

# Effects of Priming on Online Discussion Behavior

Hung-Tao Chen, Eastern Kentucky University

Benjamin D. Horne, Rensselaer Polytechnic Institute

Online disinhibition effect describes the phenomenon where people feel less restrained in an online environment. People are therefore more likely to express thoughts and opinions that they normally would not share in a face-to-face interaction (Suler, 2004). Online disinhibition effect could either be benign or toxic. Students and instructors in an online learning environment often experience toxic disinhibition in several forms, including arguments about grades, emotional outbursts, potential death threat to the instructor, personal attacks, swearing, and heated arguments using upper-case letters (Rose, 2014).

Suler (2004) proposed six factors that contribute to the online disinhibition effect. These six factors include dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. Not all six factors proposed by Suler (2004) have received equal empirical evidence. Also, not all factors are relevant to online learning environments. This study therefore focused on the factor of invisibility and the lack of contextual cues as a result of invisibility.

One of the ways to provide contextual cues in a situation that lacks face-to-face interaction is through the usage of color signaling. Color signaling refers to the usage of colored text to convey information (Elliot, 2015; Lemarié, Lorch, Eyrolle & Virbel, 2008). This study looked at the effects of red color signaling, because the color red has been associated with dominance and aggression (Elliot, Maier, Moller, Friedman & Meinhardt, 2007). It is also often associated with some type of warning sign, such as a stop light or a stop sign (Elliot, 2015). The implicit warning and danger conveyed by the color red has been shown to result in inhibited performance, such that participants who were exposed to the color red had lower performance on the subsequent achievement task (Elliot, Maier, Reidman & Meinhardt, 2007; Gnamb, Appel & Batinic, 2010). Similar effects have been also been demonstrated in online gaming situations, where red priming messages lowered the amount of negative language usage (Maher, 2016). It is therefore likely that red priming message could also lower any potential toxic disinhibition in an online learning environment.

The current study included two experiments that tested the effects of red priming message and black priming message on 1) participants' expressed sentiment in their open-ended discussion posts, 2) participants' self-rating of verbal aggressiveness, and 3) the total number of words generated in the open-ended responses. Past studies have shown that red color could inhibit task performance and reduce offensive language, but it is not clear how a red color priming message might affect discussion posts in a simulated online classroom.

Similarly, black color has been shown not to inhibit behavior, but it is not clear how a priming message such as "exercise courtesy and professionalism" might affect participants' behavior in an online discussion post.

Results from the study indicated that red priming message caused participants to rate themselves as less verbally aggressive. This was likely due to increased attention to the priming message and the implicit warning conveyed by the color red. There was evidence that red priming message lowered the amount of negative sentiment expressed in the discussion posts. The results approached statistical significance, but it was not significant probably due to the low levels of negative sentiment expressed. Black priming message was found to be ineffective in lowering verbal aggression rating or negative sentiment expression. The findings from the current study has practical implications in the design of online courses. Instructors could use red priming messages as a strategy to promote a less verbally aggressive and negative online discussion environment.

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