
9. National Association for the Advancement of Colored People (NAACP)	28. Islami City
10. National Organization for Women	29. Islamic Society of North America
11. One Campaign	30. Jewish Voice for Peace (JVP)
12. Pro-Life Action League	31. John Birch Society
13. Tea Party Nation	32. National Coalition for Men (NDFM)
14. The Family International	
15. The American Cause	
16. United Methodist Church	
17. United Pentecostal Church International	

<p>18. Unitarian Universalist Association of Congregations</p> <p>19. United States Conference of Catholic Bishops</p>	<p>33. National Rifle Association (NRA)</p> <p>34. No H8 Campaign</p> <p>35. Sierra Club</p> <p>36. Socialist Party USA</p>
--	---

(c)Non-ideological Groups

- | | |
|---|--|
| <p>1. American Association of Retired Persons (AARP)</p> <p>2. Amateur Entomologists' Society</p> <p>3. American Heart Association</p> <p>4. American Red Cross</p> <p>5. American Trucking Association</p> <p>6. Amnesty International</p> <p>7. Asian American Arts Alliance</p> <p>8. Association of Woodworking and Furnishings Suppliers</p> <p>9. Atomic Age Alliance</p> <p>10. Big Brothers/Big Sisters of America</p> <p>11. British Beatles' Fan Club</p> <p>12. Children and Adults with Attention Deficit/Hyperactivity Disorder (CHADD)</p> <p>13. Lions Club</p> <p>14. National Association of Miniature Enthusiasts</p> <p>15. National Street Rod Association</p> <p>16. Society of Professional Journalists</p> <p>17. Shriners International</p> <p>18. Special Olympics</p> <p>19. Teamsters (Union)</p> <p>20. US Tennis Association</p> <p>21. Yellow Ribbon Club</p> | <p>22. American Astronomical Society</p> <p>23. American Botanical Council</p> <p>24. American Cancer Society</p> <p>25. American Diabetes Association</p> <p>26. American Fisheries Society</p> <p>27. American Meteorological Society</p> <p>28. American Sewing Guild</p> <p>29. Doctors without Borders</p> <p>30. Habitat for Humanity</p> <p>31. Jenny Craig</p> <p>32. Mensa</p> <p>33. Mustang Club</p> <p>34. National Association for Amateur Radio</p> <p>35. National Association of Rocketry</p> <p>36. National Association for the Self-Employed</p> <p>37. Photographic Society of America</p> |
|---|--|

**It is not recommended to visit violent, ideological group websites without extensive virus protection software and service enabled on your computer*

Table 2. *Intercorrelations for Credibility, Processing, and Website Interactivity Variables*

	1	2	3	4	5	6	7
1 Site Credibility	-						
2 Structural Credibility	.77**	-					
3 Two-way communication	.29**	.37**	-				
4 Active Control	.45**	.42**	.42**	-			
5 Synchronicity	.15	.14	.09	.18	-		
6 Central Processing	.60**	.58**	.26**	.31**	-.05	-	
7 Peripheral Processing	.68**	.66**	.27**	.28**	.07	.43**	-
8 Fear Appeals	-.46**	-.33**	-.08	-.19	-.30**	.04	-.01

Note. $N = 105$ * = $p < .05$, ** = $p < .01$

Table 3. Means, Standard Deviations, and Cell Sizes of Credibility and Persuasion Variables

	Non-Ideological			Non-Violent, Ideological			Violent, Ideological		
	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>
<u>Credibility</u>									
<i>Site Credibility</i>	3.90	0.60	37	3.48	0.70	36	2.33	0.59	32
<i>Structural Credibility</i>	2.65	0.41	37	2.59	0.37	36	2.03	0.43	32
<u>Persuasion</u>									
<i>Peripheral Processing</i>	2.86	0.70	37	2.85	0.61	36	2.39	0.55	32
<i>Central Processing</i>	3.29	0.81	37	3.77	0.78	36	3.30	0.90	32
<i>Fear Appeals</i>	1.36	0.53	37	1.95	0.79	36	2.59	0.69	32
<u>Website Interactivity</u>									
<i>Two-way communication</i>	5.03	1.18	37	5.17	1.12	35	4.60	1.14	31
<i>Active Control</i>	6.12	0.53	37	6.06	0.61	36	5.61	0.63	32
<i>Synchronicity</i>	5.96	0.60	37	5.73	1.00	36	5.34	0.96	32

Figure 1. Mean differences between group types on fear messages used.

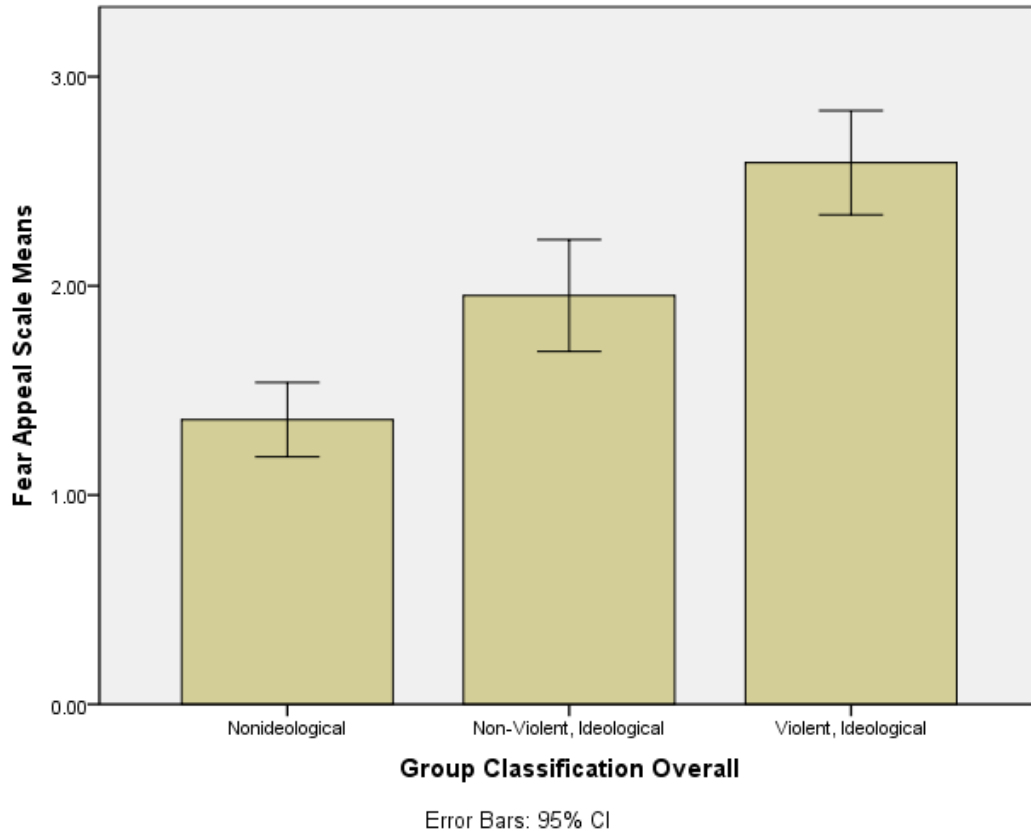
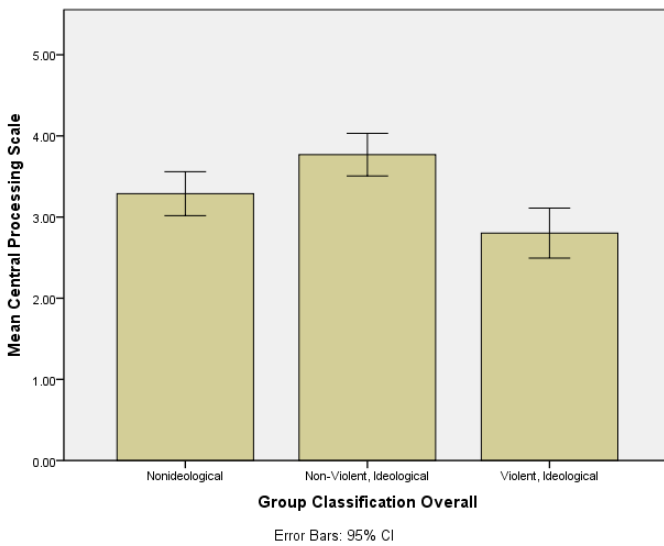
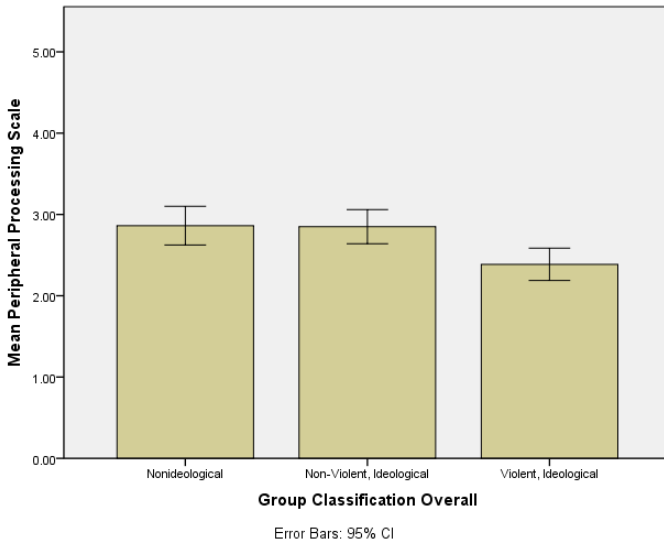


Figure 2a and Figure 2b. Mean differences between groups on peripheral and central processing cues.



(a) Peripheral Cues

(b) Central Cues

About the Authors:

Norah E. Dunbar, Ph.D. is an Associate Professor of Communication and a researcher in the Center for Applied Social Research at the University of Oklahoma. She is interested in the nonverbal communication of credibility and power, the detection of interpersonal deception, and computer-mediated communication. Correspondence should be directed to ndunbar@ou.edu or Department of Communication, 101 Burton Hall, University of Oklahoma, Norman OK 73019.

Shane Connelly, Ph.D. is a researcher in the Center for Applied Social Research and Associate Professor of Psychology at the University of Oklahoma. Her research interests include leadership processes, the role of emotions in organizational contexts, ethical decision-making, and ideological groups.

Matthew L. Jensen, Ph.D. is a researcher in the Center for Applied Social Research and Assistant Professor of Management Information Systems at the University of Oklahoma. His research interests include deception and credibility attribution in online exchanges, human-computer interaction, and computer-aided decision making.

Bradley J. Adame, Ph.D. is an Assistant Professor in the Hugh Downs School of Communication at Arizona State University. His research interests include social influence, crisis communication, campaign design and evaluation as well as deception, and motivation.

Bobby Rozzell, M.A. is a graduate teaching assistant at the University of Oklahoma. His research interests include ethical dilemmas in organizational communication, and the use of computer-mediated communication in leadership impression management.

Jennifer A. Griffith, Ph.D. is an Assistant Professor of Management at Alfred University. Her current research interests include leadership, emotions and influence in organizations, and computer-mediated communication.

H. Dan O'Hair, Ph.D. is Dean of the College of Communication and Information and Professor of Communication at The University of Kentucky. His research interests include risk and health communication, public relations, business communication, media management, and terrorism.

Funding Acknowledgement:

This research was supported by a Grant from the National Science Foundation, Human-Centered Computing Division, Project# 120028. The views and 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.