Negatively Disinhibited Online Communication: The Role of Visual Anonymity and Public Self-Awareness

Dissertation

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Abstract

Visual anonymity is often thought to contribute to negative disinhibition and anti-social behavior online (Lapidot-Lefler & Barak, 2012; Halpern & Gibbs, 2013) because it has been associated with similar behavior in the physical world (Zimbardo, 1969; Deiner, 1980). Given that this behavior routinely occurs in online spaces where users are visually identified, theories that rest on the traditional effects or social identity effects of visual anonymity do not represent a complete explanation for disinhibited online behavior. The work presented here proposes that self-attention is affected by factors in mediated communication environments and the resulting direction of self-attention provides a more complete explanation.

In an 2 (self awareness cues/no self-awareness cues) x (visually anonymous/visible) 2 online experiment where participants are either visually identified by their Facebook profile picture or remain visually anonymous, this work examines how the absence of self-awareness cues in online environments—specifically cues that prime the effect of human eye gaze—interact with visibility and perceptions of anonymity to influence communication behavior. Although specific predictions were not supported, a post-hoc analysis indicates that visibility and cues to human eye gaze influence how people pay attention to themselves. Thus providing a framework to explain negatively disinhibited behavior in online spaces where users are visually identified.
Visibility affected the way people thought about themselves depending on how identifiable they were in their profile picture. Perhaps surprisingly, visible participants were generally more negatively disinhibited than visually anonymous participants, but participants who rated themselves high in physical identifiability in their Facebook photo exhibited less negative behavior. Further, cues to human eye gaze also affected participants differently depending on whether or not they were visible or visually anonymous. For visually anonymous participants, the eye gaze prime increased public self-consciousness. For visible participants, the prime resulted in lower public self-consciousness. The eye gaze prime did not affect negative disinhibition, but it did make people harsher judges of their behavior in self-assessments.
I dedicate my dissertation work to my husband, Dr. Robert Finn. Thank you for giving me the intellectual and emotional support that I needed to complete this project. Your love and belief in me carried me through, as it does always.
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Chapter 1: Introduction

Classic deindividuation theory was developed to explain anti-social behavior in the physical world. Visual anonymity was thought to precipitate deindividuation—a psychological state of decreased self-evaluation resulting in anti-normative and disinhibited behavior (Diener, 1980, Zimbardo, 1969). Because of this, common explanations for negative behavior in computer-mediated-communication (CMC) have converged on visual anonymity as a preeminent cause. Over the last 50 years though, research in the physical world linking visual anonymity, deindividuation, and anti-normative behavior has produced inconsistent results (Postmes & Spears, 1998), calling into question the validity of the deindividuation concept and the common anonymity hypothesis. Not only has this relationship failed to endure in the scholarly literature, but it is routine for users to observe negative and anti-social behavior in online spaces such as Facebook, YouTube, and Instagram where users are visually identified. Consequently, new explanations for disinhibited behavior that do not solely depend on people's lack of concern over identification and that apply to online environments where visual representation is the norm are needed.

One such explanation which accomplishes the first part of that task is the social identity model of deindividuation effects (SIDE) (Postmes, Spears & Lea, 1988). Unlike classic deindividuation theory, the SIDE model accounts for anti-social behavior in
visually anonymous text-based environments without relying on the unidentifiability and unaccountability afforded by visual anonymity. Rather, it explains behavior using social identity-driven group processes that do not rest solely on monolithic anonymity effects.

Like classic deindividuation theory though, the SIDE model is limited in its explanatory ability when it comes to the second part of the task, as it does not provide a framework that can be used to explain negative disinhibition in online spaces where users are visually identified.

In this work, I propose that the direction of self-attention experienced by online users is a more crucial determinant of negative disinhibition than is visual anonymity. In an online experiment where participants are either visually identified by their Facebook profile picture or remain visually anonymous, I examine how the absence of self-awareness cues in online environments—specifically cues that prime the effect of human eye gaze—interact with visibility and perceptions of anonymity to influence communication behavior.

The theorizing that is presented in the following chapters leads to predictions that ultimately are not supported. However, a post-hoc analysis suggests that these predictions were not conceptually wrong. Results indicate that self-attention does play a role in influencing negatively disinhibited behavior and that visibility—or the absence of visual anonymity—influences how people pay attention to themselves. Perhaps surprisingly, visible participants were more negatively disinhibited than visually anonymous participants, but visibility affected people in different ways depending on their profile picture. Participants who rated themselves high in physical identifiability in their
Facebook photo exhibited less negative behavior. Further, self-awareness cues also affected participants differently depending on whether or not they were visible. For visually anonymous participants, the eye gaze prime increased public self-consciousness. For visible participants, the prime resulted in lower public self-consciousness. Additionally, self-awareness cues did not ultimately effect negative disinhibition. However, they did make people harsher judges of their behavior when engaged in self-assessment. While the implications of these results are treated at length in Chapter 5, they are mentioned here in order to provide the reader with the most important findings as they consider the following chapters.
Chapter 2: Background and Literature Review

Consequences of visual anonymity, deindividuation, and deindividuation effects

Visual anonymity in the physical world is a straightforward concept in that identity and therefore action are concealed. The concept becomes more complex when considering what it means to be visually anonymous versus visible online, and a technical explanation is useful. To be visually anonymous online is to be unrepresented by a visual form in an online environment or to be indistinguishable from other forms. For example, a user of a text-based online chat program is visually anonymous because they cannot be visually identified from other users. A handle or name identifier may serve as a textual cue to identity, i.e. “Goldilocks” but when there is no visual form to represent the textual identifier, the user remains visually anonymous. The effect is the same for users of a CMC system that are uniformly represented by the same avatar, picture, or symbol. Visual anonymity online does not preclude being seen, as demonstrated in Figure 1.

Figure 1. Visual anonymity online: Uniformity of appearance

(a)                    (b)                     (c)                    (d)                    (e)
Visual anonymity in CMC ceases when users are represented by non-uniform appearance and identifiable as individuals (see image c in Figure 2). This is not to say that visual representation by a form discloses the identity of a user as it would in the physical world—“Goldilocks” may be represented by a cartoon seahorse—but in this case “Goldilocks” is no longer visually anonymous as defined here.

**Figure 2. Visibility online: Non-uniformity of appearance**

Thus, there are important differences between what is meant by visual anonymity in the physical and online world. Personal identifiability being the consequence for visibility in the former and visual representation with a possibility of personal identifiability in the latter. The work presented here deals with visibility in the second sense; in that it is concerned with explaining negatively disinhibited behavior in individuals who choose to represent themselves with personally identifying visual forms (see image c and e below in Figure 3).
In online spaces like Facebook and other social networks, users are increasingly representing themselves visually with accurate and identifying photos. Given this, we might expect to see the consequences of visual anonymity in the physical world manifest in these online spaces. With that expectation, visually anonymous users should exhibit the most negatively disinhibited behavior in discussion, while visible participants should react to the consequences of their visibility with friendlier tones. Theories such as classical deindividuation (Zimbardo, 1969) that explain the effects of visual anonymity on disinhibition in the physical world have been applied to explain negative behavior in the virtual world, but given the difference between the two places, visual anonymity alone may not be a sufficient explanation.

Despite that, the nature of online communication three decades ago was primarily text-based, and so, interest in applying the research concerning visual anonymity’s effect on behavior in the physical world was inevitable. In classic deindividuation theory, visual anonymity is considered to be a precursor to a psychological state of deindividuation
leading to disinhibited or anti-social behavior. According to this theory, visual anonymity decreases feelings of accountability and promotes reduced concern for self-evaluation through deindividuation. Deindividuation has been traditionally manipulated by using some means (a costume, a darkened room) to obscure the visual identity of research participants. Early studies suggested that deindividuation mediated the effect of visual anonymity on behavior, but it has been difficult to separate out which behaviors can be attributed to deindividuation itself as a psychological state, and which can be attributed to other causes. For example, the lack of accountability individuals feel when visually anonymous or lost in a crowd is sufficient to explain disinhibited behavior without necessitating a mediating psychological state. The question of whether or not deindividuation exists as a sovereign state between visual anonymity and behavior as outlined in classic deindividuation theory has produced conflicting answers (Deiner, 1979; Postmes & Spears, 1998).

The SIDE model is less concerned with the existence of deindividuation, but rather with what the hypothetical effects of deindividuation would be. Applied to online environments, SIDE draws on a social identity interpretation of crowd behavior (LeBon, 1890; Tajfel & Turner, 1986) to explain the effects of visual anonymity online. It is not primarily interested in the predictions of classical deindividuation which assume visual anonymity to be a predictor of antisocial or disinhibited behavior. Rather, it considers deindividuation a neutral state. In the SIDE model, deindividuation means that people self-categorize into social groups and see themselves primarily as group members rather than individuals, and the effects of deindividuation are determined by situation specific
group norms. Deindividuation as it is used in the SIDE model has positive outcomes for group cohesion, group liking, group attraction, and group norm adherence (Postmes, Lea, & Martin, 2002; Sassenberg, 2002). Thus, factors such as visual anonymity and immersion in a crowd that were previously implicated in explaining disinhibited behavior actually increase group salience and conformity (Postmes, Spears, & Lea, 1998). This conceptualization of deindividuation has become the state that current CMC researchers think about when the term deindividuation is used.

As with classical deindividuation, research that has tested the propositions of the SIDE model in computer-mediated environments has relied on manipulations of visual anonymity. General (or blanket) anonymity, visual anonymity, or some kind of uniform visual representation (see Figure 1) is essential to producing deindividuation effects (Postmes, Spears, & Lea, 1998; Lea, Spears & DeGroot, 2001; Postmes, Spears, Sakhel & DeGroot, 2001; Lee, 2004; Lee, 2007; Lee, 2008; Kim & Park, 2011). Thus, application of the SIDE model in explaining online behavior requires blanket anonymity, visual anonymity or uniform visual appearance as an antecedent condition. Of interest to this project are manipulations of visual anonymity of course, as online spaces where people communicate with each other have become increasingly resistant to the preservation of visual anonymity.

SIDE can explain why people behave negatively when they are visually anonymous, but unlike classical deindividuation, does not assume that that the behavior is due to the concealment of identity and action. The SIDE model demonstrates the effect of visual anonymity on self-attention elegantly, and can account for negatively disinhibited
behavior online without claiming that visual anonymity cultivates unaccountability as classical deindividuation theory would. The model predicts that visual anonymity shifts self-attention away from thoughts of self-as-individual to self-as-group member, and this change in self-focus oriented towards group membership can explain why people sometimes engage in disinhibited behavior online. Under conditions of visual anonymity people may come across a message that makes their membership in a particular social group salient. When this message is in opposition or presents a threat to that social group, people may polarize their opinions toward what is considered normative or prototypical for that social identity. Further, they may view the sender of the message as a more prototypical or stereotypical member of the opposing group than is actually the case (Hogg, 2004). Lee (2007) found evidence for group opinion polarization among anonymous CMC discussants and attributed it to the effect of their deindividuated state; those that exchanged personal information before interacting did not engage in opinion polarization. Discussants that are anonymous and have polarized their opinions are not likely to engage in quality discussion where reasons are shared before opinions. For example, the SIDE model would predict that when confronted with a contentious political discussion in a visually anonymous CMC context, a member of the Democratic Party may become “more” of a Democrat and defend the normative positions of the Democratic Party with disinhibited enthusiasm.

With this explanation for negative disinhibition in mind, there are factors other than anonymity or visual anonymity that are part of the mediated communication experience, and these factors affect how the self is considered in mediated interaction.
They are also likely to influence behavior, making virtual interactions particularly prone to disinhibition.

**Explaining bad behavior online**

The argument presented here is that the focus of self-attention is key to explaining anti-social and negatively disinhibited behavior online without reliance on monolithic anonymity effects. This is not to say that anonymity does not affect behavior, but that there are reasons other than anonymity that may contribute to negative disinhibition. Suler (2004) speculates that there are characteristics of the online environment that affect psychological processes leading to what he terms *the online disinhibition effect*. These characteristics point to both anonymity effects and the direction of self-attention in online interactions in determining disinhibition. Like deindividuation in its modern conceptualization, online disinhibition is considered a neutral state. Disinhibition can be relatively benign—it may cause people to disclose information that they would not otherwise disclose in a face-to-face setting. This can have a positive effect on personal well-being in that people may discover a previously unavailable outlet to discuss difficult life circumstances such as living with a stigmatized illness or a traumatic event. On the other hand, Suler describes the opposite side of disinhibition as detrimental to personal well-being. He calls this effect “toxic online disinhibition” characterized by anti-social behavior that people would not engage in offline, including “rude language, harsh criticism, anger, hatred, and even threats” (Suler,
Toxic online disinhibition also explains why people spend time with the
darker side of the Internet—places that violently exploit others for profit or masochism.

The characteristics of the online environment that are thought to contribute to the
online disinhibition effect are the following: blanket anonymity, invisibility, asynchrony,
solipsistic introjection, dissociative imagination, and the minimization of status and
authority. Two of these represent the effect of anonymity, and the remaining four point to
the direction of self-attention. Anonymity and invisibility are related to both identity and
action remaining unknown, and thus contribute to feelings of unaccountability. These
elements support the predictions that classic deindividuation makes concerning
disinhibited behavior online; when people feel anonymous, they may indulge in anti-
social and negative behavior. The four other factors locate the insular self at the center of
online interaction. As noted by Hollenbaugh & Everett (2013), dissociative (or blanket)
anonymity and visual anonymity have been particularly important concepts for
communication scholars working in CMC research, but Suler’s suggestions of
asynchrony, solipsistic introjection, dissociative imagination and the idea of minimizing
status and authority have received comparatively less attention. Taken together, these
remaining four concepts suggest something about the focus of attention during an online
exchange. The asynchronous potential of most CMC means that it is at the user’s
discretion when and how to respond to a message. When a user reads a message,
solipsistic introjection is likely in the form of sub-vocalizing or transferring an
individual’s own wants and needs on to the message. The mental image that an
interaction takes place out there in cyberspace further distances the message from the
sender and receiver. Finally, when social status or authority are not obvious cues in an interaction, they are easily dismissed. This is to say that CMC is a rather sovereign and self-directed experience with thoughts largely focused on the internal self. This is parallel with the group-process driven explanation provided by the SIDE model: An individual is either focused on the self-as-group-member or the self-as-individual depending on the status of their visual anonymity. SIDE offers a plausible explanation for disinhibited behavior via group processes under conditions of visual anonymity and disagreement, but not when discussants are visible. Applying the SIDE model as it is cannot explain this behavior because SIDE does not make any predictions about what happens when personal identity is the focus of self-attention.

Halpern and Gibbs (2013) make an effort to reconcile the mechanics of SIDE with degrees of anonymity in a study which compares the quality of discourse on “more anonymous” YouTube comment threads and “less anonymous” Facebook posts, noting that the two environments differ in their affordances of identifiability. They find that while anti-social and aggressive communication occurs in both more and less anonymous environments, conversations in places with more cues to identifiability tend to be more polite and egalitarian. This supports the tenants of classic deindividuation theory: people who are less anonymous are more responsible with their online behavior then people who are more anonymous. However, their application of the SIDE theory here presents an obvious problem. First, SIDE can only be applied when conditions of visual anonymity are met and, in that case can only explain the behavior of those that are “more anonymous.” More importantly, explanations for negative disinhibition that are
consistent with SIDE are group process driven and have nothing to do with visual anonymity leading to more negative behavior due to lack of concern over identifiability.

Although it makes no predictions about resulting behavior under conditions of visibility, SIDE does predict that visibility causes a shift in self-attention from self-as-group-member to self-as-individual. This allows for speculation that thoughts about the self-as-individual will influence behavior. If visibility ‘breaks’ deindividuation effects, or the focus on self-as-group-member, questions are raised about where self-attention is directed when visibility is achieved and thoughts about the self-as-individual become prominent. It is possible that there is a process by which thoughts about the self-as-individual lead to negative disinhibition.

*The role of self-awareness.* SIDE sets the stage by predicting that thoughts about the self as an individual become prominent in the absence of visual anonymity. This is essentially a change in self-awareness. Self-awareness theory may provide explanations for why negative disinhibition persists despite visibility and regardless of anonymity perceptions. Differential self-awareness theory explains how different classes of antecedent variables cause changes in self-awareness (Prentice-Dunn & Rogers, 1980). Aspects of the self that people pay attention to are affected by their perception of their environment and other outside stimuli. This idea is based on the theory of objective and subjective self-awareness (Duval & Wicklund, 1972) which establishes the notion that self-awareness is a constant evaluative narrative state where one may construct the self as either the subject or the object in the social world occurring around them. Prentice-Dunn
and Rogers theorized that the distinction between objective and subjective self-awareness was that self-attention may exist in either the private or public domain. *Private self-awareness* refers to an attentional focus on internal states such as thoughts, perceptions or bodily sensations. *Public self-awareness* explains how an individual imagines themselves as a social actor through the eyes of others. Both are evaluative states in which individuals consider their own behavior in light of appropriate personal or social norms respectively.

Prentice-Dunn and Rogers (1982) argued that an individual’s public self-awareness is altered by accountability cues such as fear of retribution, identifiability, or a sense of felt responsibility. In line with research by Johnson and Downing (1979), they asserted that anti-social behavior was the direct result of the reduction of accountability cues and that it was not mediated by an internal state such as classical deindividuation. Instead, their work suggested that increases in *private self-awareness* resulted in anti-social behavior. However, their results have not since been replicated. There are several reasons this may be the case, as measures claiming to capture private self-awareness have been historically unreliable and the construct is considered problematic to measure, but it is more than likely a false association. (Lee, 2007; Matheson & Zanna, 1988; Yao & Flanagin, 2006).

While the evidence about private self-awareness is inconclusive, reductions in *public self-awareness* have been linked to disinhibited behavior. In a meta-analysis of 60 independent studies which examined the role of self-awareness on anti-normative behavior, decreases in *public self-awareness* emerged as a reliable mediator for
disinhibited behavior: “It seems that self-awareness does not have a systematic effect on anti-normative behavior. The exception is public self-awareness, however. The variable had a small but consistent effect on anti-normative behavior when manipulated directly; reduced public self-awareness was associated with more anti-normative behavior.” (Postmes & Spears, 1998, p. 253). That is to say, it is not thoughts about the self that are restricted to the private realm that are linked with disinhibited behavior, but the temporary inability to or choice not to think about how the self appears in the public realm that is the culprit.

**Self-awareness and mediated communication.** Reduced public self-awareness among the visually anonymous (or visible) is an alternative explanation for negatively disinhibited behavior that does not rely on the unaccountability effect of anonymity. Although we have not arrived at a complete understanding of how different CMC environments act on self-attention, the extant research suggests that visually anonymous CMC decreases public self-awareness and increases private self-awareness.

Matheson and Zanna (1998) were the first to investigate the relationship between CMC and different forms of self-awareness. In their experiments, participants discussed a dilemma either face-to-face or using a text-only chat program. As they expected, they found that CMC users experienced lower levels of public self-awareness than their face to face counterparts. Additionally, CMC users with lowered public self-awareness were more likely to negatively evaluate the social context of the interaction. Contrary to their original hypothesis which predicted reduced private self-awareness for visually
anonymous CMC users, they found that the levels of private self-awareness were actually higher in visually anonymous CMC users than those that discussed the dilemma face-to-face. They reasoned that because participants in the CMC condition did not have to focus their attention on a physical interaction partner, they were better able to attend to their own thoughts and feelings. These findings were later replicated by Sassenberg, Boos, & Rabung (2005) who found that interpersonal influence was weaker in visually anonymous CMC than in face-to-face situations, deducing that a focus on one’s own thoughts made them less open to the suggestion of others. Adding to the evidence that the visual anonymity experienced by many CMC users increases private self-focus, Joinson (2001) found that visually anonymous CMC users experienced heightened private self-awareness and self-disclosed more personal information than visible participants—an example of self-focused attention resulting in benign disinhibition.

Considering that under different conditions of visibility a person’s self-attention may be directed towards themselves as private or themselves as public social actors or as in SIDE, as group members or individuals, self-attention is affected by visibility.

Public self-awareness—the state in which people focus their self-attention on how their behavior appears to others—requires that people evaluate their behaviors against the appropriate social norm or convention. In line with Prentice-Dunn and Rogers’s (1980) ideas about what antecedent variables are necessary to cause changes in self-attention, researchers often manipulate public self-awareness in experiments with accountability cues such as cameras (Joinson, 2001) and mirrors (Sentyrz & Bushman, 1998). These manipulations are intended to prime thoughts about the self from someone else's
perspective—a public perspective. It should be noted that the presence of another person is not sufficient to increase public self-awareness—an individual’s self-attention must be focused on how their actions appear to others within a given social context (Froming, Walker, & Lopyan, 1982). Increases in public self-awareness have been linked to pro-social, pro-health, and pro-normative behaviors including a reversal of the bystander effect (Bommel, Prooijen, Elffers, & Lange, 2012). Decreases in public self-awareness are associated with the violation of social norms such as cheating or stealing (Deiner, 1979). Observability cues that activate public self-awareness are largely missing in CMC environments, and are an alternative explanation to pure anonymity effects for anti-social behavior in online environments where people experience different visual anonymity states.

The next section represents a shift in the discussion on the effect of self-awareness on behavior and puts forth some alternative ways to consider how visual anonymity versus visibility might be interpreted by online users. Anonymity states—visual or otherwise—are often considered objective and manipulatable by researchers and that kind of objectivity does not allow for the subjective perception of the user. As noted earlier, visibility in the physical world has different consequences than in the virtual world, and independent of self-awareness those differences may contribute to or attenuate negative online behavior.
Alternative approaches to anonymity: The non-coordinatability of traits, perceived anonymity, and online sense of unidentifiability

Research testing the SIDE model indicates that the effect of visibility is to individuate an actor X and reduce conformity to group norms (Lee, 2007). Just as with classic deindividuation research, manipulations of self-awareness in CMC research often rely on visual anonymity or visibility of the research participants to produce the desired effects, suggesting that visibility necessarily equates with being known, or the opposite of anonymity. Recall that in the physical world, the effect of visual anonymity is to obscure identity and therefore accountability. The opposite of course, is visibility, which can only exist with the knowledge of immediate observation by others in the physical world.

The argument proposed here puts forth the assertion that this is not necessarily the case online. Online visibility does not include the knowledge of immediate observation by others. Thus, what is proposed is that visibility does not necessarily negate all perceptions of anonymity by users in online spaces. If we consider a definition of anonymity that is the “non-coordinatability of traits in a given respect” (Wallace, 1999; p. 24), we can abstract anonymity and the protection or breaking thereof as it may be perceived by online users.

A trait in this context is considered to be a piece of information or a record of action that is accessible to others in an information network and carries a weight with respect to identifiability. For example, a trait may be an e-mail extension, an IP address, a real or representative profile picture, a review on a consumer product website, a blog entry, a username/pseudonym or a location. A person maintains or perceives their
anonymity to the extent that they erect or leverage existing network barriers to keep pieces of information and actions isolated, secret, and most significantly, unconnected or un-coordinated:

“Anonymity is never complete unknowability. For anonymity to obtain there is always some knowledge or identifier of the person, even if it is only in virtue of a single and unique trait or location which cannot be coordinated with other locations...Anonymity does not mean that there are no other connected traits, but that in the relevant order(s) coordinatability of those traits by others is severed or shielded.” (Wallace, 1999; p. 28).

Classical deindividuation theory was a product of researcher’s interest in crowd behavior—what kinds of behaviors people will perform when they feel indistinguishable within a group. If we conceptualize the way people experience anonymity online as a subjective perception of identifiability based on the coordination of traits, then it is true that visual anonymity itself is a trait that individuates—as in the case of the SIDE model—but does not identify. One way to capture this difference is to adopt a model of anonymity that allows for subjective experience to influence behavior. Tsikerdekis (2013) presents such a model of perceived anonymity that takes into account several factors that may be considered by users when thinking about their anonymity status. According to this model, a person’s objective anonymity state, the specific scenario, and level of judged importance influence a user’s perception of their own identifiability.
This conceptualization of anonymity was tested with Wikipedia editors who either used their real names, a pseudonym, or were completely anonymous. Results indicated that while objective anonymity state and perceived anonymity state were significantly correlated, “two different people may perceive anonymity in different ways even if they are both in the same [objective] anonymity state” (Tsikerdekis, 2013, p. 1009). This model is the first of its kind to allow for anonymity to exist as a function of perception rather than an experimental condition manipulated by a researcher. However, it is not a well-established model and further testing is necessary in order to integrate the notion of perceived anonymity into larger models of online behavior. To that end, the research presented here does not assume that anonymity as an either/or state, but that people experience anonymity on a spectrum as a function of how they process available cues.

The online sense of identifiability: Anonymity and self-awareness. Recent research supports the idea of a non-binary anonymity: Lapidot-Lefler and Barak (2012) argue that what has traditionally been called anonymity in CMC research ought to be defined in terms of a person’s subjective perception of unidentifiability. They offer as a substitute the notion of an “online sense of unidentifiability,” comprised of three aspects: non-disclosure of personal details, visual anonymity, and the absence of eye contact. The effect of one’s online sense of unidentifiability on negatively disinhibited behavior was tested in an experiment where dyads were asked to discuss a dilemma designed to provoke an argument under several different anonymity states. In the anonymous condition participants were randomly assigned an alias. In the non-anonymous condition,
participants were given the name, gender, age, place of residence, and field of study of their interaction partner. To manipulate visual anonymity and visibility, a silent webcam was used. For eye contact, a second webcam was placed at eye level, and participants were instructed to maintain eye contact with their chat partner. Results supported the notion that online sense of unidentifiability had an effect on online disinhibition, with eye contact being the strongest deterrent of threats and flaming incidents. Visual anonymity had a main effect on increasing threats, and visibility decreased the perception of a negative atmosphere. They conclude that the extent to which people feel anonymous in a particular environment has an effect on their actions. Specifically, how people perceive their identifiability shifts with the context of the online environment, and that non-disclosure of information, invisibility, and lack of eye contact in online conversations contribute to negatively disinhibited behavior.

There is a commonality between the first two factors of one’s online sense of unidentifiability—non-disclosure and visual anonymity—in that both represent pieces of information or traits of an individual that may be coordinated to identify a specific person. Non-disclosure of information and visual anonymity are involved with the way people experience and manage anonymity online. These traits are only useful for identification to the extent that a receiver has the ability to link them together. The third construct, lack of eye-contact does not share the same commonality. Eye-contact is not a piece of information, nor is it a trait that can be linked with others to identify an individual. Eye-contact is a nonverbal communication process that elicits a sense of observation or surveillance (Klinke, 1998). It is the confirmation of observation that a
public action is being performed. In other words, eye contact is not a sub-component of anonymity, but rather an accountability cue for an observed action. Lapidot-Lefler & Barak’s (2012) results demonstrated that dyads who were instructed to maintain eye contact over a webcam interface were less aggressive and more inhibited in their conversation over the dilemma designed to produce the opposite behavior. The knowledge of observation may prevent a socially undesirable action by an otherwise unidentifiable actor. Lack of public self-awareness cues such as eye-contact that activate feelings of observation in online spaces explains why people participate in anti-social and negatively disinhibited communication even when they may be visually or otherwise identified. However, this kind of eye-contact is not offered as a technological feature in the overwhelming majority of online systems. Even in the case of systems like social networks where users tend to represent themselves with their actual photos, it is not apparent that viewing a photo of an individual while communicating with them would have the same effect of looking them in the eye face-to-face or over real time video conferencing software. However, people are especially attuned to the shape and topography of human faces, and specifically the shape and presence of the eyes. Eyes act as an indicator of outward attention towards the self and psychologically prime observability. Noticing the presence of a watching eye has the effect of producing a number of pro-social and cooperative behaviors: Haley & Fessler (2005) have shown that subtle observability cues such as a pair of stylized eyes are social evolutionary mechanisms that increase cooperative behavior in economic games—People who were exposed to a pair of stylized eyespots showed almost twice as much generosity toward
their game partner, despite maintaining total anonymity. This same pro-social effect was demonstrated by Nettle, Harper, Kidson, Stone & Penton-Voak (2012) who found that exposure to eye primes increased amount allocations in a Dictator Game. In an experiment on voter turnout, the inclusion of a pair of eyes on a voting reminder postcard increased voter turnout by 1.1% over those that received the same postcard with a national flag, a palm tree, or no image at all (Panagopoulos, 2014). In a field experiment, anonymous shoppers deposited 48% more money into supermarket donation buckets that were decorated with eye-like images than they did to otherwise identical buckets that were decorated with non-eye-like images (Powell, Roberts & Nettle, 2012). Additionally, the suggestion of a watching eye on a sign decreased people’s littering behavior in public places (Bateson, Callow, Holmes, Roche & Nettle, 2013), to successfully deter bicycle theft, and promote proper recycling (Nettle, Nott, & Bateson, 2012). Exposure to an eye prime activates cooperation using a mechanism that is clearly different than visibility or the breaking of other types of anonymity states.

Hypotheses

The research proposed here asserts that explanations for negative and disinhibited online behavior have focused too much on the effects of relaxing different types of anonymity while overlooking the role that self-attention plays in the process. Instead, lack of public self-awareness cues such as eye contact in online interfaces combined with fluctuating perceptions of anonymity states contribute to the anti-social and aggressive tone characterized by many online interactions. Introduction of public self-awareness
cues in the design of online interaction spaces is hypothesized to attenuate this effect and result in less negative disinhibition.

The first set of hypotheses is concerned with demonstrating that both visual anonymity and lack of eye gaze cues are capable of having the same general effect on negative online behavior independently. Both visual anonymity and the absence of eye gaze are expected to increase negatively disinhibited communication. However, lack of eye gaze is predicted to have a larger effect because eye gaze activates cues to observability that online visibility does not.

**H1:** Negatively disinhibited online communication increases in the absence of eye gaze cues.

**H2:** Negatively disinhibited online communication increases when participants remain visually anonymous.

**H3:** The effect of lack of eye gaze cues on negative disinhibited online communication is greater than that of visual anonymity.

In order to further separate the effects of anonymity from eye gaze, two mediating relationships are proposed. The first predicts that eye gaze acts as an observability cue that causes self-attention to be construed publicly. Decreases in negatively disinhibited online communication are expected to be the result of increased public-self-awareness.

**H4:** Public self-awareness mediates the effect of eye gaze on negatively disinhibited online communication.
Lapidot-Lefler & Barak (2013) found that visibility decreased perceptions of negativity during online discussion, but that seeing an interaction partner did not have any direct effect on negatively disinhibited communication. According to the SIDE model, visible communication partners should not be influenced by deindividuation effects, so it is unlikely that visibility is contributing to a process where these effects—such as adherence to group norms and polarization of opinions—are influencing negative disinhibition. However, allowing for a more flexible conceptualization of anonymity than the binary visually anonymous/visible distinction that has been used to test the SIDE model would extend the theory in a way that can be applied to explain disinhibited behavior in real world online social networks were degrees of anonymity exist and may be experienced differently by users. The construct of perceived anonymity proposed by Tsikerdekis (2013) provides this flexibility and allows for an additional test of the validity of the concept and the relative importance of visual anonymity/visibility in explaining behavior online.

**H5:** Perceived anonymity mediates the effect of visual anonymity on negative disinhibited online communication.
A parallel prediction is worth noting here for clarification purposes. Several studies have suggested that visually anonymous CMC increases people’s feelings of private self-awareness and leads to disinhibition in terms of information-sharing (Mattheson & Zanna, 1998; Joinson, 2001). So, private, rather than public self-awareness could be seen as an alternative mediator in the relationship between visual anonymity and negatively disinhibited online communication predicted in H4. This is a reasonable substitution, but the literature does not support the idea that private self-awareness has this relationship with offline anti-social behavior (Postmes & Spears, 1998). In other words, while private self-awareness may contribute to online disinhibition in general, it is the lack of public self-awareness that contributes to negative disinhibition. The evidence is not strong enough to believe that the private self-awareness experienced by visually anonymous users is related to negatively disinhibited behavior.

Visual anonymity may matter less in some contexts and more in others. If the distinction between those who are visually anonymous and those who are visible is not as important as once thought in influencing behavior when users are not publicly self-aware,
then it may become important when they are. Publicly self-aware people are concerned with the way that other people will judge their actions. They know that their behavior will be held to whatever the specific social norm the situation dictates. People that become publicly self-aware become self-evaluative about how they appear to others. For publicly self-aware online users, visibility may become important to them when self-attention shifts to be construed in the public sphere.

**H6:** Visibility will increase the effect of public self-awareness on disinhibited online communication in the presence of eye gaze.

**Figure 6. Conceptual diagram of H6**

![Conceptual diagram of H6](image)

This should in turn, alter experiences of perceived anonymity. If visibility has a larger effect on negatively disinhibited communication when individuals are publicly self-aware, then it is also likely to factor into people’s subjective experiences of anonymity under that condition.

**H7:** Visibility will moderate the effect of public self-consciousness on perceived anonymity.
Figure 7. Conceptual diagram of H7

Visibility

Perceived Anonymity → Public Self-consciousness
Chapter 3: Method

Overview

A 2 (visual anonymity/visibility) x 2 (no eye gaze prime/eye gaze prime) factorial online experiment was developed to test the proposed hypotheses. The experiment was programmed using the research platform developed by Qualtrics, Inc., and participants were recruited using the Qualtrics Online Panel service. Eligible participants were English speaking adults who were members of an opt-in panel administered by Qualtrics Panels and who maintained active Facebook accounts. Participants received an e-mail invitation to complete the experiment in return for incentives offered by Qualtrics Panels. The study was conducted in May and June of 2015.

Participants were randomly assigned to one of four experimental conditions in which they were visually identified (saw a photo of themselves), visually anonymous, saw cues to human eye gaze and a photo of themselves, or cues to human eye gaze with no photo. They watched a short video and were asked to leave a comment in a confederate comment thread about the video.

Sample

Consent to participate was given by 4,783 of respondents. Qualifying respondents were redirected to the experiment and asked to sign in to their Facebook account, with
1,959 succeeding. As recommended by Berinsky, Margolis & Sances (2013), there were two attention checks embedded in the experiment. 778 participants passed the first attention check, and about half of those (439) passed the second attention check. Chi square tests for independence show that participants who failed the first $\chi^2(3, 1,959) = 0.61, p = 0.89$ and second $\chi^2(3, 778) = 2.97, p = 0.39$ checks were evenly distributed among experimental conditions.

**Criterion Exclusions.** Although 439 participants finished the experiment, it was necessary to exclude further cases based on reasonable time to completion, technical issues with the experiment, and the quality of the comments left by participants.

*Completion time.* Time to completion exclusions include those that finished the experiment in under 7 minutes or took over 30 minutes. These exclusions are based on the minimum amount of time it takes to reasonably complete the experiment and a visual inspection of the histograms below for outliers. Average time to complete the experiment was approximately 15 minutes ($M = 15.09, SD = 5.26$).
Figure 8. Time-to-completion before exclusions

Figure 9. Time-to-completion after exclusions
**Visual identification.** In the visually identified conditions, people saw their Facebook profile picture. Participants were asked if their profile picture was a photo of themselves. People reporting that their profile picture was not of themselves were excluded.

**Comment Quality.** Cases where the participant reported not seeing the video or failed to leave a meaningful comment were excluded. Two human coders read participant comments and assigned each an inclusion value. Blank comments, nonsense comments, and comments that mentioned not being able to see the video were excluded (Chronbach’s $\alpha = 1$). All included comments left by participants can be found in Appendix E of this document ranked in descending order by coded negative disinhibition.

Total retention rate from the number of participants who were redirected to the experiment to the number of usable cases was 7.6%, which is typical of experimental research conducted using opt-in online panels. The proportion of participants retained after each exclusion criteria by experimental condition is summarized in Table 1 below.
Table 1. Number and proportion of participants excluded by criteria

Exclusion Description

<table>
<thead>
<tr>
<th>Condition</th>
<th>FB photo</th>
<th>Eye gaze</th>
<th>Signed in to FB</th>
<th>First Attention Check</th>
<th>Second Attention Check</th>
<th>Completion Time</th>
<th>Facebook Photo</th>
<th>Comment Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
<td>No</td>
<td>34.1%</td>
<td>34.8%</td>
<td>36.4%</td>
<td>36.8%</td>
<td>28.1%</td>
<td>27.3%</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
<td>No</td>
<td>18.2%</td>
<td>18.1%</td>
<td>19.1%</td>
<td>17.7%</td>
<td>23.1%</td>
<td>21.0%</td>
</tr>
<tr>
<td>3</td>
<td>Yes</td>
<td>Yes</td>
<td>24.6%</td>
<td>25.6%</td>
<td>24.6%</td>
<td>24.5%</td>
<td>21.7%</td>
<td>21.3%</td>
</tr>
<tr>
<td>4</td>
<td>No</td>
<td>Yes</td>
<td>21.8%</td>
<td>21.5%</td>
<td>19.8%</td>
<td>20.9%</td>
<td>27.1%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>1959 (57.1%)</td>
<td>778 (22.8%)</td>
<td>439 (12.9%)</td>
<td>388 (11.4%)</td>
<td>299 (8.8%)</td>
<td>258 (7.6%)</td>
</tr>
</tbody>
</table>

Note. Cell values are the number (proportion) of participants remaining after each exclusion.

The final sample is comprised of $n = 258$ adults (48.4% female) aged 18 to 78 years old ($M = 45.9$, $SD = 16.5$). As compared to data collected during the recent United States Census and American Community Surveys, participants included in this study are older and more educated than the population as a whole, but are representative of the distribution of national household income levels (US Census Bureau, 2010; 2013a;
2013b). Consistent with a recent trend in United States political party affiliation (Gallup, 2014), most participants identify themselves as political Independents, with more participants identifying as Democrats or leaning toward the Democratic party than the Republican party. The political party affiliation, education level, and annual income of the sample are summarized in Table 2 below.
Table 2. Demographic characteristics of final sample

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>135</td>
<td>47.7%</td>
</tr>
<tr>
<td>Male</td>
<td>147</td>
<td>51.9%</td>
</tr>
<tr>
<td><strong>Political Party Affiliation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong Republican</td>
<td>26</td>
<td>10.1%</td>
</tr>
<tr>
<td>Leans Republican</td>
<td>43</td>
<td>16.7%</td>
</tr>
<tr>
<td>Independent</td>
<td>88</td>
<td>34.2%</td>
</tr>
<tr>
<td>Leans Democrat</td>
<td>59</td>
<td>23.0%</td>
</tr>
<tr>
<td>Strong Democrat</td>
<td>41</td>
<td>16.9%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some High School</td>
<td>8</td>
<td>3.1%</td>
</tr>
<tr>
<td>High School Graduate or GED</td>
<td>46</td>
<td>18.0%</td>
</tr>
<tr>
<td>Trade School or Associate Degree</td>
<td>12</td>
<td>4.7%</td>
</tr>
<tr>
<td>Some College or College Degree</td>
<td>134</td>
<td>52.3%</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>55</td>
<td>21.9%</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 10,000</td>
<td>8</td>
<td>3.1%</td>
</tr>
<tr>
<td>Between 10,000 and 20,000</td>
<td>21</td>
<td>8.2%</td>
</tr>
<tr>
<td>Between 20,000 and 40,000</td>
<td>74</td>
<td>28.9%</td>
</tr>
<tr>
<td>Between 40,000 and 60,000</td>
<td>55</td>
<td>21.5%</td>
</tr>
<tr>
<td>Between 60,000 and 80,000</td>
<td>46</td>
<td>18.0%</td>
</tr>
<tr>
<td>Between 80,000 and 100,000</td>
<td>19</td>
<td>7.4%</td>
</tr>
<tr>
<td>More than 100,000</td>
<td>33</td>
<td>12.9%</td>
</tr>
</tbody>
</table>
Procedure

Participant’s Facebook profile pictures were used to manipulate visual anonymity. Facebook user’s profile pictures are public information and typically feature a photo of the user. Facebook allows Qualtrics to access these pictures with participant permission. Participants can sign into Facebook to allow Qualtrics survey software to use their Facebook user name and ID. Participants assigned to the visibility condition saw their Facebook profile picture and name during the study, and participants that were assigned to the visually anonymous condition saw their name only and no picture. Facebook names and IDs were removed when data collection was complete to protect participant privacy.

After signing in to Facebook, participants confirmed that either their name or their name and Facebook profile picture were displayed correctly. Only participants who reported seeing their Facebook information displayed correctly continued their participation in the experiment.

Eye gaze was manipulated with an eye-shaped logo embedded on each page of the survey (see Figure 10 below). Research using eye gaze primes typically relies on a stylized rendering of the human eye to induce pro-social behaviors (Powell, Roberts & Nettle, 2012; Nettle, Harper, Kidson, Stone & Penton-Voak; Nettle, Nott, & Bateson, 2012; Bateson, Callow, Holmes, Roche & Nettle, 2013; Panagopoulos, 2014). To this end, those assigned to the eye gaze condition saw a small image above the ‘continue’ button on each screen of the experiment resembling a human eye. To be sure it was noticeable, they were instructed “When you are ready to begin, please click on the arrow
button below the eye to continue.” Participants who were not assigned to this condition saw only the ‘continue’ button, as a one-to-one comparison manipulation of a closed eye may have made participants suspicious.

**Figure 10. Eye gaze prime**

Participants first completed the situational public self-awareness scale and were asked how anonymous they felt. Next, all participants were directed to view a brief video and asked to contribute their thoughts to the developing confederate comment thread using a blank comment box at the bottom of the page (see Figures 11 and 12 below. Full page versions are included in Appendix A). Visually identified and visually anonymous participants saw the same written content in the comment thread, but it was presented differently for visually identified participants who saw user names and profile pictures next to each comment. Visually identified participants also saw their own Facebook profile picture and name next to the blank text box. Visually anonymous participants saw user names but no profile pictures next to comments and saw only their name next to the blank text box.
After commenting, all participants saw their comment appear in the comment thread along with the other comments (See Figure 13). Visually identified participants saw their
Facebook profile picture and name next to the comment and visually anonymous participants saw their name and comment only. Participant comments were ‘time stamped’ as appearing “just now.”

Figure 13. Screen-shot of participant comment with eye gaze prime

Amelia Jones: What makes this even worse is the fact that she’s literally wearing JEANS AND A TSHIRT while several dudes are breaking their necks to look at her as if she was in a bikini. When will men learn that no means no? If someone is ignoring you, as much as that might hurt your inflated ego, LEAVE THEM THE FUCK ALONE. added 3 hours ago.

Bob Finn: I’d love to see how people would react if this were their daughter, mother, sister, or girlfriend in this woman’s position. How would these catcalls sound under those circumstances? added one hour ago.

Elizabeth Finn: Participant typed in their comment here. added just now.

Participants were then asked again about their perceptions of anonymity and situational public self-awareness. They also completed a general self-consciousness scale and indicated their attitudes about the stimulus video. Participants finished the study by completing a self-assessment of the comment they wrote.
Materials

Examining negatively disinhibited online behavior in an experiment poses a unique set of challenges. The first challenge is motivating the behavior, and the second is to avoid the perception that behavior-shaping is the obvious goal. Research on verbal aggressiveness suggests that negatively disinhibited behavior can be difficult to cultivate during an experimental session due to people’s desire to be seen in a positive light by researchers (Kotowki, Levine, Colin & Bolt, 2009). With that in mind it was necessary to select a stimulus video that would potentially draw out strong opinions and motivate the defense of those opinions. With increasing media attention on the problem of gender inequality (Hymowitz, 2014), a controversial video addressing the street harassment of women was chosen. In October of 2014, an organization devoted to ending the street harassment of women called ihollaback.com published an online video of cat-calls and unsolicited comments from men that were experienced by one woman walking around New York City in a day. The video was widely shared on social media and received mainstream news coverage, receiving over 10 million views in just 24 hours (Hoby, 2014). Public reception of the video ranged from outrage over the way the woman was treated to justification of the men’s behavior to skepticism over editing techniques and the motivations of the creators (Butler, 2014). This larger discussion was an ideal dialogue to invoke in the stimulus material because it allows for a variety of interpretations and the expression of a variety of viewpoints on modern gender issues in
the confederate comment section. The video can be found at this link:
https://www.youtube.com/watch?v=b1XGPvbWn0A

The second challenge was addressed by avoiding a normative conversational tone in the comments section. Seeing all positive or all negative comments might lead to participants adopting that tone, specifically when visually anonymous. The effect of adherence to situational group norms under conditions of visual anonymity is well established by the SIDE model (Lee, 2006; Postmes & Spears, 1998, etc.). Prior research that tested the SIDE model showed that under an established group norm such as task-orientation or social facilitation, visually anonymous participants were more likely to behave in either more task-oriented or more friendly ways respectively. Additionally, Lee (2006) found that visually anonymous participants were more likely to parrot the normative opinion of a group when asked to make a decision. It is reasonable to assume that if visually anonymous participants perceive the situational norm of the comments section to be either negative or positive commenting behavior, the tone of their own comments is likely to be reflected in that perception.

To that end, the researcher-selected comments were actual comments that YouTube users posted about the video in the YouTube comment thread in the weeks leading up to the study. The included comments reflect a variety of perspectives as to avoid biasing participant responses. Half of the comments were designated by two trained coders as negatively disinhibited, and half as representative of a neutral tone (Krippendorph’s α = 0.84). The text of all comments used can be found in Appendix A of this document.
Measures

Situational Public self-awareness. Situational public self-awareness (PSA) is a psychological state measure that assesses how aware people are that their actions are public in a current situation. It is measured in this study by summing participants’ level of agreement with the following three statements on a five-point scale: “Right now, I am concerned about the way I present myself,” “Right now, I am self-conscious about my behavior,” and “Right now, I am concerned about what other people think of me.” Higher scores indicate higher levels of public self-awareness. Participants filled out the PSA items before ($M = 9.88$, $SD = 2.93$, Cronbach’s $\alpha = 0.76$) and after ($M = 10.09$, $SD = 3.10$, Cronbach’s $\alpha = 0.82$) the experimental task. As can be seen in Table 3, mean PSA scores did not vary by experimental condition, pretest $F(3, 257) = 1.62, p = 0.18$ and posttest $F(3, 257) = 3.07, p = 0.08$.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Visibility</td>
<td>9.92</td>
<td>2.96</td>
</tr>
<tr>
<td>Visually Anonymous</td>
<td>9.89</td>
<td>2.89</td>
</tr>
<tr>
<td>Visibility/Eye Gaze Present</td>
<td>9.23</td>
<td>2.99</td>
</tr>
<tr>
<td>Visually Anonymous Eye Gaze Present</td>
<td>10.31</td>
<td>2.86</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9.88</strong></td>
<td><strong>2.93</strong></td>
</tr>
</tbody>
</table>
**Perceived Anonymity.** Participants answered the question “How anonymous do you feel to other Internet users right now?” using a five-point semantic differential scale with 1 representing the answer choice ‘completely known’ and 5 representing ‘completely anonymous.’ Perceived anonymity was measured twice—once before the experimental task \((M=3.16, SD=.98)\), and once after \((M=2.86, SD=1.12)\). Table 4 below shows that perceived anonymity was consistent across experimental conditions for both the pretest \(F(3, 257) = 0.42, p = 0.71\) and posttest \(F(3, 257) = 0.01, p = 0.99\).

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(M)</td>
<td>(SD)</td>
</tr>
<tr>
<td>Visibility</td>
<td>3.28</td>
<td>1.00</td>
</tr>
<tr>
<td>Visually Anonymous</td>
<td>3.22</td>
<td>.96</td>
</tr>
<tr>
<td>Visibility/Eye Gaze Present</td>
<td>3.05</td>
<td>.99</td>
</tr>
<tr>
<td>Visually Anonymous/Eye Gaze Present</td>
<td>3.06</td>
<td>.97</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.16</strong></td>
<td><strong>.98</strong></td>
</tr>
</tbody>
</table>

**Public Self-consciousness.** The literature conceptualizes public self-consciousness as a stable psychological trait that captures how generally aware people are of their behavior being on public display. It is measured in this project using Scheier & Carver’s (2013) self-consciousness scale. Participants indicate their level of agreement with 22 statements such as “I feel nervous when I speak in front of a group,” “I’m usually aware of my appearance” and “I think about myself a lot” for a personality trait measure of general self-consciousness (exact wording for each statement is found in the Appendix B of this document). The scale includes three sub-scales for the public and private dimensions of self-consciousness as well as social anxiety. For public self-consciousness, participants
answer their level of agreement with seven items: “I’m concerned about my style of doing things,” “I care a lot about how I present myself to others,” “I’m self-conscious about the way I look,” “I usually worry about making a good impression,” “Before I leave the house, I check how I look,” “I’m concerned about what other people think of me,” and I’m usually aware of my appearance.” These statements are summed together to create a public self-consciousness scale ($M = 23.89$, $SD = 5.55$). Higher scores indicate higher public self-consciousness. Cronbach’s alpha reliability for public self-consciousness is $\alpha = 0.87$.

**Negatively Disinhibited commenting behavior**

**Self-reports of disinhibited behavior.** Participants assessed their own commenting behavior after completing the experimental task. They saw their comment next to their Facebook picture and name (see figure 14) or just their name. They were given the following directions and asked to rate the comment on a five-point semantic differential scale anchored by positive/negative, respectful/disrespectful, polite/impolite helpful/not helpful: “Below are four pairs of opposite adjectives. Please indicate how you think someone else might rate your comment using these adjectives.” Higher numbers represent ratings of more disinhibited or anti-social behavior. Participants also indicated their level of agreement with the statement “Did you say things in your comment that you might have a difficult time saying face-to-face?” where a response choice of 1 indicates “strongly disagree” and 5 “strongly agree.”
Now, we have some questions about the comment that you wrote. Please read it over and answer the questions below:

Below are four pairs of opposite adjectives. Please indicate how you think someone else might rate your comment using these adjectives. For example, clicking on the bubble closest to "Helpful" means that you think someone else would find your comment helpful. Clicking on the bubble in the middle of "Helpful" and "Unhelpful" means that you think someone would find your comment neither helpful or unhelpful. There are no right or wrong answers.

Self-reported attributes of participants’ comments on disrespectfulness, impoliteness, negativity, and unhelpfulness are summed to create an aggregate self-assessment of negatively disinhibited behavior. Inter-item Cronbach reliability of this measure is \( \alpha = 0.87 \). Higher scores on the self-assessment scale represent more negative disinhibition. These scores are summarized in Table 5.
**Table 5. Mean self-reported negative disinhibition**

<table>
<thead>
<tr>
<th>Condition</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility</td>
<td>9.60</td>
<td>3.75</td>
</tr>
<tr>
<td>Visually Anonymous</td>
<td>9.72</td>
<td>3.67</td>
</tr>
<tr>
<td>Visibility/Eye Gaze Present</td>
<td>10.82</td>
<td>4.42</td>
</tr>
<tr>
<td>Visually Anonymous/Eye Gaze Present</td>
<td>10.15</td>
<td>3.82</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10.04</strong></td>
<td><strong>3.91</strong></td>
</tr>
</tbody>
</table>

Most participants (83%) disagreed or strongly disagreed ($M = 1.74$, $SD = 0.93$) that they would have any trouble repeating their comment in a face-to-face context.

**Coded disinhibited behavior.** Two trained coders used a five-point semantic differential scale to rate each response comment on the attributes of respectful/disrespectful, polite/impolite, helpful/not helpful, and positive/negative. Coders were instructed to give higher ratings to more negatively disinhibited comments and lower ratings to more prosocial comments. (The codebook and directions are included in Appendix C.) Inter-coder reliability, measured using Krippendorff’s alpha, was high, $\alpha = 0.87$.

Coder scores for each attribute are averaged to create individual scores for disrespectfulness, politeness, negativity, and unhelpfulness. These scores are then summed into a scale representing an aggregate coded measure of negative disinhibition (see Table 6 below) The inter-item Cronbach reliability of the scale is $\alpha = 0.93$. 


Table 6. Mean coded scores for negative disinhibition

<table>
<thead>
<tr>
<th>Coded scores for negative disinhibition</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility</td>
<td>9.10</td>
<td>4.41</td>
</tr>
<tr>
<td>Visually Anonymous</td>
<td>8.22</td>
<td>3.84</td>
</tr>
<tr>
<td>Visibility/Eye Gaze Present</td>
<td>10.95</td>
<td>5.65</td>
</tr>
<tr>
<td>Visually Anonymous/Eye Gaze Present</td>
<td>9.10</td>
<td>4.57</td>
</tr>
<tr>
<td>Total</td>
<td><strong>9.30</strong></td>
<td><strong>4.70</strong></td>
</tr>
</tbody>
</table>

Control variables

**Attitudes about the stimulus video.** Attitudes about the stimulus video are measured using McCrosky’s (1996) generalized attitude measure. Participants indicated their attitudes about the video using a five-point semantic differential scale on the attributes of bad/good, wrong/right, harmful/beneficial, unfair/fair, foolish/wise, and negative/positive. These attributes are summed together to create a scale representing the relative favorability or unfavorability of participants’ attitudes toward the stimulus video ($M = 17.28, SD = 5.56$). Cronbach’s alpha reliability for this scale is $\alpha = 0.88$.

**Facebook Profile Picture and identifiability.** Participants in the visually identified condition answered the question: “Is your current Facebook profile picture of you? It’s OK if it is not. We just need to know so that we have accurate information.” 62.6% of participants responded that the photo was of them. As shown in Table 1 above, participants that did not have Facebook profile pictures of themselves were excluded. Participants in the Visibility condition also indicated how identifiable they were in their
profile picture on a scale of 1 to 5 anchored by ‘not identifiable at all’ and ‘very identifiable’ \((M = 4.08, SD = 1.20)\).

In the next chapter, results of the study are presented. Manipulation checks and formal hypothesis tests comprise the first half of the chapter, with item level effects and a post-hoc analysis to follow.
Chapter 4: Results

Manipulation checks

Eye gaze and public self-awareness. Existing research shows that direct eye gaze can promote a number of cognitive and affective responses, including pro-social motivation and increased public self-awareness via sensing the presence of others 'watching' (Kleinke, 1986; Hietanen, Jukka, Peltola, & Ruuhiala, 2008; Lapidot-Lefler & Barak, 2012). In this project, it was anticipated that cues to human eye gaze would have the same effect. This expectation was tested with independent samples t-tests comparing the pre and posttest PSA scores of those who saw the eye gaze prime and those that did not. Unfortunately, there was no significant difference in pretest $t(256) = 0.19, p = 0.85$ or posttest scores $t(256) = -0.89, p = 0.37$ (two-tailed).

To understand what covariates may have influenced public self-awareness during the experiment, pretest and posttest PSA scores were modeled separately in linear regression equations with perceived anonymity, visibility, and demographic control variables in Table 7 and Table 8 below.
### Table 7. Predictors of pre-test PSA

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td></td>
<td></td>
<td>Model 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>12.83**</td>
<td>(.86)</td>
<td>.00</td>
<td>12.55**</td>
<td>(.88)</td>
<td>.00</td>
</tr>
<tr>
<td>Perceived Anonymity</td>
<td>-.12</td>
<td>(.19)</td>
<td>.511</td>
<td>-.14</td>
<td>(.19)</td>
<td>.47</td>
</tr>
<tr>
<td>Gender</td>
<td>-.41</td>
<td>(.39)</td>
<td>.26</td>
<td>-.40</td>
<td>(.39)</td>
<td>.309</td>
</tr>
<tr>
<td>Age</td>
<td>-.04**</td>
<td>(.01)</td>
<td>.00</td>
<td>-.04**</td>
<td>(.01)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>-.05</td>
<td>(.37)</td>
<td>.89</td>
<td>.44</td>
<td>(.52)</td>
<td>.40</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.75*</td>
<td>(.39)</td>
<td>.05</td>
<td>-.27</td>
<td>(.53)</td>
<td>.60</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-.96</td>
<td>(.72)</td>
<td>.18</td>
</tr>
</tbody>
</table>

\(n\)  
257  
257

**Model F**  
4.04**  
3.67 **

**Model Degrees of Freedom**  
5, 251  
6, 250

**R^2**  
0.074  
0.081

Note: 1. *p < 0.05 **p < 0.01

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
Table 8. Predictors of post-test PSA

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>(SE)</td>
<td>p</td>
<td>B</td>
<td>(SE)</td>
<td>p</td>
</tr>
<tr>
<td>Constant</td>
<td>3.13**</td>
<td>(.81)</td>
<td>.00</td>
<td>3.10**</td>
<td>(.81)</td>
<td>.00</td>
</tr>
<tr>
<td>Pre-test PSA</td>
<td>.81**</td>
<td>(.04)</td>
<td>.00</td>
<td>.81**</td>
<td>(.04)</td>
<td>.00</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>-.28</td>
<td>(.13)</td>
<td>.03</td>
<td>-.28*</td>
<td>(.13)</td>
<td>.03</td>
</tr>
<tr>
<td>Gender</td>
<td>-.32</td>
<td>(.27)</td>
<td>.24</td>
<td>-.32</td>
<td>(.27)</td>
<td>.25</td>
</tr>
<tr>
<td>Age</td>
<td>-.00</td>
<td>(.01)</td>
<td>.92</td>
<td>-.00</td>
<td>(.01)</td>
<td>.94</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>-.39</td>
<td>(.25)</td>
<td>.12</td>
<td>.49</td>
<td>(.36)</td>
<td>.17</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.33</td>
<td>(.26)</td>
<td>.21</td>
<td>-.24</td>
<td>(.36)</td>
<td>.51</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-.19</td>
<td>(.50)</td>
<td>.71</td>
</tr>
</tbody>
</table>

n                     | 257     |       | 257   |       |
Model F                | 66.27** |       | 56.62** |       |
Model Degrees of Freedom | 6, 250   |       | 7, 249 |       |
R²                    | 0.61    |       | 0.61  |       |

Note: 1. *p < 0.05 **p < 0.01
2. Reference categories are No Eye Gaze, No Facebook Photo, and Female

Contrary to the expected effect of the eye gaze prime to increase PSA, the models show that the manipulation failed. However, older people and people who saw their Facebook profile picture had lower pretest PSA scores. The interaction term in model 2
of Table 7 above rules out the notion that the efficacy of the eye gaze prime was dependent on seeing the Facebook profile picture.

For posttest PSA, seeing the Facebook profile picture and age were also significant predictors of lower posttest PSA when controlling for pretest PSA. The eye gaze prime did not increase posttest public self-awareness. The interaction term in model 2 of Table 8 above shows no conditional effect for the eye gaze prime, but suggests that people who felt more anonymous at the posttest were also less publicly self-aware. Perceived anonymity was not significant in any other models above, but this result provides tentative evidence that anonymity perceptions are related to self-awareness.

Exposure to the eye gaze prime did not have a significant effect on PSA and so the measure cannot be used as originally intended. Going forward, it will be treated as a covariate measure of self-awareness that is significantly related to visibility. Because there was no significant change in PSA throughout the experiment, each participant's mean PSA score is used in further analysis ($M = 9.98; SD = 2.84$).

**Eye gaze and public self-consciousness.** Although the eye gaze prime did not have the intended effect on PSA, it had an unintended effect on the trait of public self-consciousness. Visibility or the eye gaze cues alone were not significant predictors of public self-consciousness (see Model 1 in Table 9), but the addition of the interaction term in Model 2 of Table 9 shows that seeing the eye gaze prime resulted in higher public self-consciousness among visually anonymous participants.
Table 9. Predictors of public self-consciousness

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>(SE)</th>
<th>$p$</th>
<th>$B$</th>
<th>(SE)</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td></td>
<td></td>
<td>Model 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>31.88**</td>
<td>1.57</td>
<td>.00</td>
<td>30.92**</td>
<td>1.61</td>
<td>.00</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>-.89**</td>
<td>.35</td>
<td>.01</td>
<td>-.93**</td>
<td>.34</td>
<td>.01</td>
</tr>
<tr>
<td>Gender</td>
<td>-2.54**</td>
<td>.72</td>
<td>.00</td>
<td>-2.50**</td>
<td>.72</td>
<td>.00</td>
</tr>
<tr>
<td>Age</td>
<td>-.08**</td>
<td>.02</td>
<td>.00</td>
<td>-.07**</td>
<td>.02</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.50</td>
<td>.67</td>
<td>.45</td>
<td>2.13*</td>
<td>.94</td>
<td>.02</td>
</tr>
<tr>
<td>Visibility</td>
<td>-1.28</td>
<td>.71</td>
<td>.07</td>
<td>.31</td>
<td>.96</td>
<td>.75</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td></td>
<td></td>
<td>-3.19*</td>
<td>1.31</td>
<td>.02</td>
</tr>
</tbody>
</table>

$N$  257           257

Model $F$     7.40**  7.27**

Model Degrees of Freedom

5, 251         6, 250

$R^2$          0.13     0.15

Note: 1. *p< 0.05 **p< 0.01
2. Reference categories are No Eye Gaze, No Facebook Photo, and Female

In other words and perhaps surprisingly, when the eye gaze prime was visible individuals who are visually identified by their Facebook profile picture had lower public self-consciousness than those who are visually anonymous $\Delta R^2 = 0.02, F(1, 250) = 5.91, p = .02$; however, visual anonymity makes no difference in the absence of the eye gaze
prime. To better understand these effects, estimated marginal means for public self-consciousness are presented in table X below. Although the effect is small, when the eye gaze prime was present participants who saw their Facebook profile picture had lower public self-consciousness than those that remained visually anonymous. Because the eye gaze prime had the intended effect (although not in the intended direction) on the trait of public self-consciousness but not the state of public self-awareness, it will be used as an alternative for PSA where appropriate.

Table 10. Estimated marginal means for public self-consciousness

<table>
<thead>
<tr>
<th>Condition</th>
<th>M</th>
<th>SE</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility</td>
<td>23.64</td>
<td>.62</td>
<td>22.42</td>
<td>24.87</td>
</tr>
<tr>
<td>Visually Anonymous</td>
<td>23.39</td>
<td>.72</td>
<td>21.98</td>
<td>24.81</td>
</tr>
<tr>
<td>Visibility/Eye Gaze Present</td>
<td>22.75</td>
<td>.71</td>
<td>21.36</td>
<td>24.15</td>
</tr>
<tr>
<td>Visually Anonymous/Eye Gaze Present</td>
<td>25.52</td>
<td>.65</td>
<td>24.24</td>
<td>26.81</td>
</tr>
</tbody>
</table>

Perceived anonymity. Previous online research using visual anonymity as an independent variable usually manipulates the construct by either making the participant visible or obscuring them. The research presented here argues that conceptualizing any form of anonymity online is more complex than that because its perception may be based on a number of subjective components. Given that all participants saw their names when they left a comment in the confederate comment section, it was important to discover how visual anonymity versus visibility affected people’s general anonymity perceptions.
A linear regression equation modeling perceived anonymity from experimental condition and demographic control variables shows that visibility via Facebook profile picture was not a significant predictor of pretest or posttest anonymity perceptions. There was no significant difference between pretest and posttest perceived anonymity, so an average of participants' pre and posttest scores are used in further analysis ($M = 3.01; SD = 0.95$).

**Perceived anonymity and physical identifiability.** Although most people (88%) reported being at least modestly physically identifiable in their photos (see Table X), there was no relationship between self-reports of physical identifiability in the Facebook photo and perceptions of anonymity, pretest $r = -0.11, p = 0.19$ or posttest $r = -0.05, p = 0.54$. Possible reasons for this are included in the discussion.

<table>
<thead>
<tr>
<th>Table 11. Identifiability in Facebook Photos</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Not identifiable at all</td>
</tr>
<tr>
<td>(2)</td>
</tr>
<tr>
<td>(3)</td>
</tr>
<tr>
<td>(4)</td>
</tr>
<tr>
<td>(5) Very Identifiable</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Hypothesis Tests**

The weak correlation between human coders' evaluations and participants' self-reports of negative disinhibition ($r = 0.15, p < 0.05$, two-tailed) prevent me from
combining the measures. This weak association is likely due to a social desirability bias, as participants did not want to rate their behavior in a research study as negative. Instead, two sets of results are presented for each hypothesis, one corresponding to coded disinhibition and the other to participant’s self-reported behavior.

The first three hypotheses address the effect of the eye gaze prime and visibility on disinhibited online communication. H1 and H2 predict that negatively disinhibited online communication will increase when people are visually anonymous, and when they do not see eye-gaze cues. H3 expects that the lack of eye gaze cues will have a larger effect than that of visual anonymity. To test these hypotheses, negatively disinhibited communication is modeled in a linear regression equation using the presence of the eye gaze prime and visibility as successive predictors and age, gender and attitude about the stimulus video as covariates.

As seen in Table 12 below, seeing the eye gaze prime or the Facebook profile picture both resulted in increased coded disinhibition. This is directly opposite to what was predicted by H1 and H2. The effect of seeing either the eye gaze cues or being visible was hypothesized to depress negatively disinhibited behavior. Instead, the presence of the eye gaze cues and participant visibility had the opposite effect of increasing it. (Note: The effect of the eye gaze prime on behavior is not significant in the post-hoc analysis to come, and this is the first of many surprises in the data.)
Table 12. Predictors of coded negative disinhibition

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.52</td>
<td>(2.41)</td>
<td>.29</td>
</tr>
<tr>
<td>Public self-awareness</td>
<td>.15</td>
<td>(.15)</td>
<td>.33</td>
</tr>
<tr>
<td>Public self-consciousness</td>
<td>-.01</td>
<td>(.08)</td>
<td>.99</td>
</tr>
<tr>
<td>Perception of anonymity</td>
<td>.11</td>
<td>(.30)</td>
<td>.72</td>
</tr>
<tr>
<td>Age</td>
<td>.07**</td>
<td>(.02)</td>
<td>.00</td>
</tr>
<tr>
<td>Gender</td>
<td>1.01</td>
<td>(.64)</td>
<td>.12</td>
</tr>
<tr>
<td>Attitudes about video</td>
<td>-.02</td>
<td>(.05)</td>
<td>.75</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>1.16*</td>
<td>(.58)</td>
<td>.05</td>
</tr>
<tr>
<td>Visibility</td>
<td>1.95**</td>
<td>(.62)</td>
<td>.00</td>
</tr>
</tbody>
</table>

n: 257
Model F: 3.66
Model Degrees of Freedom: 8, 248
$R^2$: 0.106

Note: 1. *p < 0.05 **p < 0.01

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female

This surprising directional pattern was the same for self-reported behavior, although there are some important differences. Controlling for coded behavior, participants who saw the eye gaze prime rated their comments as more negatively disinhibited, but visibility did not have a significant effect on self-evaluations. Males and those that held favorable opinions about the stimulus video rated their behavior less negatively (see Table 13 below).
Table 13. Predictors of self-reported negative disinhibition

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>(SE)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>16.30**</td>
<td>(2.09)</td>
<td>.00</td>
</tr>
<tr>
<td>Coded negative disinhibition</td>
<td>.17**</td>
<td>(.05)</td>
<td>.00</td>
</tr>
<tr>
<td>Public self-awareness</td>
<td>-.09</td>
<td>(.13)</td>
<td>.49</td>
</tr>
<tr>
<td>Public self-consciousness</td>
<td>-.04</td>
<td>(.07)</td>
<td>.52</td>
</tr>
<tr>
<td>Perception of anonymity</td>
<td>-.02</td>
<td>(.25)</td>
<td>.98</td>
</tr>
<tr>
<td>Age</td>
<td>-.03</td>
<td>(.15)</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.84**</td>
<td>(.52)</td>
<td>.00</td>
</tr>
<tr>
<td>Attitudes about video</td>
<td>-.14**</td>
<td>(.04)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>1.16*</td>
<td>(.48)</td>
<td>.02</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.43</td>
<td>(.52)</td>
<td>.41</td>
</tr>
</tbody>
</table>

| n                                      | 257     |
| Model F                                | 3.28**  |
| Model Degrees of Freedom               | 9, 247  |
| $R^2$                                  | 0.105   |

Note: 1. *p < 0.05 **p < 0.01

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female

Although the result for coded disinhibition shows that both the eye gaze prime and visibility influenced behavior, the effect was not in the direction predicted. The eye gaze prime had an effect on self-reports of negativity that were also not in the expected direction, so H1 and H2 are not supported by either the coded or self-reported models. Possible reasons for this unexpected result are presented in the discussion.

H3 predicts that the absence of eye gaze cues will have a stronger effect on negatively disinhibited behavior than visual anonymity. The model in Table 12 above shows that for coded disinhibition, visibility resulted in an average change in mean disinhibition that was greater than that of the eye gaze prime. While visibility had a stronger effect than the eye gaze prime on coded disinhibited behavior, it had no effect on
self-reported disinhibition while seeing the eye gaze prime did (see Table 13). Thus H3 is not supported by the coded model, but is partially supported by the self-reported model.

Moving forward to the next set of hypotheses, the result that visibility via the Facebook photo was the strongest predictor for the \textit{coded} measure of disinhibited behavior and that the eye gaze prime was the strongest predictor for \textit{self-reported} disinhibited behavior is important to keep in mind moving forward. It is representative of a reoccurring pattern in the data that suggests the way in which visibility and accountability cues such as the eye gaze prime influence self-attention in computer-mediated communication.

The next set of hypotheses investigates mediating roles for public self-consciousness and perceived anonymity on negatively disinhibited behavior. H4 expects the presence of the eye gaze prime to affect behavior through public self-consciousness. PROCESS (Hayes & Preacher, 2014) is an SPSS macro that uses ordinary least squares regression and boot-strapped confidence intervals to estimate models that can be used to detect direct, indirect and conditional indirect effects. A test for simple mediation using the PROCESS macro (see conceptual diagram in Figure 15 below) does not support a mediating role for public self-consciousness on coded disinhibited behavior. The 10,000 sample bias-corrected bootstrap confidence interval for the indirect effect of eye gaze through public self-consciousness included zero (-0.095 to 0.10).
**Figure 15.** Regression coefficients for the effect of the eye gaze prime on coded disinhibited behavior as mediated by public self-consciousness. *p < .05

```
<table>
<thead>
<tr>
<th></th>
<th>Public Self-consciousness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Gaze Cues</td>
<td>1.15* (.58)</td>
<td>Coded Disinhibited Behavior</td>
</tr>
<tr>
<td></td>
<td>.27(.46)</td>
<td>- .01(.07)</td>
</tr>
</tbody>
</table>
```

Similar results with self-reported disinhibition as the dependent variable are reflected in Figure 16 below. The models estimated to detect a mediating role for public self-consciousness did not indicate a significant relationship with the eye gaze prime or self-reported negative disinhibition. The 10,000 sample bias-corrected bootstrap confidence interval for the indirect effect of eye gaze was -0.20 to 0.03, thus, H4 cannot be supported by the models for coded or self-reported behavior. Age, gender, PSA, and attitudes about the stimulus video were used as covariates all models, controlling for coded behavior in self-report models.

**Figure 16.** Regression coefficients for the effect of the eye gaze prime on self-reported disinhibited behavior as mediated by public self-consciousness. *p < .05

```
<table>
<thead>
<tr>
<th></th>
<th>Public Self-consciousness</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Gaze Cues</td>
<td>1.16* (.47)</td>
<td>Self-reported Disinhibited Behavior</td>
</tr>
<tr>
<td></td>
<td>.96(.47)</td>
<td>- .04(.06)</td>
</tr>
</tbody>
</table>
```
H5 predicts that perceived anonymity mediates the relationship between visual anonymity and negatively disinhibited behavior. Models estimated to test for mediation yielded insignificant evidence for an indirect effect of visual identification on both coded and self-reported behavior (see Figures 17 and 18 below). Although there was a direct effect for visual anonymity on coded negatively disinhibited behavior, there is no evidence to indicate that it was influenced by perceived anonymity, leaving H6 unsupported. The 10,000 sample 95% bias-corrected bootstrap confidence interval for the indirect effect includes zero for coded behavior (-0.09 to 0.08) and for self-reported behavior (-0.08 to 0.08). As above, age, gender, PSA, PSC, and attitudes about the stimulus video were used as covariates all models, controlling for coded behavior in self-report models.

**Figure 17.** Regression coefficients for the effect of visual identification on coded disinhibited behavior as mediated by perceived anonymity. *p < .05
H6 predicts that visibility will increase the effect of public self-consciousness on disinhibited behavior when eye gaze cues are present. Models estimated to detect this relationship failed to confirm moderated mediation. Eye gaze had no significant effect on public self-consciousness, and levels of public self-consciousness did not differ when participants saw their Facebook profile picture or were visually anonymous. This was true for both coded and self-reported disinhibited behavior. Age, gender, PSA and attitudes about the stimulus variable were used as covariates in all models, controlling for coded behavior in self-report models. Results are summarized in table 14 and 15 below.
Table 14. **Conditional indirect effect of eye gaze on coded disinhibited behavior**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$B$</th>
<th>$(SE)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediator Variable (Public self-consciousness) Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>9.91</td>
<td>(.25)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze</td>
<td>.16</td>
<td>(.36)</td>
<td>.66</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable (coded negative disinhibition) Model</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.57</td>
<td>(2.21)</td>
<td>.48</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>.28</td>
<td>(.15)</td>
<td>.06</td>
</tr>
<tr>
<td>Eye Gaze</td>
<td>1.08</td>
<td>(.58)</td>
<td>.06</td>
</tr>
<tr>
<td>Visibility</td>
<td>4.46</td>
<td>(2.10)</td>
<td>.03</td>
</tr>
<tr>
<td>Age</td>
<td>.07</td>
<td>(.02)</td>
<td>.00</td>
</tr>
<tr>
<td>Gender</td>
<td>1.01</td>
<td>(.62)</td>
<td>.11</td>
</tr>
<tr>
<td>Attitudes about video</td>
<td>.02</td>
<td>(.05)</td>
<td>.74</td>
</tr>
<tr>
<td>Public Self-awareness $\times$ Visibility</td>
<td>-.25</td>
<td>(.20)</td>
<td>.21</td>
</tr>
</tbody>
</table>

**Conditional effect of Public self-awareness at Visual Anonymity**

<table>
<thead>
<tr>
<th>Effect</th>
<th>$95%$ Bootstrap CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visually Anonymous (0)</td>
<td>.04 (.11) - .13 to .36</td>
</tr>
<tr>
<td>Visibility (1)</td>
<td>.00 (.06) -.09 to .18</td>
</tr>
</tbody>
</table>

Note: 1. *$p < 0.05$ **$p < 0.01$  
2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
Table 15. Conditional indirect effect of eye gaze on self-reports of disinhibited behavior

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Effect</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mediator Variable (Public self-awareness) Model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>9.91**</td>
<td>(.25)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze</td>
<td>.16</td>
<td>(.36)</td>
<td>.66</td>
</tr>
<tr>
<td><strong>Dependent Variable (coded negative disinhibition) Model</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>15.99**</td>
<td>(1.84)</td>
<td>.00</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>-.18</td>
<td>(.12)</td>
<td>.16</td>
</tr>
<tr>
<td>Public Self-Consciousness</td>
<td>-.04</td>
<td>.06</td>
<td>.29</td>
</tr>
<tr>
<td>Eye Gaze</td>
<td>1.17**</td>
<td>(.48)</td>
<td>.02</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.97</td>
<td>(1.75)</td>
<td>.58</td>
</tr>
<tr>
<td>Age</td>
<td>-.03</td>
<td>(.01)</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.76**</td>
<td>(.52)</td>
<td>.00</td>
</tr>
<tr>
<td>Attitudes about video</td>
<td>-.14**</td>
<td>(.04)</td>
<td>.00</td>
</tr>
<tr>
<td>Coded Negative Disinhibition</td>
<td>.17</td>
<td>(.05)</td>
<td>.07</td>
</tr>
<tr>
<td>Public Self-awareness x Visibility</td>
<td>.05</td>
<td>(.17)</td>
<td>.74</td>
</tr>
</tbody>
</table>

Conditional effect of Public self-awareness at Visual Anonymity

<table>
<thead>
<tr>
<th>Effect</th>
<th>(SE)</th>
<th>95% Bootstrap CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visually Anonymous (0)</td>
<td>-.03</td>
<td>-.28 to .07</td>
</tr>
<tr>
<td>Visibility (1)</td>
<td>-.02</td>
<td>-.27 to .06</td>
</tr>
</tbody>
</table>

Note: 1. *p < 0.05 **p < 0.01
2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
H7 predicted that visual identification moderates the relationship between a person's public self-consciousness and their perceptions of anonymity. A regression equation estimating average perceptions of anonymity from public self-consciousness and visual identification found neither the predictors nor their interaction to be significant. Probing the interaction suggests a small conditional effect for public self-consciousness on perceived anonymity when participants saw their Facebook profile pictures. However, the change in $R^2$ due to the addition of the interaction term was not significant $\Delta R^2 = 0.01, F(1, 254) = 2.40, p = 0.12$. Results are summarized in Table 16 below.

Table 16. Conditional effect of public self-consciousness on perceived anonymity

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$B$</th>
<th>$(SE)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.19**</td>
<td>(.37)</td>
<td>.00</td>
</tr>
<tr>
<td>Visibility</td>
<td>.80</td>
<td>(.52)</td>
<td>.12</td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>-.01</td>
<td>(.02)</td>
<td>.61</td>
</tr>
<tr>
<td>Visibility x Public Self-consciousness</td>
<td>-.03</td>
<td>(.02)</td>
<td>.12</td>
</tr>
</tbody>
</table>

| $N$                              | 257   |
| Model $F$                        | 2.46* |
| Model Degrees of Freedom         | 3, 254|
| $R^2$                            | 0.03  |

Note: 1. *$p < 0.05$ **$p < 0.01$
   2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
**Item-level effects**

The theoretically motivated hypotheses initially offered in this work are not supported. However, the analyses reveals two intriguing and counter-intuitive patterns in the data. The first is that visibility via Facebook photo and the eye gaze prime both contributed to *increased* negatively disinhibited behavior as rated by human coders (again, the effect of the eye gaze prime on coded disinhibited behavior is not ultimately significant, but reporting the item-level effects help demonstrate why). These experimental manipulations were meant to decrease, not increase negative disinhibition.

The second pattern is that a participants' visibility was not a significant predictor of self-reported disinhibition, but the eye gaze prime was. This suggests that the experimental manipulations had different effects when participants were asked to comment on the video than when they were asked to evaluate their behavior. To better understand the effect that visibility and the eye gaze prime have on both coded and self-reported disinhibited behavior, item-level effects for the components of disinhibition -- negativity, impoliteness, unhelpfulness, and disrespectfulness -- are examined. The next section repeats the hypothesis tests presented above substituting each item of coded and self-reported disinhibition as the dependent variable. Only significant differences are reported.

*Negativity.* None of the models using the coded measure of negativity were significant. For self-reported negativity, however, visibility decreased negativity ratings. This is different than the pattern that was found for the omnibus measure of self-reported
disinhibition; the eye gaze prime was the only significant predictor of higher ratings of disinhibition, and there was no significant interaction between the Facebook profile picture and the eye gaze prime.

Here, visibility and the eye gaze prime resulted in a slight increase in negativity ratings (see model 2 in Table 17 below). Visible participants who did not see the eye-gaze prime rated their behavior as less negative than visible participants who saw it.
Table 17. Predictors of self-reported negativity

<table>
<thead>
<tr>
<th></th>
<th>$B$</th>
<th>(SE)</th>
<th>$p$</th>
<th>$B$</th>
<th>(SE)</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.47**</td>
<td>(.62)</td>
<td>.00</td>
<td>.51**</td>
<td>(.61)</td>
<td>.00</td>
</tr>
<tr>
<td>Coded Negativity</td>
<td>.01</td>
<td>(.05)</td>
<td>.06</td>
<td>.09</td>
<td>(.05)</td>
<td>.06</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>-.06</td>
<td>(.04)</td>
<td>.14</td>
<td>-.60</td>
<td>(.04)</td>
<td>.12</td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>-.01</td>
<td>(.02)</td>
<td>.13</td>
<td>.00</td>
<td>(.02)</td>
<td>.99</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>.06</td>
<td>(.08)</td>
<td>.45</td>
<td>.07</td>
<td>(.08)</td>
<td>.35</td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>(.16)</td>
<td>.34</td>
<td>-.01</td>
<td>(.01)</td>
<td>.31</td>
</tr>
<tr>
<td>Gender</td>
<td>-.57**</td>
<td>(.17)</td>
<td>.00</td>
<td>-.55**</td>
<td>(.17)</td>
<td>.00</td>
</tr>
<tr>
<td>Attitudes About Video</td>
<td>-.05**</td>
<td>(.01)</td>
<td>.00</td>
<td>-.04**</td>
<td>(.01)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.12</td>
<td>(.15)</td>
<td>.41</td>
<td>-.19</td>
<td>(.21)</td>
<td>.36</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.30</td>
<td>(.16)</td>
<td>.07</td>
<td>-.59**</td>
<td>(.22)</td>
<td>.01</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.61*</td>
<td>(.30)</td>
<td>.04</td>
</tr>
</tbody>
</table>

| $n$              | 257      | 257   |
| Model $F$        | 4.21**   | 3.54**|
| Model Degrees of Freedom | 9, 247 | 10, 246 |
| $R^2$            | 0.11     | 0.126 |

Note: 1. *p < 0.05 **p < 0.01
2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
Impoliteness. For impoliteness as determined by coders, seeing the Facebook profile picture and age were significant predictor of impoliteness. As with omnibus coded disinhibition, visible participants left comments that on average were less polite than those left by the visually anonymous, but there was no interaction between visibility and the eye gaze prime (see Table 18 below). In a deviation from the pattern above, the eye gaze prime did not have an effect on either coded impoliteness nor self-reported impoliteness.
Table 18. Predictors of coded impoliteness

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$(SE)$</td>
<td>$p$</td>
<td>$B$</td>
<td>$(SE)$</td>
<td>$p$</td>
<td>$B$</td>
<td>$(SE)$</td>
</tr>
<tr>
<td>Constant</td>
<td>.57</td>
<td>(.62)</td>
<td>.36</td>
<td>.58</td>
<td>(.62)</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>.03</td>
<td>(.04)</td>
<td>.44</td>
<td>.03</td>
<td>(.04)</td>
<td>.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>-.01</td>
<td>(.02)</td>
<td>.79</td>
<td>.00</td>
<td>(.02)</td>
<td>.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>-.03</td>
<td>(.08)</td>
<td>.66</td>
<td>-.03</td>
<td>(.08)</td>
<td>.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.01**</td>
<td>(.00)</td>
<td>.00</td>
<td>.01</td>
<td>(.00)</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.30</td>
<td>(.16)</td>
<td>.07</td>
<td>.30</td>
<td>(.16)</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes About Video</td>
<td>.00</td>
<td>(.01)</td>
<td>.78</td>
<td>.00</td>
<td>(.01)</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.24</td>
<td>(.15)</td>
<td>.11</td>
<td>.14</td>
<td>(.21)</td>
<td>.52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility</td>
<td>.45**</td>
<td>(9.16)</td>
<td>.00</td>
<td>.36</td>
<td>(.22)</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.20</td>
<td>(.30)</td>
<td>.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$n$ = 257

Model $F$ = 2.86

Model Degrees of Freedom = 8, 248**

$R^2$ = .08

Note: 1. *$p < 0.05$ **$p < 0.01$

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
Unhelpfulness. Results for coded unhelpfulness followed the same pattern as omnibus coded negative disinhibition. When the interaction term is left out of the regression equation, both the presence of the eye gaze prime and visibility are significant predictors for less helpful behavior (see model 1 in Table 19 below).
Table 19. Predictors of coded unhelpfulness

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>(SE)</td>
<td>$p$</td>
<td>$B$</td>
<td>(SE)</td>
<td>$p$</td>
</tr>
<tr>
<td>Constant</td>
<td>.75</td>
<td>(.62)</td>
<td>.22</td>
<td>.78</td>
<td>(.62)</td>
<td>.21</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>.05</td>
<td>(.04)</td>
<td>.22</td>
<td>.05</td>
<td>(.04)</td>
<td>.23</td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>.01</td>
<td>(.02)</td>
<td>.72</td>
<td>.01</td>
<td>(.02)</td>
<td>.60</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>.03</td>
<td>(.08)</td>
<td>.73</td>
<td>.03</td>
<td>(.08)</td>
<td>.66</td>
</tr>
<tr>
<td>Age</td>
<td>.02</td>
<td>(.00)</td>
<td>.00</td>
<td>.02</td>
<td>(.00)</td>
<td>.00</td>
</tr>
<tr>
<td>Gender</td>
<td>.24</td>
<td>(.16)</td>
<td>.24</td>
<td>.25</td>
<td>(.16)</td>
<td>.13</td>
</tr>
<tr>
<td>Attitudes About Video</td>
<td>-.01</td>
<td>(.01)</td>
<td>.37</td>
<td>-.01</td>
<td>(.01)</td>
<td>.39</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.31</td>
<td>(.15)</td>
<td>.04</td>
<td>.10</td>
<td>(.21)</td>
<td>.63</td>
</tr>
<tr>
<td>Visibility</td>
<td>.61</td>
<td>(.16)</td>
<td>.00</td>
<td>.41</td>
<td>(.21)</td>
<td>.06</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.40</td>
<td>(.30)</td>
<td>.17</td>
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<tr>
<td>$n$</td>
<td>257</td>
<td></td>
<td></td>
<td>257</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model $F$</td>
<td>5.20**</td>
<td></td>
<td></td>
<td>4.84**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Degrees of Freedom</td>
<td>8, 248</td>
<td></td>
<td></td>
<td>9, 247</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.14</td>
<td></td>
<td></td>
<td>.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. *$p < 0.05$ **$p < 0.01$

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
The pattern for *self-reported* helpfulness followed what was seen in overall self-reported negative disinhibition where the eye gaze prime becomes the significant predictor of less helpful self-ratings of behavior and a participants' visibility does not have an effect (see Table 20 below).
Table 20. Predictors of self-reported Unhelpfulness

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td></td>
<td></td>
<td>Model 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.47** (0.57)</td>
<td>.00</td>
<td>3.47** (0.58)</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coded Unhelpfulness</td>
<td>.09 (0.60)</td>
<td>.12</td>
<td>.09 (0.60)</td>
<td>.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>-.02 (0.37)</td>
<td>.57</td>
<td>-.02 (0.37)</td>
<td>.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>-.01 (0.02)</td>
<td>.69</td>
<td>-.01 (0.19)</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>.052 (0.07)</td>
<td>.48</td>
<td>.05 (0.07)</td>
<td>.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.01** (0.00)</td>
<td>.00</td>
<td>-.01** (0.00)</td>
<td>.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.40** (0.15)</td>
<td>.01</td>
<td>-.41** (0.16)</td>
<td>.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes About Video</td>
<td>-.02* (0.01)</td>
<td>.04</td>
<td>-.03* (0.01)</td>
<td>.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.45** (0.14)</td>
<td>.00</td>
<td>.39* (0.20)</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visibility</td>
<td>.016 (0.15)</td>
<td>.92</td>
<td>-.04 (0.20)</td>
<td>.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>.12 (0.28)</td>
<td>.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( n \quad 257 \quad 257 \)

\( \text{Model } F \quad 4.21** \quad 3.73** \)

\( \text{Model Degrees of Freedom} \quad 9, 247 \quad 10, 246 \)

\( R^2 \quad 0.114 \quad 0.114 \)

Note: 1. \(*p < 0.05 \quad **p < 0.01\)

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
**Disrespectfulness.** For coded disrespectfulness, age, visibility, and the eye gaze prime were indicators of disrespectful commenting behavior. Visible participants and participants who saw the eye gaze prime left more disrespectful comments as determined by human coders (see model 1 in Table 21 below).
Table 21. Predictors of coded disrespectfulness

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$(SE)$</td>
<td>$p$</td>
<td>$B$</td>
</tr>
<tr>
<td>Constant</td>
<td>.63</td>
<td>(.64)</td>
<td>.33</td>
<td>.64</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>.05</td>
<td>(.04)</td>
<td>.20</td>
<td>.05</td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>-.01</td>
<td>(.02)</td>
<td>.76</td>
<td>-.01</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>.05</td>
<td>(.08)</td>
<td>.54</td>
<td>.05</td>
</tr>
<tr>
<td>Age</td>
<td>.02</td>
<td>(.00)</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>Gender</td>
<td>.26</td>
<td>(.17)</td>
<td>.13</td>
<td>.26</td>
</tr>
<tr>
<td>Attitudes About Video</td>
<td>-.01</td>
<td>(.01)</td>
<td>.53</td>
<td>-.01</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.30</td>
<td>(.15)</td>
<td>.05</td>
<td>.23</td>
</tr>
<tr>
<td>Visibility</td>
<td>.44</td>
<td>(.16)</td>
<td>.01</td>
<td>.38</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.13</td>
</tr>
</tbody>
</table>

$n$ 257 257

Model $F$ 3.51** 3.13**

Model Degrees of Freedom 8, 248 9, 247

$R^2$ 0.10 .10

Note: 1. *$p < 0.05$ **$p < 0.01$

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
For self-reported disrespectfulness, the eye gaze prime is a significant predictor for self-ratings of disrespectfulness in both model 1 and model 2 in Table 22 below, but visibility did not have an effect on the level of disrespect participants assigned to their comments.
Table 22. Predictors of self-reported disrespectfulness

<table>
<thead>
<tr>
<th></th>
<th>B   (SE)</th>
<th>p</th>
<th>B   (SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td></td>
<td>Model 2</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>4.08** (.56)</td>
<td>.00</td>
<td>4.07** (.56)</td>
<td>.00</td>
</tr>
<tr>
<td>Coded Disrespectfulness</td>
<td>.22** (.06)</td>
<td>.00</td>
<td>.22** (.06)</td>
<td>.00</td>
</tr>
<tr>
<td>Public Self-awareness</td>
<td>-.03 (.04)</td>
<td>.43</td>
<td>-.03 (.04)</td>
<td>.44</td>
</tr>
<tr>
<td>Public Self-consciousness</td>
<td>-.01 (.02)</td>
<td>.44</td>
<td>-.02 (.02)</td>
<td>.40</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>-.09 (.07)</td>
<td>.23</td>
<td>-.09 (.07)</td>
<td>.23</td>
</tr>
<tr>
<td>Age</td>
<td>-.01** (.00)</td>
<td>.01</td>
<td>-.01* (.00)</td>
<td>.02</td>
</tr>
<tr>
<td>Gender</td>
<td>-.53** (.15)</td>
<td>.00</td>
<td>-.53** (.15)</td>
<td>.00</td>
</tr>
<tr>
<td>Attitudes About Video</td>
<td>-.03** (.01)</td>
<td>.01</td>
<td>-.03** (.01)</td>
<td>.01</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>.28* (.14)</td>
<td>.04</td>
<td>.36* (.19)</td>
<td>.05</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.21 (.15)</td>
<td>.14</td>
<td>-.13 (.19)</td>
<td>.50</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>--</td>
<td>--</td>
<td>-.17 (.27)</td>
<td>.54</td>
</tr>
</tbody>
</table>

\( n \) | 257 | 257 |
\( Model F \) | 4.62** | 4.19** |
\( Model Degrees of Freedom \) | 9, 247 | 10, 246 |
\( R^2 \) | 0.144 | 0.146 |

Note: 1. *\( p < 0.05 \) **\( p < 0.01 \)

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
In summary, visible participants tended to leave more impolite, unhelpful, and disrespectful comments, while participants who saw the eye gaze prime tended to think they left more impolite, unhelpful, and disrespectful comments (see Table 23 below). The exception to this pattern was negativity, where visibility and the eye gaze prime had no effect on coded negativity, but visible participants thought they left less negative comments unless they also saw the eye gaze prime. In this case, they reported that their comment was more negative than it actually was. The next section probes this interesting relationship between visibility, the eye gaze prime other self-reported data with post-hoc tests.

Table 23. Summary of item level effects

<table>
<thead>
<tr>
<th></th>
<th>Coded Negative Disinhibition</th>
<th>Self-reported Negative disinhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eye Gaze</td>
<td>Visibility</td>
</tr>
<tr>
<td>Negativity</td>
<td>n.s</td>
<td>n.s</td>
</tr>
<tr>
<td>Impoliteness</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Unhelpfulness</td>
<td>n.s</td>
<td>+</td>
</tr>
<tr>
<td>Disrespectfulness</td>
<td>n.s</td>
<td>+</td>
</tr>
</tbody>
</table>
Post-hoc tests

Thus far, perceived anonymity has not played a significant role in predicting disinhibition, despite the surprising fact that visibility contributed to negatively disinhibited behavior. The results presented in the previous sections are contradictory to a number of studies that link amenable and more positive online behavior with the reduction of anonymity by introducing visibility (Halpern & Gibbs, 2013; Barak & Lapidot-Lefler, 2013). However, this study differs from others in that visual anonymity is manipulated using participants Facebook profile pictures. This may explain the pattern of results reported here. (The implications of using the Facebook profile picture will be considered in extensive detail in the discussion section.)

Recall that although people who reported that their Facebook profile pictures were not photos of themselves were excluded from the analysis, no exclusions were made on the basis of physical identifiability in the photo. This provides an opportunity to test the role of physical identifiability, as there might be something that about the level of physical identifiability in the picture that affects people differently than merely seeing a picture of themselves.

To see if physical identifiability played a part in disinhibited commenting behavior, the identifiability item answered by participants in the Visibility condition was re-coded for the entire sample. Participants who were visually anonymous and thus not physically identifiable and participants who reported that they were “not identifiable at all” were assigned the same value. The original coding was kept for the remainder of the sample. Adding physical identifiability to the general model used to test H1-H4 and H6
yielded a significant effect. While visibility increased coded disinhibited behavior, being highly identifiable reduced it. This somewhat resolves the puzzling inconsistency between the results presented here and previous research, and the effect of physical identifiability on self-attention will figure prominently in the next chapter. Additionally, the effect of the eye gaze prime was not significant when physical identifiability is added to the model. This was not true for self-reports of disinhibition, though, where the eye gaze prime remained the only significant predictor of interest. Results are summarized in Table 24 and Table 25 below.

Table 24. Physical Identifiability and Coded Negative Disinhibition

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.90</td>
<td>(2.36)</td>
<td>.23</td>
</tr>
<tr>
<td>Public self-awareness</td>
<td>.15</td>
<td>(.05)</td>
<td>.72</td>
</tr>
<tr>
<td>Public self-consciousness</td>
<td>.04</td>
<td>(.03)</td>
<td>.54</td>
</tr>
<tr>
<td>Perception of anonymity</td>
<td>.07</td>
<td>(.26)</td>
<td>.57</td>
</tr>
<tr>
<td>Age</td>
<td>.07**</td>
<td>(.01)</td>
<td>.00</td>
</tr>
<tr>
<td>Gender</td>
<td>1.06</td>
<td>(.20)</td>
<td>.26</td>
</tr>
<tr>
<td>Attitudes about video</td>
<td>-0.01</td>
<td>(.0)</td>
<td>.93</td>
</tr>
<tr>
<td>Physical Identifiability</td>
<td>-1.23**</td>
<td>(.32)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>1.22</td>
<td>(.56)</td>
<td>.07</td>
</tr>
<tr>
<td>Visibility</td>
<td>5.77**</td>
<td>(1.2)</td>
<td>.00</td>
</tr>
</tbody>
</table>

n 257
Model F 3.21**
Model Degrees of Freedom 9, 247
$R^2$ 0.105

Note: 1. *p < 0.05 **p < 0.01

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
Table 25. Physical Identifiability and Self-reported Negative Disinhibition

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>16.21</td>
<td>(2.01)</td>
<td>.00</td>
</tr>
<tr>
<td>Public self-awareness</td>
<td>-.01</td>
<td>(.25 )</td>
<td>.96</td>
</tr>
<tr>
<td>Public self-consciousness</td>
<td>-.05</td>
<td>(.13 )</td>
<td>.49</td>
</tr>
<tr>
<td>Perception of anonymity</td>
<td>-.01</td>
<td>(.07 )</td>
<td>.49</td>
</tr>
<tr>
<td>Age</td>
<td>-.03</td>
<td>(.02 )</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td>-1.84**</td>
<td>(.54 )</td>
<td>.00</td>
</tr>
<tr>
<td>Attitudes about video</td>
<td>-.14**</td>
<td>(.04 )</td>
<td>.00</td>
</tr>
<tr>
<td>Physical Identifiability</td>
<td>.09</td>
<td>(.28 )</td>
<td>.74</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>1.14*</td>
<td>(.48 )</td>
<td>.02</td>
</tr>
<tr>
<td>Visibility</td>
<td>-.72</td>
<td>(1.0 )</td>
<td>.48</td>
</tr>
</tbody>
</table>

| n                          | 257  |
| Model F                    | 3.22**|
| Model Degrees of Freedom   | 9, 247|
| $R^2$                      | 0.105|

Note: 1. *p < 0.05 **p < 0.01

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female

These results suggest that visibility affected people who were highly identifiable in a different way. Recall that there was no significant correlation between identifiability in the photo and perceived anonymity, so it is impossible to say that those individuals felt less anonymous and thus commented more positively than people who were less physically identifiable in their photo or visually anonymous. One possibility is that high physical identifiability caused a change in self-attention which influenced commenting behavior. To investigate this possibility, public self-consciousness is modeled as it was previously in this chapter (see Table 9) with physical identifiability included in the model.
Table 26. Predictors of public self-consciousness with physical identifiability

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$B$</th>
<th>$(SE)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>30.51**</td>
<td>(1.87)</td>
<td>.00</td>
</tr>
<tr>
<td>Perceived Anonymity</td>
<td>-.84**</td>
<td>(.34)</td>
<td>.01</td>
</tr>
<tr>
<td>Age</td>
<td>-.07**</td>
<td>(.02)</td>
<td>.00</td>
</tr>
<tr>
<td>Gender</td>
<td>-2.47**</td>
<td>(.70)</td>
<td>.00</td>
</tr>
<tr>
<td>Attitude about video</td>
<td>-.07</td>
<td>(.06)</td>
<td>.20</td>
</tr>
<tr>
<td>Physical identifiability</td>
<td>1.16**</td>
<td>(.37)</td>
<td>.00</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>2.16*</td>
<td>(.93)</td>
<td>.02</td>
</tr>
<tr>
<td>Visibility</td>
<td>-3.13*</td>
<td>(1.46)</td>
<td>.03</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>-3.38*</td>
<td>(1.29)</td>
<td>.01</td>
</tr>
</tbody>
</table>

$n$ = 257

Model $F$ = 7.08**

Model Degrees of Freedom = 8, 248

$R^2$ = 0.19

Note: 1. *$p < 0.05$ **$p < 0.01$

2. Reference categories are No Eye Gaze, No Facebook Photo, and Female

Results indicate that perceiving greater anonymity, age, gender, seeing the Facebook profile picture, and seeing the Facebook profile picture and the eye gaze prime together were all significant predictors of lower public self-consciousness. Visually anonymous participants and visible participants who rated themselves high in physical identifiability had higher levels of public self-consciousness. This suggests that these individuals were more publicly minded. Unfortunately, public self-consciousness did not have a significant effect on coded or self-reported disinhibited behavior, so mediation through public self-consciousness as it was measured cannot be confirmed. Other kinds of shifts in self-attention caused by high physical identifiability that may have affected commenting behavior are explored in the discussion.

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In light of the result on physical identifiability and disinhibited behavior, researchers are often concerned with comparing what happens in the virtual world with what happens in the brick-and-mortar physical world. Negative online disinhibition and visual anonymity have been of interest because of the early research done on visual anonymity and disinhibition offline (Zimbardo, 1969; Diener, 1980). The assumption, or the common anonymity hypothesis, is that people will say and do things online under conditions of anonymity that they would not when identified. Although not a specific goal of this project, participants were asked if they would have a difficult time repeating the comment they left in the experiment in a face-to-face context. Using the same predictors used to test H1-H6, Table 27 below shows a significant interaction between the eye gaze prime and visibility. Visible participants who saw the eye gaze prime were more likely to report that they would have difficulty repeating their comment, after controlling for how negatively disinhibited they rated their comment. Recall that those participants were also the least publicly self-conscious. However, people who rated themselves high in physical identifiability were less likely to agree that they would have difficulty with the comment in a face-to-face. Although a small effect, the other significant predictor was public self-consciousness, which lends face-validity to this result—it would be expected that people who were more self-conscious in general would think twice about repeating any comment they made online.

84
<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>(SE)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>.50***</td>
<td>.48</td>
<td>.29</td>
</tr>
<tr>
<td>Self-reported disinhibition</td>
<td>.06**</td>
<td>.02</td>
<td>.00</td>
</tr>
<tr>
<td>Public self-awareness</td>
<td>.04</td>
<td>.03</td>
<td>.14</td>
</tr>
<tr>
<td>Public self-consciousness</td>
<td>.04*</td>
<td>.16</td>
<td>.02</td>
</tr>
<tr>
<td>Perception of Anonymity</td>
<td>.05</td>
<td>.04</td>
<td>.49</td>
</tr>
<tr>
<td>Age</td>
<td>-.00</td>
<td>.00</td>
<td>.86</td>
</tr>
<tr>
<td>Gender</td>
<td>-.05</td>
<td>.13</td>
<td>.67</td>
</tr>
<tr>
<td>Attitudes about the stimulus video</td>
<td>-.00</td>
<td>.01</td>
<td>.75</td>
</tr>
<tr>
<td>Physical Identifiability</td>
<td>-.12*</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>Eye Gaze Present</td>
<td>-.16</td>
<td>.16</td>
<td>.33</td>
</tr>
<tr>
<td>Visibility</td>
<td>.26</td>
<td>.26</td>
<td>.19</td>
</tr>
<tr>
<td>Eye Gaze X Visibility</td>
<td>.52*</td>
<td>.23</td>
<td>.03</td>
</tr>
</tbody>
</table>

N 257
Model F 3.65**
Model Degrees of Freedom 10, 246
\[R^2\] 0.129

Conditional effect of the eye gaze prime on face-to-face hesitancy at visual anonymity

<table>
<thead>
<tr>
<th>Effect</th>
<th>B (SE)</th>
<th>95% Bootstrap CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visually Anonymous (0)</td>
<td>-.15 (.16)</td>
<td>-.48 -.17</td>
</tr>
<tr>
<td>Visibility (1)</td>
<td>.33 (.16)</td>
<td>.02 -.65</td>
</tr>
</tbody>
</table>

Note: 1. *p < 0.05 **p < 0.01
2. Reference categories are No Eye Gaze, No Facebook Photo, and Female
In the next chapter, I focus primarily on the results of the post-hoc analysis, as they support the overall argument that self-attention is an important factor in explaining negatively disinhibited behavior in online spaces where users are visually identified. Although there was no evidence that public self-consciousness mediated commenting behavior, visibility contributed to lower public self-consciousness by reversing the effect of the eye gaze prime. Visibility also affected commenting behavior. Visible participants left more negative comments unless they were highly identifiable in their Facebook
profile pictures. This suggests that visibility changed the way that people thought about themselves as participants in an interaction that led to two different outcomes, which is tentative evidence for what happens when thoughts shift to self-as-individual from self-as-group member under conditions of visibility.
Chapter 5: Discussion

The genesis of this work is the idea that visual anonymity has less impact on negatively disinhibited online behavior than commonly thought. I have argued that it is not the reduction of anonymity but the direction of self-attention that plays a more prominent part in shaping negative behavior. Although the specific predictions made with respect to public self-awareness were not confirmed, the results of this work are consistent with the idea that visibility affects self-attention and thus plays an influential role in online interactions. In this discussion, I briefly review my argument and summarize the results of formal hypothesis tests before explaining the unexpected effects of visibility, physical identifiability, and the eye gaze prime. I then integrate these results with the SIDE model and suggest a new framework for interpreting online anonymity effects. Finally, I acknowledge the limitations and shortcomings of the project before considering future research directions.

Public self-consciousness and perceived anonymity did not influence behavior

There has been an almost universal dissatisfaction with the concept of online anonymity among those interested in its effects. Repeatedly, the argument is made that anonymity is dealt with in a “problematic and simplistic” way by researchers (Spears & Lea, 2015). My predictions in this work were influenced by two more recent and
promising ways that scholars have proposed thinking about anonymity. The first is that people may perceive a sense of anonymity even when objective conditions of anonymity are not met (Tsikerdekis, 2013). That is, the extent to which a person feels anonymous in an online environment may be a subjective perception. The second has to do with an alternative approach to conceptualizing online anonymity that suggests a person's “online sense of unidentifiability” (OSU) is influenced by the disclosure of personal details, visibility, and whether or not there is eye contact involved in the interaction. The presence or absence of these three components can have an important impact on the tone of online conversations (Lapidot-Lefler & Barak, 2013). I began this dissertation by arguing that the eye contact component of the OSU does not reduce anonymity perceptions, but rather has an influence on people's concern over how their actions appear to others. Based on this, I predicted two paths to reduced negatively disinhibited behavior commonly reported in the extant literature.

The first path was through public self-consciousness. I predicted that the eye gaze prime would reduce negative behavior by way of increasing public self-consciousness. While the prime succeeded in increasing public self-consciousness, this increase had no effect on the kind of comments left by participants. Curiously, visibility reversed the effect of the prime. Visible participants exposed to the eye gaze prime were less publicly self-conscious than those who weren’t, suggesting that their self-attention was turned away from thoughts about the public self (see Table 9). Furthermore, post-hoc analyses tentatively suggest that in one condition, the shift in attention effected commenting behavior. Participants who reported high physical identifiability in their Facebook profile
photo had higher public self-consciousness than visually anonymous participants and participants reporting lower physical identifiability (see Table 26). For these individuals self-consciousness was associated with more positive commenting behavior (see Table 24). However, the post-hoc mediation test for the effect of physical identifiability on behavior through public self-consciousness was not significant.

The second path expected to produce less negative commenting behavior was through perceived anonymity. I predicted that people who felt less anonymous would be less likely to behave negatively, and I expected that perceptions of anonymity would be influenced by the manipulation of visual anonymity. Surprisingly, visibility had no effect on perceived anonymity, and perceived anonymity had no effect on negative behavior. The only factor that influenced anonymity perceptions was public self-consciousness. People who were generally concerned about what others thought of their behavior tended to feel the least anonymous, but that concern did not influence the kind of comment a participant left. It is also notable that post-hoc tests found no significant relationship between high physical identifiability and perceived anonymity.

Although neither public self-consciousness nor perceived anonymity had an effect on the types of comments participants made, testing the predicted associations revealed intriguing relationships between visibility, the eye gaze prime, and participant behavior. The experimental manipulations had direct and unexpected effects on the kinds of comments participants left and how participants rated their own commenting behavior. I turn to these unanticipated patterns next.
Unexpected effects of visibility and the eye gaze prime

Visibility influences thoughts about the self. Post-hoc results suggest that visibility and visual anonymity have less to do with feeling identifiable or anonymous than with how people pay attention to themselves. These results provide evidence that there are at least two different ways that visually identified people think about themselves that have implications for the kind of comments they made. For some people, seeing their Facebook profile picture caused a shift in self-attention that led to negative behavior. For others who considered themselves high in physical identifiability, that shift resulted in more positive behavior.

Before proceeding, it is important to briefly discuss the methodological decision to use participant’s Facebook profile pictures as a manipulation for visual anonymity/visibility, as it had unintended consequences. In previous research involving visual anonymity and online behavior, visibility has been manipulated with webcams, static photos taken at the research site, and avatar representation. To my knowledge, this is the first study to manipulate visibility using a photo that was selected by the participant not for the purpose of a research study, but for selective self-presentation and online impression management. This may have important implications for how participants responded to being visually identified.

Facebook users selectively present themselves, sharing overwhelmingly positive information about themselves on social networks (Gonzales and Hancock, 2011). Users select a profile picture that will convey their personality and present themselves in a
positive, attractive manner. Wu, Chang & Yuan (2015) found that users consider their Facebook profile picture to be the most important way to manage and maintain the impression they wish to give others on Facebook. Users tend to choose profile pictures based on what they think makes them the most physically or socially attractive (Hum, Chamberlin, Hambright, Portwood, Schat & Bevin, 2011) and narcissism has been shown be a significant predictor in motivations to select a Facebook profile picture (Kapidzic, 2013). It is likely that participants in this study chose a Facebook profile photo that they perceive to maximize their social and physical attractiveness. Further, their choice of self-presentation had likely been reinforced prior to the study by the number of “likes” and comments the photo had received from Facebook friends (Mabe, Forney & Keel, 2014). Providing this context for the Facebook photo is the first step in making sense of the patterns observed in the data.

Facebook use itself has also been shown to affect users, which may have played a role in this study as well. Facebook browsing has been shown to boost self-esteem (Gonzales and Hancock, 2011), and the temporary ego inflation from browsing Facebook can reduce self-control (Wilcox & Stephen, 2013). After five minutes of Facebook browsing, people made more unhealthy food choices and gave up on difficult tasks more quickly than people who spent five minutes writing about browsing Facebook.

Taken together, these observations about the Facebook environment and the Facebook profile picture may help to explain the disinhibition associated with visual identification. Participants who saw their Facebook profile picture in this experiment are likely to have experienced a momentary increase in self-esteem due to previous actions...
taken to promote positive self-presentation on Facebook. The reduction in self-control accompanying this boost is one possible cause of the observed negative disinhibition in comments. Visibility can cause people to become engrossed in their positive online self-presentation and this can lead to negative behavior due to lack of self-control or inflated perceptions of the self.

For some people, though, seeing their Facebook profile picture caused a shift in self-attention that increased positive commenting behavior. High physical identifiability may cause a shift in self-attention not to the online self and positive curated identity, but the self of the physical world that interacts with others using the appropriate amount of inhibition for the public realm. People who reported high physical identifiability in their profile picture may approach online interactions using face-to-face conversational conventions, which tend to be more polite. In this way visibility can affect people in ways that work *against* disinhibited online behavior. The effect of visibility for both groups was to increase self-attention. The direction of self-attention depends on whether visibility promotes thoughts about the online self or thoughts about the self in the physical world.

*Eye gaze affects self-attention and self-evaluation, not behavior.* The evidence presented above suggests that high physical identifiability may cause people to approach their online interactions similarly to how they approach a face-to-face conversation. This is a different than what was experienced by people who thought they were less physically identifiable in their Facebook profile picture. Those individuals may be approaching
online interactions with their curated online identities in tow. I suggest that the eye gaze prime may have altered how people thought their behavior would appear to others. In other words, the eye gaze prime prompted people to be more public minded, and to consider their behavior from a public perspective. This effect complements the influence of visibility described above, priming different ways of thinking about the self that affect behavior.

First, although the eye gaze prime was effective in increasing public self-consciousness, like visibility, its ultimate consequence was unexpected. The effect of the prime on self-attention differed depending on whether participants were leaving a comment or evaluating it. When participants were asked to evaluate their comment, people who saw the eye gaze prime rated their comments as more negative than both the independent coders and participants who did not see the eye gaze prime (see Table 13 and Table 25). The eye gaze prime only influenced participants’ assessment of their own comment; it did not influence the level of disinhibition observed by coders. This suggests that people who saw the prime were more publicly self-conscious when asked to evaluate themselves even though the prime had no effect on how their behavior appeared to others at the time that they commented.

Next, there was a conditional effect for the eye gaze prime on visibility when people thought about repeating the comment in a face-to-face context. Neither visibility not physical identifiability were related to self-evaluations of negative disinhibition, but when participants had to think about repeating what they wrote in a face-to-face context, visibility and physical identifiability became important (See Table 27: Predictors of
difficulty repeating comment in face-to-face setting). Visible participants who saw the prime reported that they would have more difficulty repeating the comment they wrote in a face-to-face situation, while participants who were high in physical identifiability reported that they would have less difficulty than either visually anonymous participants and participants who did not consider themselves highly identifiable. High physical identifiability participants also left more positive comments. Their behavior was consistent regardless of the effects of the eye gaze prime, suggesting that their self-attention was not pushed into the public realm by evaluation, but had already been there at the time of commenting. As was shown in the results for negatively disinhibited behavior, this is further evidence that high physical identifiability may shift self-attention to the physical world and face-to-face interactions, which are inherently public events. It should be noted that considering the ease of repeating the comment in a face-to-face context was the only self-evaluative task in which visibility and identifiability were a factor.

**A Methodological Lesson**

These results also point to an important methodological lesson. Studies of discussion in mediated communication environments will do well to engage participants with the choices they make about online self-presentation. What is important about this idea is the acknowledgement that a) where behavior is being studied and b) the kind of control a user has in customizing that environment may be important to the research question in some way.
This suggestion may mean some reduction in experimental control, but there are cases when a trade off with true experimentation is worth a gain in ecological validity. Considering the choices that users make with respect to self-presentation may be one way to explain discrepancies between laboratory studies and field studies. For instance, early work on self-attention in CMC showed that visual anonymity decreased public self-awareness and promoted private self-awareness leading to increased self-disclosure online, a form of benign disinhibition (Joinson, 2001; Mattheson & Zanna, 1998). This research was conducted in a physical laboratory on computers with interfaces with which participants were not familiar, and with a webcam visibility manipulation. Both of these circumstances do not generalize well to real-world user experiences, and while I do not question the validity of the results, I question their application in describing self-attention in environments users are familiar with where they may choose the form of their visual representation. More recent research using content analysis methodology has cast doubt on this claim about visibility and self-disclosure. Qian & Scott (2007) found that visual anonymity was not associated with greater self-disclosure in blog posts, and in an analysis of YouTube videos about sensitive topics (self-harm, suicide, rape, etc.) researchers found that people chose more often than not to visually identify themselves with their faces or other body parts rather than telling their story by holding up notecards to the camera (Miscoh, 2015).

In this discussion, I have argued that using participant's Facebook profile pictures to manipulate visibility helps to explain the unexpected outcomes of the experiment. The results presented here may well have looked different had I conducted this study in a
laboratory and photographed participants myself, although this needs to be empirically verified. If the goal is to understand how mediated environments influence psychological processes that affect discussion behaviors, we cannot not discount the effect of user influence or content on what people see and feel. For example, although I am unable to generalize specific effects in this study to all negative disinhibition online, the data allow me to speculate that a) the effects of visibility are difficult to divorce from the uses of a particular online communication environment and b) how the methods of impression management afforded by these environments affect self-attention. If not for the fact that I used self-selected photos from a particular social network and found out something about what participants thought about their photo by asking about their level of physical identifiability, I would have made different speculations. Additionally, asking participants what they thought about their own behavior was valuable, although not in the way I thought it would be. Having participants rate their behavior the same way that coders did provided an alternative way to look at the data, and uncovered an important effect of the eye gaze prime that would have otherwise been undetected.

How to engage users with their own content may not always be clear, and it may not always be possible given participant privacy concerns, but this may be an important consideration going forward in research examining how online environments shape discussion, lest interesting effects be buried.
Theorizing about Unexpected Results

Turning to the theoretical consequences of this work, I have argued that due to the influence of classical deindividuation theory, anonymity—specifically the visual anonymity afforded by online interaction—receives too much credit for negative and anti-social online communication. Instead, I suggested that negatively disinhibited behavior under conditions of visual anonymity can be explained by SIDE, of which predictions are reliant on group processes and not the anonymity of classic deindividuation theory. Because SIDE as it is cannot be applied to explain negative behavior that occurs in online environments where users are visible, I predicted that self-attention—specifically lack of public self-attention fostered by online environments was more responsible for behavior regardless of visibility status or concern about anonymity.

These predictions were wrong, and finding that visible participants were more negatively disinhibited than visually anonymous participants except when high in physical identifiability was a surprise. However, post-hoc analyses suggest that SIDE can be used to explain negatively disinhibited behavior under conditions of visibility when visibility primes thoughts about the self that are likely to contribute to that kind of behavior. These results provide evidence for what happens when visibility disrupts SIDE’s predictions that are made on the basis of group dynamics and visual anonymity. SIDE predicts that under conditions of visibility (or non-uniformity of appearance), people cease to think of themselves and others in terms of group identities and begin to think about themselves in terms of personal, individual identities. I suggest that here, visibility affected thoughts about personal, individual identities differently depending on
how physically identifiable people thought they were in their Facebook profile picture. One direction for self-attention was the online self, or curated online identity, which increased negative behavior, and the other was the self of the physical world, which decreased it. This evidence supports the idea that visibility affects negatively disinhibited behavior not solely on the basis of concerns about disclosure of identity, but rather on the basis of how it affects self-attention and thoughts about the self as an individual. Under conditions of visual anonymity, SIDE can explain disinhibited behavior through group processes without relying on classic deindividuation effects. The post-hoc results of this study are consistent with the idea that SIDE can also explain disinhibited behavior under conditions of visibility when visibility primes thoughts about the self as an individual that are likely to contribute to disinhibited behavior. Further, this explanation also does not rely on the tenants of classical deindividuation theory.

In light of this, it may be better to think about what online visibility does in terms of changing the form and shape of thoughts about the self rather than something that leads to feeling more or less anonymous. In contrast to visual anonymity in the physical world which is associated with disinhibition, the results of this dissertation suggest that the role of personally identifying information of a visual nature in the digital world is different. In the physical world, knowledge of visibility and knowledge of observation are interconnected. An everyday example of this is the tendency to stop picking one's nose in the car after noticing someone at a stoplight looking. In other words, in the physical world we don't think about our visibility until we consider observation. In the digital world, visibility and observation are not inherently connected. For example, Facebook
users are aware of their visibility on Facebook, but are not aware every time their comments or photos are viewed by others. The extent to which observation by others exists in the digital world is limited to what a user wants others to observe. Based on this understanding of the difference between visual anonymity and visibility in the physical and digital worlds—that one necessitates observation and the other does not, it is not concern over identifiability that should be the focus of how visibility affects the tone of online discussions, but how visibility affects self-attention. Which identifying traits are known or unknown seem less important to research on negative disinhibition online, but very important to the interaction between these traits and situational self-attention. This approach would fill a large gap in the CMC literature and has implications for theory that seeks to explain how mediated communication environments shape communication behaviors.

Limitations

While the results presented here tell a story about visual anonymity, visibility, and shifting self-attention, it is a substantial limitation of this study that explanations for this narrative are almost exclusively post-hoc. Although consistent with existing theory, what is discussed here is one interpretation of the data. I am left without evidence of possible factors influencing self-attention other than visibility or physical identifiability, and I cannot confirm a mediating mechanism through which these act on behavior. In addition to that, although the post-hoc analysis revealed interesting results that challenge the common anonymity hypothesis, the variance explained was small and none of the planned hypotheses were supported.
While I have advocated for CMC research that engages users with their existing content in online spaces, but the use of participants’ Facebook profile pictures to manipulate visibility also deserves a word in this section. This methodological choice was made with the assumption that the only purpose the profile picture would serve would be to visually represent the participant. In the discussion above, I suggest that the Facebook profile picture primed participant’s positive presentation of identity leading to results that I did not predict. In hindsight, if I would have collected information on participants’ Facebook use habits, self-esteem, narcissism, and thoughts about the picture itself, I would have obtained more informative results. Additionally, because this work employed Facebook profile pictures as a visibility manipulation, these results do not generalize to all online communities which allow for visual representation.

Finally, I consider the failure to manipulate perceptions of anonymity with the Facebook profile picture a limitation. Although anonymity has historically been difficult for researchers to study, one of the main purposes of this work was to understand the relationship between visual anonymity, perceived anonymity, and negatively disinhibited behavior. Lack of variation in the dependent variable between experimental groups prohibits a true test of those ideas, so the contribution I can make to the discourse on anonymity is admittedly, not in the area I was hoping to.

Conclusion

The main theoretical goal of this dissertation is to provide a framework to explain why people act in anti-social and negatively disinhibited ways in online spaces in which
they can be visually identified. I have presented evidence which suggests that visibility promotes negatively disinhibited communication when a participant’s curated online identity—in this case, a Facebook profile picture—inflates self-esteem, but that this effect is attenuated when the picture also promotes thoughts about the self in the physical world. The tentative suggestion put forth here is that as visibility causes a shift in self-attention to 'self-as-individual', the resulting feelings about the visible self influence behavior. This is a promising model to be tested in future research, as it provides an analog, or even an extension to what is predicted by the SIDE model under conditions of visual anonymity or visual uniformity. In completing this work, it is my hope that these ideas provide a new and testable framework for understanding how visibility can influence negatively disinhibited behavior outside the boundaries of anonymity concerns.
References


Appendix A: Experimental Stimuli
Figure 20. Large size screen-shot of experimental stimuli (Eye Gaze condition)
Figure 21. Large size screen-shot of experimental stimuli (No Eye Gaze condition)
Appendix B: Measures

Situational self-awareness scale (Govern & Marsch, 2001)
1. Right now, I am concerned about the way I present myself (public)
2. Right now, I am self-conscious about my behavior (public)
3. Right now, I am concerned about what other people think of me (public)
4. Right now, I am keenly aware of everything in my environment (surroundings)
5. Right now, I am conscious of what is going on around me (surroundings)
6. Right now, I am conscious of all objects around me (surroundings)
7. Right now, I am conscious of my inner feelings (private)
8. Right now, I am reflective about my life (private)
9. Right now, I am aware of my innermost thoughts (private)

Self-consciousness scale (Scheier & Carver, 2013)
A lot like me/Somewhat like me/A little like me/Not like me at all
1. I’m always trying to figure myself out
2. I’m concerned with my style of doing things
3. It takes me time to get over my shyness in new situations
4. I think about myself a lot
5. I care about how I present myself to others
6. I often daydream about myself
7. It’s hard for me to work when someone is watching me
8. I never take a hard look at myself
9. I get embarrassed very easily
10. I’m self-conscious about the way I look
11. It’s easy for me to talk to strangers
12. I generally pay attention to my inner feelings
13. I usually worry about making a good impression
14. I’m constantly thinking about my reasons for doing things
15. I feel nervous when I speak in front of a group
16. Before I leave my house, I check how I look
17. I sometimes step back (in my mind) in order to examine myself from a distance.
18. I’m concerned about what other people think about me
19. I’m quick to notice changes in my mood
20. I’m usually aware of my appearance
21. I know the way my mind works when I work through a problem
22. Large groups make me nervous

**Anonymity**
Right now, how anonymous do you feel? (Semantic differential scale 1-5; Not at all known/Completely known)

**Self-evaluation of negative disinhibition**
1. Reading back over the comment you left, how do you think someone else would rate the overall tone of your comment? (1-5 semantic differential scale)
   (Positive/Negative)
   (Respectful/Disrespectful)
   (Polite/Impolite)
   (Helpful to the discussion/Not helpful to the discussion)

2. Did you say things in your comment that you might have a difficult time saying face-to-face? (Agree/Somewhat Agree/Not sure/Somewhat Disagree/Disagree)

**Feelings about stimulus video- Generalized Attitude Measure (McCrosky, 1966)**
On the scales below, please indicate your feelings about the video you watched.
(Semantic differential scale 1-5)
(Good/Bad)
(Wrong/Right)
(Harmful/Beneficial)
(Fair/Unfair)
(Wise/Foolish)
(Negative/Positive)

8. It is easy to understand why women’s groups are still concerned about societal limitations of women’s opportunities.

**Visual anonymity manipulation check**
Is your Facebook profile picture a photo of you?
   Yes
   No
   Yes, but there are other people in the photo, too.

If there are other people in the photo, how many? ( )

How identifiable would you say you are in your Facebook profile picture?
   Very Identifiable/Not identifiable at all
**Demographic measures**

What is your gender?
- Male
- Female
- Other

How old are you? _____

What is the highest level of education that you have completed?
- Did not finish high school
- Finished high school
- Had some college courses
- Received a bachelor’s degree
- Had some graduate courses
- Received a graduate degree
- Don’t know/no answer

Would you say your family’s income last year was:
- Under $10,000
- Between 10 and $20,000
- Between 20 and $40,000
- Between 40 and $60,000
- Between 60 and $80,000
- Between 80 and $100,000
- More than $100,000
- Don’t know/no answer
Appendix C: Debriefing Form

Thank you for participating in this research study. It is important that you know that all of the information you provided in this research study is confidential. No personal information about you, including your Facebook information is kept by the experimenters. In addition, any information about your identity will be removed from the data you provided.

Now that the study is over, we would like to give you more information about the task you just completed. In some types of studies if we told people what the point of the experiment was ahead of time, then some people might do whatever it is they think we want them to do just to be helpful. When people try to guess what the experiment is really about they behave in a way that is different from how they would act in the real world. The point of this experiment is to find out how people would naturally behave.

Now, we’d like to explain more about the study. Have you ever wondered why there is a difference between the way people act online and offline? We think it might have something to do with how the places people communicate online are designed, and how people perceive their anonymity online. We wanted to see if there was a difference between the comments people left about the video when they could see a picture of themselves and when they could not. The comments you read were not left by other study participants. They were actual comments about the video taken from similar comment threads around the internet.
We asked people to sign in to their Facebook account at the beginning of the study so that we could use either their Facebook username or Facebook profile picture and username in the experiment. We did this with a commonly used social media plug-in. The reason is that we wanted some of the people in this experiment to see their own photo. Some people did not see their Facebook profile picture so that we could compare the differences between groups.

Also, some people were told to “look for the eye logo to find the continue button” and some people were not. Seeing the image of an open eye has been shown to psychologically prime a feeling of being watched, as if someone were looking at you. Subtle images like this also have been shown to increase pro-social and helping behaviors. Most online places where people communicate do not expose people to similar psychological primes. We wanted to see if there was a difference between the comments people left about the video when they eye-shaped logo was there, and when it was not.

The comments you read were not left by other study participants. They were actual comments about the video taken from similar comment threads around the internet.

We want to remind you that there were no right or wrong answers in this research study. We will use the data you provided to look for differences between groups and not individuals. No personal information about you, including Facebook information is kept by the experimenters. In addition, your identity will be removed from all of data you provided.

On the next screen you will receive a randomly-generated survey identification number. If you would like to withdraw and have all your answers to the survey questions removed
entirely from our study, please copy and email this number to Elizabeth Kiefer at the email listed below. Your data will be immediately and permanently deleted upon such a request.

Although there are no direct benefits to you as a participant, this research study may benefit science and society. We also know of no risks associated with this study. If you have questions about the study, you can contact the investigator, Elizabeth Kiefer at kiefer.68@osu.edu. If you have any questions about your rights as a volunteer in this research, or would like to discuss the study with someone who is not part of the research team, you can contact the staff in the Ohio State University Office of Responsible Research Practices (ORRP) at (614) 688-8457.
Appendix D: Codebook and Coding Form

Two human coders coded all participant comments using a Qualtrics Survey. I programmed the survey to display each comment, one comment at a time, and coders were able to enter in their evaluations using a five-point semantic differential scale. The codebook used to train the coders, the coding form, and a screenshot of what the coding form looked like in Qualtrics are included below.

Codebook

Unit of Data Collection: Participant comments in response to stimulus

Task: Rate each comment on its individual and overall attributes.

Defining Negatively disinhibited online communication: Negatively disinhibited online communication was originally defined as “rude language, harsh criticism, anger, hatred, and even threats” (Suler, 2004, p.321). However, this definition is limited in a few respects. First, it suggests the idea that online communication that is angry or conveys hatred is always negative. This is not necessarily the case. Second, it does not account for text presentation that signals other aggressive communication behaviors. For example: !!!!!!!!!??!!? or “Yelling” in call-caps. Finally, it lacks the precision needed to make a binary judgment about whether a comment is negatively disinhibited or not. For coding purposes, Negatively disinhibited online communication is defined as any message that contains rude or disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.), is impolite, and is not helpful to discussion.
**Individual attributes**: Rate each comment on the following three attributes:

**Respectful/Disrespectful**: Respectful comments show regard or consideration for the subject matter and other people participating in the discussion. Resentful comments are free from disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.) Disrespectful comments do not show regard or consideration for the subject matter and others participating. Disrespectful comments include disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.)

Respectful 1 2 3 4 5 Disrespectful

**Polite/Impolite**: Polite comments exhibit good communication manners. Polite comments indicate that the author considered how the comment was presented and are free of grammatical errors (common misspellings may occur) and all-caps “yelling” and exaggerated punctuation. Impolite comments are characterized by poor communication manners, are may be difficult to read because of misspellings or excessive shorthand, and/or contain the use of all-caps to “yell.”

Polite 1 2 3 4 5 Impolite
Helpful to the discussion/Not helpful to the discussion: Helpful comments indicate interest and participation. Comments that are not helpful are characterized by lack of interest and lack of participation.

Helpful 1 2 3 4 5 Not Helpful

Overall attribute: In light of the ratings above, give the comment an overall rating for negatively disinhibited communication:

Not Negative/Negative: This rating represents the overall tone of the comment. Negatively disinhibited comments will contain rude or disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.), will be towards the “Disrespectful,” “Impolite,” and “Not Helpful” side of each scale. Comments that are not negative do not have to be necessarily positive. Rather, they will be free of rude and disrespectful language and will be towards the “Respectful,” “Polite,” and “Helpful” sides of each scale.

Not Negative 1 2 3 4 5 Negative
Coding form (RAs coded data in Qualtrics; see screenshot below)

Negatively disinhibited online communication is defined as any message that contains rude or disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.), is impolite, and is not helpful to discussion.

<Actual comment displayed here>

**Individual attributes:** Rate each comment on the following three attributes:

**Respectful/Disrespectful:** Respectful comments show regard or consideration for the subject matter and other people participating in the discussion. Resentful comments are free from disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.) Disrespectful comments do not show regard or consideration for the subject matter and others participating. Disrespectful comments include disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.)

Respectful: 1 2 3 4 5 Disrespectful

**Polite/Impolite:** Polite comments exhibit good communication manners. Polite comments indicate that the author considered how the comment was presented and are free of grammatical errors (common misspellings may occur) and all-caps “yelling” and exaggerated punctuation. Impolite comments are characterized by poor communication manners, are may be
difficult to read because of misspellings or excessive shorthand, and/or contain the use of all-caps to “yell.”

**Polite**  1  2  3  4  5  **Impolite**

**Helpful to the discussion/Not helpful to the discussion:** Helpful comments indicate interest and participation. Comments that are not helpful are characterized by lack of interest and lack of participation.

**Helpful**  1  2  3  4  5  **Not Helpful**

**Overall attribute:** In light of the ratings above, give the comment an overall rating for negatively disinhibited communication:

**Not Negative/Negative:** This rating represents the overall tone of the comment. Negatively disinhibited comments will contain rude or disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.), will be towards the “Disrespectful,” “Impolite,” and “Not Helpful” side of each scale. Comments that are not negative do not have to be necessarily positive. Rather, they will be free of rude and disrespectful language and will be towards the “Respectful,” “Polite,” and “Helpful” sides of each scale.

**Not Negative**  1  2  3  4  5  **Negative**
Negatively disinhibited online communication is defined as any message that contains rude or disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.), is impolite, and is not helpful to discussion.

Disrespectful/Respectful Respectful comments show regard or consideration for the subject matter and other people participating in the discussion. Respectful comments are free from disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.) Disrespectful comments do not show regard or consideration for the subject matter and others participating. Disrespectful comments include disrespectful language (general profanities, name calling, racial slurs, insults, group generalizations, etc.)

Please rate the comment on the attribute of Disrespectful/Respectful

Disrespectful □ □ □ □ □ Respectful

Figure 22. Screen shot of coding form in Qualtrics
Appendix E: Participant comments

Participant Comments by Coded Disinhibition (descending)

1. men are pigs and this proves it..glad that in the midwest here in iowa some still have some manners, mothers try their best but after they leave the nest i think peer pressure and the fact they think with their dicks takes over the male brain. the fact that i'm older always reminds me of how things were when i was younger and glad i grew up then

2. What a delicate little flower who thinks that mere words can hurt her. What a special snowflake who thinks someone paying her a compliment is harassment. Little missy, please go to a country where, if you walk around like that, you will be raped, like Ian or Yemen. Freaking out over a few catcalls, sad.

3. Like throwing meat to lions. We men are such animals. No control whatsoever.

4. all men are animals when they think no one will see how they really act...

5. THIS HARRASSMENT FROM ANY MAN OR WOMAN MAKES ME WANT TO PUKE. TOTALLY SICKENING AND UNCALLED FOR IN ANY CIVILIZED SOCIETY. WHERE HAS THE WORD MANNERS GONE?? TO HELL IN A HANDBASKET. WISH THERE WAS A LAW ON THE BOOKS THAT PERMITTED PEPPER SPRAYING UNCOUTH BEAVIOR.

6. men are pigs...its that simple

7. Most of the "cat-calling" are just simple acknowledgements that she exists. Someone stranger saying "how you doin'?" isn't harassment. It's common
courtesy. The two morons that kept on walking and talking with her, both
deserve a punch to the dick. Bro, he's not responding to you. Piss off. Now,
what really makes this whole experiment hilarious, is she's an attractive
woman, hair and makeup done, tight shirt and pants on. She wants to act
surprised that she might receive some unwanted attention? Keep inmind, the
majority of the harassment took place in the shitty corners of New York.
Might that be a clue? But what makes me hate this whole experiment, is at
the end of the video, where she comes begging for your donations to put an
end to street harassment. Riiigggghhhhttt... I'm just supposed to send my money
to some stranger on the Internet. How will this money put an end to this
behavior? Are you going to hire a bunch of mercenaries to beat the living shit
out of these undesirables who happen to say to you "good evening" or "damn
girl, you stupid fly"?

8 How else would you expect wanna-be thugs to act?

9 Lets see this is all they have after 10 hours? and about 2/3rds of the
comments were complementary or friendly "Hi How Are you?" or "Have a
good day" is NOT the same is "Hey baby want to fuck?" and it's an insult to
say they are.

10 i DON'T LIKE THIS BUT i DON'T THINK DONATING SOME MONEY
IS GOING TO STOP IT.

11 WHY CAN'T THEY JUST SAY HAVE A NICE DAY!! THIS IS
DISGUSTING

12 Skip the tight T shirt and jeans and take a walk in NYC. See if it makes a
difference

13 just tazer all of them, they'll get the message!

14 I find it rude that men on here saying this is men just being men. If they had
any idea what this shit was like they wouldn't be saying that.

15 men can be such pigs, I think the ones that with the harassing words need to
call their moms and tell her bout what they did so she can give the a good

124
chewing out and how to respect women

typical comments from the uneducated public...

Typical east coast rude behavior.

This may happen often, but this video is entirely scripted and fake. This woman should be ashamed of herself for participating in such a display of something so horrific.

men are foul mouthed

wouldn't talk to anyone what's up with that

This isn't sexual harassment, saying "hey beautiful" should never be illegal, like ever. I've never heard of this happening or had this happen to me this many times in a ten hour period, there was probably something on the back of her shirt that said "hiton me"...or something lol

just goes to show how some people are rude and immature

men will be men well what to say to that, sometimes men just need to shut there mouths,

I've seen the video before and thought it was mostly staged. Of course catcalling and harrasment exist. Many of the guys are simply saying hello, a simple hi back wouldn't be that encouraging. If I see someone on the streety, I look them in the eye and say a friendly greeting. They may be male, female, pretty or plain. To me that video shows an ordinary woman that hates herself.

We don't allow that in Texas. Only low class people without manners seem to be this way. My neighborhood is turning into this down here,. It needs to stop. It is the decline of civilization.

Notice the men have two things in common? Race/ethnicity and NOTHING TO DO in the MIDDLE of the day? These aren't your 'movers and shakers' here. Oh, and a third one: none of them did anything other than speak. No
physical contact, not getting in her path nothing.

27 I'm honestly surprised of all the catcalling she got considering her demeanour and what she was wearing...

28 I guess a woman should dress down if that would stop all the uncalled for comments

29 Why do these people think that they're going to be taken seriously by her? Grow up guys!!!!

30 I think a lot of the comments made were just greetings. Others were verbal harassment. Some of the comments made are made from people of that neighborhood or ethnic group and some were compliments.

31 I have to ask: Do women do the same thing to men as they walk by? In some instances, yes. Would the men classify it as sexual harassment? Probably not. Stop this double-standard, ladies.

32 I THINK THIS IS SAD THAT MEN CAN BE DISRESPECTFUL. WHAT IS WRONG WITH JUST A "HAVE A NICE DAY"

33 I think people should get a grip on life and keep their comments to their selves, they just made themselves look stupid!

34 MEN CAN BE VERY INVASIVE WITH THEIR COMMENTS. I DO NOT FIND IT ATTRACTIVE IN A MAN WHEN THE ARE THAT FORWARD TO JUST SAY WHAT EVER THEY ARE FEELING AT THAT TIME.

35 If you want to make the case against verbal harassment then distinguish between that and verbal compliments. Don't cry wolf in EVERY case if you want help with those that are actually a problem.

36 It's too bad some guys can't enjoy the eye candy with their mouths shut

37 I think the woman should dress a little more modest in the video
She just seemed so rude for never saying a word.

PEOPLE ARE VERY INCONSIDERATE. INVADE YOUR PRIVACY. PEOPLE CAN BE SO RUDE.

It happens to my daughters all the time and I just want to smack these guys.

Rape disgusts me

This is typical behavior of men with a younger attractive female. This is a bit aggressive though when the guy is following the female for several minutes. I hope the women involved with these men see this and give the men a butt whooping or tell em offlol.

She was not being very friendly by ignoring the nice folks on the street

Some people need to relax.

Men being men doesn't cut it...would they react to their own family that way? Unfortunately probably yes.

If women do not want to attract attention, one option they have is to dress in a way that doesn't cause the unwanted attention. The fund to end street harassment seems trivial compared to the financial needs of other causes.

I am astounded that men find it necessary to make a comment to a woman. Are they so stupid that they think she is going to respond? AND....what is the organization that is trying to get money?

Actually I wish I would get flattery like that. It'll never happen at all. 72!!!!!!!!!!!!

OK, what is considered appropriate male behavior anymore? Some of those men could have just been saying hello to her, wishing her the blessing of their particular faith, or just paying her a compliment? What do women want in general, to be utterly left alone? To be able to walk down the street & have no one comment or talk to them at all? I seriously do not know what is proper behavior anymore based on the bias of this video. If simply wishing someone
a good day is considered harassment...in the same category as a cat call or HELLOOOO SEXY!!! than I don't know what is the correct public behavior.

Some men are just crappy jerks, so they make others feel crappy. That is not acceptable.

Really? Men can't help themselves in situations like this. Maybe they just need to somehow relax because it was a hard day or something and besides, it doesn't hurt anyone, so...

OK, a lot of guys are just pigs! don't know how to act. But a lot of guys are sensitive to others feelings and can admire a pretty lady without rude, offensive comments.

disturbing examples of harassment women suffer every day.

best to ignore these creepy people, disgusting behavior. women should be treated respectively.

Cat cling is annoying, but not worth getting really upset by it.

Wow; that's crazy, and people still blame rape on how a girl dresses...

Really people if you can easily see your being ignored by a total stranger why why why must you continue it is creepy.

Catcalling is harassment, end of story.

People should learn to control their reactions to comments such as the ones we listened to.

If this is sexual harassment, than technically don't most relationships begin with sexual harassment?

I don't understand how normal men can think they can just walk up to a woman and hit on her! Just unconscionable!
It's gross behavior, but it's obviously edited to make it look like she only received unwanted attention.

some people what attention, if you dress and move for attention you will get it,

Their parents didn't raise them right. They have no respect for women.

That was truly creepy. Why do these guys actually think they can "score" just like that! Unbridled chutzpa!

Some of these comments show the hate and disrespect people have for women in general. No better then the catcallers in the video. Lets start with June, yea they ignore everyone but the women they like but if its something nice the woman who just wants to ets somewhere should have to be talked to like she is in a club. Next Jasper, no women are not damaged men like the one in this video are, No they dress up for themselves most of the time and none of that time should they have to deal with anything thats nwanted. Yea mike is the type of person who does this so he doesnt like being called out. Wow Jeaneen think what she feels is what all women feel, how about a guys follows you around for BLOCKS and BLOCKS still want that "complement". Sure Krazyke ignore hings like this when women get raped and murder for ignore it or saying no because thats how things like this get stopped. What she is wearing should not matter men need to learn that walking down the street it not a club so it should not even have a chane at getting ignored. Bob does say something good but it should not even have to be said they are someone daughter, mother, sister, or girlfriend making it about something more personal should not change that fact that it is wrong, you should not have to hink about what if they were closer to me what then... treat them as the human they are even if they are not someone you know personally

Some men are just pigs, rude and no social graces; but all men are not. Some of the comments can be interpreted as complimentary.

Just let it go, to borrow a song title. Some people are creeps; newsflash!
Even though there is better ways to compliment someone, that is just how men are, even though it isn't right.

It would be EXHAUSTING hearing that all day; she invited NONE of it yet it kept going on and on...

I find it sickening and disturbing that a woman cannot walk down a street minding her own business without being verbally assaulted every step of the way. "Damn girl you fine" is not proper way to engage a young lady in a healthy conversation, nor does it show the best traits of the male intellect. Although being male one cannot sometimes control the urge to look at an attractive female, but one can control the urge open your mouth spew forth verbal diarrhea. What if it was your sister, mother, daughter or some other family member walking down the street and practically getting slobbered on by every concupiscent male in the town?

not sure what you're looking for here. If I agree with you I'm a sexist, if I disagree I'm a rapist, lose-lose

I don't think it was harassment, it's just the way men are and always have been.

some saying hi was ok, some were mean, but she was also disrespectful in not talking to nice ones.

This video depicts the typical city environment of places like New York, Chicago, etc. I'm not surprised by the lack of respect and decency.

No respect for anyone any more men or women

This is ridiculous.

Let's say you're a dude and you're just trying to greet people politely with all the best intentions. How can you not understand that a woman might not be responding to you because she's in a hurry or didn't hear you or feels threatened by you because, o, yeah, YOU DON'T KNOW EACH OTHER? If someone doesn't respond, just leave them alone. That's basic human decency even if there are no sexual implications whatsoever. It would be super
annoying to anyone to have people they didn't know stopping them in the street all the time for ANY reason, and after a while you'd get sick of it and start ignoring everyone so you can actually function.

79 ti seems that nothing ever changes the rule was always look all you want and pant if you will but don't touch

80 As long as they're not overstepping their boundaries, being explicit, or just plain disgusting I can care less. Except for the idiot that was following/walking right besides her for 5 minutes.

81 harassent is harassent plain and simple. If a man were to do this same experiment I believe that the results would be very different.

82 This is one of the reasons I am a country girl. Things like this don't happen in small towns.

83 Apparently, these individuals haven't heard of POF...it does and would get annoying really quickly, and unfortunately for me...I have the mouth of a sailor.

84 It is amazing how much crap is said to this woman walking the streets. I wonder how long she was walking. She must be tired.

85 It's a shame we live in a society where respect is oblivious.

86 She was NOT dressed up to try and look sexy. I hate to think what might have been recorded had she been in a short skirt and crop top.

87 it is most annoying and downright rude...seems like she's walking through future predators

88 it not bad guys like women

89 Men cat call to impress other men not women. Does that tell you something?

90 While some of these guys did take it a little too far, I wouldn't call it harassment. Men are men, if they find a woman attractive they're going to
compliment her. She may have just been wearing jeans and a t-shirt, but she was still dressed appealing enough to know she would receive such attention.

91 getting a compliment can be good.

92 How annoying to be constantly bothered in this way—the definition of harassment. Why can't she just walk in peace minding her own business!

93 most of the comments were tasteful and not harassing, I think it is a complimentary gesture on the men's part to make this girl feel the love from the world she is walking in

94 Men need to respect women more.

95 It's harassment and should not be tolerated.

96 Some of the comments were very rude & the guy who followed her for 5 minutes should have been arrested. A few of the comments were OK.

97 Cat calling is still street harassment.

98 This just goes to show that the world has become a place that people are taught that this kind of behavior is acceptable.

99 that guy was weird

100 I think that people over react about some of the comments and but it is ridiculous how someone follows you for so long if you aren't talking take the hint dude! I like when someone pays me a compliment but there is a line that men cross.

101 The human nature revealed!

102 There are other ways to get someone's attention. This is harassment.

103 I'm surprised how people are reacting.
People should treat others with more respect

Most of the communication was innocuous, while a few of the comments were asinine. This is life, deal with it. There are stupid people everywhere, people need to learn to deal with those they disagree with. If everyone becomes the same, life will be boing.

Maybe a little uncomfortable for the women. The men were definitely rude but I don't think that meant any harm. Maybe a little education and manners would be appropriate here.

I think this is boys being boys, a woman is walking around by herself and men hope they have a chance. It's just life and in Men's nature to chase women. She just ignored it which is what is called for, I am interested in the guy that was walking beside her, did she change her pace and he change hers to match, or was he just headed in the same direction.

I don't think it was harassment but being women I do find it annoying sometimes and other days it makes me feel attractive its men being men

Boys will be boys. They will continue to do this to women because they know eventually they will get one if they keep at it. We cannot expect to socially engineer every aspect of culture.

This whole thing is "over the top". She could have "looked off" all of those attempts; she could have said a word. It it true that this stuff happens, but it is wrong to say it ALWAYS happens.

I have experienced this and I consider this to be annoying.

Guys will be guys, yes, but that is just extreme. You can't stop them from looking, but it's just rude by anyone's standards to be vocal like that.

The author edited the video and kept the parts he/she wanted to show. In reality, only a very small percentage of people would have harassed her.

This is kind of like a police sting operation. I agree that a large percentage of the verbal comments were sexual harassment, but would the same number
and character of comments been receive if she was walking at the mall.

Most of those comments were disrespectful and if the men would only just say hi than to me that would be okay.

Mike shouldn't use offensive language.

It is what it is or in this case what they make it out to be

Admiring someone and greeting them is not harassment.

Wouldn't like this if someone I know

I have seen this video before. You can't stop a man from being a man. I am not saying that men should be disrespectful, however some women dress for attention and to highlight certain features, so don't be offended (when in the right context) because I on't really feel that this is extreme harassment.

It seems that in the city type of environment you see this more often than in a rural environment.

some times you do not want to talk wich is ok with me

saying hey beautiful or something like that is not harassment however the guys that start walking beside her is creepy id definitely have a hostile reaction to that

Not sure I would consider most of this harrassment...

It is a man's world. Women should feel free to dress anyway they so choose. We have to learn to ignore cat calling and the like...or not...

Definitely some creepy dudes but that is to be expected in NYC. I wish she had told a few of those men to get lost, especially the one who walked with her for 5 minutes.

Totally indifferent. Some people were really just saying 'Hi.' Except for the
one guy who walked lockstep with her for four minutes, that was creepy.

Black jeans and t-shirt is not looking for attention, I were that in my garden. Anyone making comments like "I just saw a $1000 " would be an insult in most normal brains. Let someone do that to thier female friends and see what feelings erupt. Look at her face, no smile, no looking around, that should tell them to leave her alone.

Okay, well something happened, maybe?

She clearly was is not interested in the "attention"; leave her alone.

I don't see how this is harassment. compliments yes, harassment no. the only things about this video that bothered me was the man who followed her and that she didn't talk to any of them.

It shows how some men are rude to woman and treat them like they are nothing.

This is honestly one of the worst things about being a woman. "Men will be men" is no excuse. What if that was your daughter?

I don't understand the reaction of the men to this fully dressed woman. It is not as if she is scantily clad.

I just kept putting myself in that woman's shoes, and imagining how unsafe I would feel with strange men walking beside me and continuing to speak to me even as I ignore them. Men really should learn to respect women and take a hint. This behavior is NOT k.

Hmmm, this has happen to me and just respond with a thank you or you too have a nice day and they kinda stay quiet while i keep going my own way...

this is not harassment although the guy that walks beside her for 5 minutes is creepy, also the number of 'cat calls' was obviously amplified my a camera pointed at her.
This is really shocking!!!

Why didn't they leave her alone. I would have ignored them too. Men shouldn't do what these men did. I would feel stressed when the man walked next to me for 5 minutes. Probably, would have gone into the nearest store within minutes..

i thought it was a silly ad, I do not see any harrassment. I just see guys being curious about the lady, and it seems the lady is not respecting anybody by not talking, it would of been better if she would say leave me alone.

Some say hi - fair enuf. Busy city, nice to have someone acknowledge you. More than that - annoying. Not interested in their assessments. The guys following along for minutes - creepy.

It's horrifying that a woman cannot walk down the street without being harassed because she's a woman. In no way did her body language or clothing invite comments, but the comments came anyway.

she did the right thing to not acknowledge all the negative cat calls and whistles women should not respond to this type of treatment

She did what she did because, for her, it was the only thing to do.

i think it ok to look but keep your comments to yourself

Just because a women is walking down the street doesn't mean she has to talk to anyone. She might have a lot on her mind and just out there to try and clear her mind. I also believe it is just Men being Men.

it would ne nice to know how it would be if it was their daughter, mother etc. would be totally different

There was nothing wrong with what was going on in this video. They didn't touch her or anything. It was their way of expressing how they really liked what they were seeing.
I would've been creeped out by that

Wish I could agree, but, I only saw 3-4 questionable actions the rest I'd quantify as friendly greetings.

Too many people think they're entitled to attention from a woman they don't even know. Depressing.

Some men reacting to the women were alright. However, some men were just upfront disrespectful. It's more about how your tone is/what you are saying. Some of the men presented were sweet, calling her "Beautiful." "Thousand Bucks" And a few asked her how hr day was. She never responded. That's kind of disrespectful on her part as well.

i think that the cat-calling is a frequent occurrence in an area like the city, but in rural areas, it's not as prevalent

Once in a while, Hi Beautiful is OK, But, better a smile and maybe ask for your phone number.

Typical New York. It may not be pleasant, but freedom of speech still is in force. There was nothing threatening (although the guy walking along side of her for several minutes was a little creepy).

Half of the people were just being nice and saying hello. The other half were creepy.

she did the right thing by ignoring all of them

Men (and women too) need to learn that if someone is not interested, to just leave them alone.

People have very poor judgement, it is a sad world where no one respects each other.

That was a bit scary. One of those guys could have grabbed her or even worse because she was totally ignoring them. Frightening video.
It amazes me how often this happens

I think all the men that have to say something to her are very disrespectful. They should find a more appropriate way to meet her rather than yelling out things like that to her.

I would be so uncomfortable if this was me

I think too many people harass on the street for money and calling women names but I never saw it with my eyes.

I would be very nervous if these guys were making comments like these to me.

A simple, "hi, how you doing" is fine. She can choose to respond or not. I lived in the city and we'd say hi to new people who moved in or we've never seen around our block, both genders. It's just being polite. Following someone is NOT okay.

Bad situation for this young lady.

That was crazy. Its an eye opener to knowing that people really do watch and pay attention to their surroundings. The guy that was following the lady, was creepy.

The catcalls would have been annoying but at a certain point I probably would have said something to the guy who was walking alongside. That was creepy.

She did a good job of ignoring the obnoxious, but I kept wondering where her jacket was, because I'm cold all the time and would definitely want to be wearing one.

Some comments were inappropriate and some people were just being friendly.

Some of that isn't harassment some are just people being friendly!
I would never speak with anyone out in the streets that I don't know. It's best not to speak with strangers.

It shows that what she was trying to prove is right men are human, and they respond to a pretty woman walking down the street in different ways. The worst part about this study is that it shows that women can be just ignorant to people in the opposite way.

Cat calling has been going on for years and only recently, has sexual harassment been used to define it. Some people are more sensitive to this than others.

I think this is probably true of real life.

The day someone is having affects how they react to everything.

The only harassment in this video is the two guys who followed her and wouldn't leave her alone, other than that just comments for a nice looking person.

Just a Friendly hello would be in order.

Some were harassing and some were just being polite and greeting her. There will always be jerks, but this video has grouped together the jerks along with some that were likely just being friendly.

This happens to me all the time. It makes me wish I were invisible. I'm just trying to live my life, I don't want or need that kind of attention.

This is not men being men. Men respect women instead of treating them like objects that they can talk to any way that they please.

There are ways of complimenting a woman without offending her. One should never resort to cat-calling because, to me, it just shows how shallow and disrespectful one can be.

I don't think she wants them to talk to her. I don't think some people like it.
seeing this video made me feel ashamed for the guy who followed her around for a long time

shes pretty, im sure i would have noticed her, but would not have said anything rude to her.

a person should be able to walk down the street without being demoralized... no matter what she's wearing, carrying, saying (or not saying) and should not have to respond to the mindless "cat-calls" hoots, hollers, or whistles.

I just feel that this kind of behavior can feel very harassing to the person, but as the woman might older she might miss the attention as she looses her sex appeal. This is also an issue of a freedom of speech, they have the freedom to talk to you, and the woman has the freedom to ignore them, as annoying as that might get.

A woman should have the right to walk down the street without all of the whistling, stares, and name calling. Women also have the right to dress up pretty as one of the above comments mentioned with out having to deal with this. If this was your daughte, wife or girlfriend you would not want won't anyone saying or doing the things these people are doing.

Not much has changed in society. This has been going on for a long time

Some men were being creepy, like the ones following for 5 minutes. Others were just saying good evening.

some of them were generally nice comments but some of them were too invasive. If I do not respond to you after the first time do not try again or even keep walking next to me.

this would make me very uncomfortable

Hope this doesn't represent the whole city. I've never seen so many men act like this in a short amount of time... approximately every 6 minutes.
It bothers me how many people defend and side with the harassers in this video. Women should be able to leave their home without having strangers shout at them, follow them, or comment on their body. Sure, it's not the crime of the century when an individual guy catcalls, but it's a problem that the men who do this feel entitled to a female stranger's time and feel entitled to make comments on her body. It's at best rude and at worst threatening. I don't think that attitude is unrelated to other gender issues. A woman is not soliciting compliments or other male attention just because she leaves her house and goes out in public.

I am not comfortable in these kinds of situations.

The guy just walking with her so long would freak me out. There are a few others that would kind of creep me out but for the most part I could ignore them.

I had no idea women walking alone in a city would be subjected to such harassment. Embarrassing.

I never realized that this behavior was so prevalent. What right does anyone have to intrude, uninvited, into someone's personal space.

If someone followed you/walked along side you for over 30 seconds, you ought to tell them to get away (loudly), look for a safe place to go, or look for the police. Those men doing those things wanted to ramp things up to a new level, much worse than the comments being made.

Unfortunately, there are people like them that constantly do this. It's best to just ignore them.

It is creepy scary that a beautiful young woman cannot walk down a busy side without having to listen to comments like in this video, it is highly invasive of personal space.

These guys aren't giving compliments just to be nice. They're saying things to get her attention because they feel that she has an obligation to give them it. That's why the one guy keeps walking with her, because he feels she owes
her a response. They felt owed. That's what makes this harassment.

This is clearly sexual harassment. Women don't owe ANYONE anything, not even a hello back. If you want to compliment a woman, that is different than what was portrayed here. These men clearly thought that that woman owed them her time, and a response, an that folks, is sexual harassment.

It just made me feeling all creepy & uncomfortable. I'm not sure if she was trying to attract attention or not. I wouldn't have thought jeans & a t-shirt were suppose to do that.

It seems to me that some of the guys (albeit a minority of them) are just being polite when they are calling out good evening or god bless you. Unfortunately, the majority come across like macho jerks. The guy that followed her for 5 minutes was just plan creepy...

Catcalling is not acceptable in any situation. It is not a compliment, it is men objectifying women. Additionally, when you have to deal with this issue on a daily basis, it becomes difficult to "just ignore".

it embarrasses me as a man that this behavior goes on routinely.

Where's the harassment? Some of the people in this video were simply wishing her a good day or otherwise politely telling her that she's pretty. I'll agree that some of the comments made to her were inappropriate, but I wouldn't consider any of it very hamful or threatening. No one reached out to grab her or hurt her and most of the guys stopped once they realized that they were being ignored. She's attractive and all of these guys wanted to take a chance to see if they could get to know her better. The mentality here is that you miss all of the shots you don't take, supposedly. Ignoring the unwanted attention is the correct response here.

These men think that they are flattering this young women, but really it makes many women, especially the ones I know, uncomfortable.

As bad as this is, this is the real world. You could put a young good looking male in the same situation and more than likely he would draw some of the same remarks from ladies just not as many. Our society has come to this for
whatever reason.

This attention was uncalled for. She was neither seeking attention nor dressed for it. Not cool at all, especially the guy who walked along side of her for several minutes!

i didn't realize how bad it was in our bigger cities, haven't seen it around here but i'm sure it happens. It's very disrespectful and annoying to see all of that happening.

Some of what was said was disrespectful but some of it was kind. You have to look at the good with the bad.

I personally think it's disrespectful of those guys to be treating her like she's an object while she's walking. She's just minding her own business. Nobody wants to be treated like that.

Most of the so called harassment was nothing more that friendly speaking or compliments, in an attempt to start a conversation with someone they perceived as attractive. However some of this especially the guy walking beside her for five minutes was creep.

Not all of these were catcalls, just friendly greetings and she should/could have responded. But, the others were definitely uncalled for and should/ would not set well with most!

I am not from New York, but in my much smaller, but still major city, it is common to say "hello, good evening", or nod as you pass a person. I don't think all of this is harassing or inappropriate. Didn't see a circumstance where she asked to be left alone, and that did not happen. When will saying hi be deemed acceptable if all these examples are harassment?

Some of the comments were not harassment. Hi, good evening aren't. I usually acknowledge people I pass on the street - but I live in a very small community. There were lots of comments and looks but no one was really offensive. I whistle or a guy saying you look good are ego lifting not abuse.
I'd say that maybe half could be seen as some type of harassment in a way, but some seemed to just say hi or have a good day and there is nothing wrong with that.

Some of the comments were harmless, others really crossed the line when this poor woman was just out for the day. If she doesn't respond then they should just take the hint and leave her alone.

Some instances seem like harassment, but others just seem like men genuinely saying hello. The guy who walked next to her was creepy and the guy who wouldn't leave her alone was creepy - that was harassment. Saying "hello beautiful" then leaving her alone after she didn't reply was not harassment.

Some of that was people just being friendly, though some of it was uncalled for. It can be difficult for people to know where to draw the line between just being friendly and what is unacceptable.

I think it would be alright to have a few complements, but I think it would be very wrong for a guy to keep on talking to you as you keep on walking. If women aren't interested, then men should respect that.

Everything always starts at home. If men were taught to respect women by their parents, siblings and family member since they are child; it would have been different scenario. I feel sorry for this men!!

It's well and good to say it's just being friendly, or a compliment, but if you even say "hi" back, it can get past that pretty fast. Nobody owes another stranger "acknowledgement". You definitely don't owe a person you've just met friendship. I don't think absolutely every man was trying to be sexual about it. Some likely were just trying to be friendly, but someone can seem to be just friendly at first, and then it turns out, no, they are coming on to you, but tried to sound like they weren't. She does look good, but I would not say she is dressed in an especially attention getting way. I mean, maybe if you wore a shirt that literally said "look at me" on it, and then complained that people were looking at you, it'd be silly. But she is dressed like a lot of women dress these days, nothing unusual except she looks better than some.
That would scare me to death. Why do people do that? It seems like they are trying to scare her, or at least get a reaction from her. She is wearing very normal, non-revealing clothing, and just walking, and is getting comments like that, so it makes me really wonder what would happen if she were wearing something else.

Catcalls are meant differently for each person that makes them. Some are expressing admiration or adoration, some are just pervs. It’s never just cut and dry on what someone’s intent is when they make a comment in any situation.

I’ve noticed I get more cat calls wearing "normal" clothes (i.e. jeans & a tshirt) than when I wear "sexy" clothes (like a dress). I’d say about 99% of what I heard in that video makes me uncomfortable when walking alone, and I’m minding my own business. You can greet a stranger on the street when walking by without making it uncomfortable but a lot of men don't greet a woman that way. Cat calling, even when intended to be "harmless" doesn't come off that way for most women. I've noticed a lot of guys who get cat called don't respond all that differently than women in the same situation.

I don't feel like there is anything wrong with acknowledging/responding (at least with a smile!) someone saying, hello, or how are you? Yes, there are some nasty people out there, but that doesn't mean they all are. If the comments/questions make you uncomfortable, you don't need to respond.

Being I am from the old school, the way I see today's behavior from people or comments whether male or female it all comes down to respect for each other. Unfortunately in today's world it is just about how do I get a female to have sex, which is why all these catcalls are being said.

New York is an interesting city, with all kinds of people living there. Each of the people in the video try to get her attention for different things. Is it right? No .. But do people do it? Yes..

People are watching you all the time, especially in public...How you interact with them tells a lot about your character.
I agree. I wonder if the comments above would be the same type of car calls if it were for a person that they knew, especially a family member like a sister or daughter.

I can understand a little. It makes me feel super uncomfortable when men yell out at me like that. It makes me feel unsafe sometimes. So, yes, they may have been just "complimenting" her, but this is not the way to do it.

Not everything is harassment; I think we've become way too confused on what is / isn't. Unable to be honest because it might offend someone. She did what I might have .. kept walking .. but I might have smiled or nodded.

I must say she did very well. She didn't speak or acknowledge anyone. I put myself in her place. A few times I would have laughed, other times it would have bothered me. It was a little creepy when the one guy walked with her for 5 or more minutes. It was interesting to watch.

Being from NY, I know exactly how this feels. It's a typical day in NY. I wouldn't take ALL of the comments as harassment. Some of the men were respectful. However, most of them were horribly disrespectful and this is what I remember most about life in NY.

When someone says hello, I have learned it is best to just say hello back. Most of the time they will be okay once you acknowledge their comment. Ignoring them can cause them to get an attitude and really embarrass you. Just say hi and keep walking. They feel if you say nothing then, they seem to think that you think you are too good to say hello. I am a senior citizen now and I learned that lesson years ago in my 20's.

I have said some things in my life that I am not proud of and now that I have a daughter it just reminds me more of the dumb things men say to women. So for that I am sorry.

Men objectifying women's bodies is something that happens to women every single day. There's no need to demean someone for not liking this kind of attention, most don't. Why not respect women and treat them like your equal, not a piece of meat?
On one hand I hate the fact that you can't compliment someone without them screaming harassment 3/4 of the time. On the other hand, catcalling IS harassment.

It was not all catcalls that were made. For those saying Hey Beautiful and making catcalls, that is uncalled for especially since she was not dressed trying to impress. I feel though that for those just telling her to have a good day or asking how she is, she was rude, she could have replied, they may have only been trying to be nice. There are some genuine people left on Earth.

Some of the people in the video were just being friendly 'have a nice day is fine' but there were a lot of unnecessary comments that she dealt with and it would be very obnoxious on a day to day basis. I would hope a video like this would help people thin about they way they handle their day to day interaction - even ones that are brief.

No one should have to face abuse just for taking a walk. If a person interests you, yo can ask in a polite manner but if the answer is no, or if you are ignored then it is a no. Leave it at that.

I wouldn't want somebody behaving that way toward my wife or daughter, nor would I want my sons behaving that way toward women either. Dignity, honor, & respect is better. Maybe I'm naive, and a big city is different, but I occasionally say hi to stranger (especially elderly) without any intent of anything other than being friendly. Perhaps a few of the comments were actually friendliness rather than harassment? Most were harassment.

If what I've read on /r/AskWomen is anything to go by, this sort of thing is unfortunately not uncommon. Women shouldn't be made to feel like walking sex objects, nor should they have to worry about others grossly overstepping her boundaries when all she wants to do is get from point A to point B.

I think this just shows how a couple of super creepy men make it hard for women to put their trust in the good men that are out there. The girl ignores all the men (both the good, and the bad) because differentiating between the two is impossible under these circumstances.
I don't see a problem with some of the comments being made, such as "Have a good day." What I do feel is inappropriate however, is the stares directed towards the woman's bottom, the comments that are directed towards her as if she's nothing beyond her beauty, and the persistence of strangers walking alongside her, asking her questions, people who won't take no for an answer.

Not all of the acknowledgements were offensive, but some were way out of line. It's difficult to define what line is crossed when something is considered harassment and when it is not. Our culture is one of the few that does not accept catcalls and (random) verbal appraisal as an appropriate expression of attraction, so the culture and personal experience of the "offenders" in this video also must be taken into account. I don't think it is appropriate to do what most of the men in this video did, but I think it is a complicated matter that must be analyzed more thoroughly.

A few instances of this were clearly in the interest of sales/marketing rather than sexual advances, but that is definitely a problem for some people. For others, it might be the only way they know how to communicate interest.

Sure, maybe, some of the guys meant to be nice by saying "good evening", but when you encounter so many other men making statements about your body or making come ons to you, it is hard not to expect the worse from every person who talks to you. Not all women are looking for outside validation even when they are dressed up "all pretty and sexy". The fact that some people don't understand that this is harassment is discouraging.

Well that was unfortunate. Some folks are just conditioned to act this way, with little restraint. We can try to educate people on the discomfort their actions may invoke, but these are full-grown adults. The likelihood of substantially altered behavior is slim. However as she was walking for 10 hours, there are thousands of people who did not harass her, so fortunately these rude folks are in the minority. Let's just make sure to instill in our youth a better foundation.

It's a tough issue. Some of those people were just being kind or were handing out flyers etc. Others were downright creepy. I think the most important thing to remember is that those men don't represent all men.
The guy who walked alongside her for 5 minutes was kind of creepy. But what bothers me most about this is people who attempt being genuinely friendly are not only ignored but ridiculed, as if we all would be better off by simply living within our own bubbles. We already have enough of that with our depersonalized, video game realities. This experiment is deeply disheartening.

I hope young girls see this video, to see that it is not flattery to be cat-called. To see that you don't need this kind of attention to have self esteem.

I think we need to learn how to distinguish real threats of rape or sexual assault from compliments or an appreciation of a woman's looks. Not every man who whistles wants to rape a woman.

Unfortunately, most males learn from an early age via TV, movies, and the actions of alleged 'role models' that it's okay to objectify women. Personally, I believe that all females should be respected the same way you would respect your own mother/sister.
### Appendix F: Table of Correlations

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<th>Coded average disinhibition</th>
<th>Self-reported average disinhibition</th>
<th>Public Self-consciousness</th>
<th>Identifiability</th>
<th>Average Anonymity</th>
<th>Average Public Self-awareness</th>
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<td>-.28**</td>
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Note: 1. *p < 0.05  **p < 0.01