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Examining the Effect of Perceived Responsibility on Online Bystander Intervention, Target Hardening, and Inaction

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Abstract

Failure to take responsibility for intervening has been identified as a primary barrier to bystander intervention. Building on these findings, we examine how perceptions of responsibility affect responses to witnessing victimization in the online realm—a topic that has received limited attention. Using a maximum-likelihood selection model, we analyze data from the Pew American Trends Panel ($N = 3709$) to estimate the effects of respondents' perceptions of the role different groups should play in addressing online harassment on their likelihood to engage in intervention, target hardening, or inaction in response to witnessing online harassment, conditioned upon their likelihood of having witnessed such behavior. Findings indicate that the greater role respondents believe online users should have in addressing online

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harassment, the more likely they are to intervene. ($b = .310$). The greater role respondents believe law enforcement or elected officials should have in addressing online harassment, the less likely they are to intervene ($b = -.135$ and $-.072$, respectively). These findings have implications for future efforts to curb online harassment through users' crime prevention efforts.

Keywords

Bystander intervention, crime prevention, online victimization, target hardening

For decades, social scientists have made progress toward understanding why individuals do or do not intervene to stop or prevent an imminent harmful situation. From efforts to understand bystanders' responses (or nonresponses) to the highly publicized murder of Kitty Genovese in New York City, to the Stanford Prison Experiment and subsequent research into heroism, to situational frameworks grounded in reducing opportunities for victimization through increased guardianship and target hardening, researchers have posited and tested explanations of how and why individuals act (or do not act) to protect themselves and others from interpersonal victimization (see, e.g., [Darley & Latané, 1968](#); [Hollis et al., 2013](#)). Across volumes of studies that have directly or tangentially addressed these issues, empirical research has consistently identified a bystander's perceived personal responsibility for intervention as a key determinant of their action versus inaction in situations where there is heightened risk for interpersonal victimization (e.g., [Darley & Latané, 1968](#); [Felson, 1995](#); [Fischer et al., 2011](#); [Reynald, 2010](#)).

Several dynamics are likely at work with respect to the effects of perceived responsibility to act in risky situations. In their early yet seminal work, [Darley and Latané's \(1968\)](#) findings suggest the presence of a bystander effect, wherein individuals perceive a diffusion of responsibility across all present bystanders. Here, the more individuals present in a risky situation, the more dispersed the responsibility to intervene becomes, and the onus on the individual to act is reduced. According to [Felson \(1995\)](#), responsibility for acting to prevent victimization, specifically, ranges from personal (oneself), to assigned (to specific people), to diffuse (across multiple people with less precision), to general (across all bystanders present), with corresponding reductions in the likelihood of individual action. These theoretical frameworks have been empirically investigated, and their propositions are largely supported in face-to-face situations ([Fischer et al., 2011](#)). Yet, despite this empirical support, questions remain as to the applicability and utility of the bystander intervention and guardianship frameworks, and particularly the

importance of individuals' perceptions of who is responsible for intervening, especially when witnessing interpersonal victimization in the online realm.

Online victimization research has flourished over the last 10 years, as its emergence and growth have presented researchers and policymakers with new questions to answer and crime-related challenges in need of responses (e.g., Melander, 2010; Mitchell et al., 2011; Reyns et al., 2019; van Laer, 2014). The specifics of how perceived responsibility to intervene influences online bystander intervention behavior—or, guardianship in action¹ (Reynald, 2009)—have not been exhaustively examined. However, recent research has explored the frequency and determinants of bystander responses to witnessing online victimization (e.g., Henson et al., 2020; Machackova et al., 2018; Patterson et al., 2017). This research suggests that individual responses to online victimization situations are diverse, and that the response and the factors that influence it may vary by victimization type and situational characteristics. The primary focus of the current study, therefore, is on responses to online harassment—a form of victimization on which limited research has been done in the context of perceived responsibility to intervene (see, e.g., Kazerooni et al., 2018; Obermaier et al., 2016; see also Finn, 2004; Henson et al., 2011; Reyns et al., 2019).

The current study examines two interrelated gaps connected to intervention responsibility issues in bystander intervention research: (1) predicting who has witnessed online harassment and (2) the effect that perceived responsibility for online harassment prevention and intervention has on individual intervention behaviors among those who have witnessed online harassment. Building upon recent research that has investigated crime prevention activities as an outcome (e.g., Madero-Hernandez et al., 2020; Reyns et al., 2016; Schreck et al., 2018), the current study analyzes data from The Pew Research Center's American Trends Panel (Wave 24 collected in 2017) to address four research questions.

First, how do individuals respond to witnessing online harassment (RQ 1)? To answer this question, we describe the frequency of self-reported individual responses to online harassment across three categories of responses: intervention, personal target hardening, and inaction. Second, who do individuals believe is responsible for intervening in incidents of online harassment (RQ 2)? Again, we provide descriptive results across four groups to whom respondents may assign responsibility: users, the platform, elected officials, and law enforcement. Third, what influences the likelihood that a person has witnessed online harassment (RQ 3)? Fourth, how do perceptions of responsibility influence bystander reactions among those who have witnessed online harassment (RQ 4)? To answer research questions 3 and 4, we use a maximum-likelihood selection model to first estimate the likelihood a person "self-selects" into having the opportunity to intervene (i.e., by witnessing online harassment). Then, we estimate the effects of perceived responsibility

and other covariates on the likelihood to engage in three different responses to witnessing online harassment, accounting for the likelihood the individual witnessed online harassment. That is, we examine how assignment of responsibility across the four aforementioned groups impacts behavior across the three individual responses to witnessing online harassment: bystander intervention, target hardening, and inaction.

Bystander and Guardian Responses to Risky Situations

Three bodies of research—on target hardening, on bystander intervention, and on online harassment—provide context for the research questions addressed in the current study. The first two are focused on the ways in which individuals respond to witnessing risky situations where criminal victimization is likely, with (1) research on target hardening informing how individuals take actions to reduce the suitability of targets (including themselves or their own property) and with (2) bystander intervention research informing how individuals intervene to stop or prevent some harm from occurring or why they fail to do so, due to various barriers. We begin by building this conceptual approach and then turn to focus on (3) research on online harassment, the form of victimization with which the current study is concerned.

Target Hardening

In both the bystander intervention and routine activities bodies of research, it is expected that third parties (i.e., bystanders or guardians) can act (or can be taught to act) to stop or prevent crimes, including interpersonal victimization, from occurring. These behaviors can take various forms, including actions taken to make it more difficult to harm a target (i.e., target hardening). Target hardening is defined as “a set of victimization-prevention approaches, where suitable targets are hardened to discourage offenders through some combination of reduced potential reward and increased potential costs/risks to offenders” (Ireland, 2020, p. 3; see also Clarke, 1995).

Unfortunately, most studies on target hardening consider target hardening as a predictor of subsequent victimization. However, some research suggests that individuals may engage in target hardening behaviors after they have experienced victimization (Reyns et al., 2016; Schreck et al., 2018). As an example, Schreck and colleagues (2018) found that the more worried an individual was about being a victim of a home invasion, the more likely they were to engage in target hardening behaviors. Thus, victimization and concern about victimization may be two relevant factors to consider when predicting the likelihood an individual has engaged in target hardening in response to witnessing a risky situation.

Although some studies include target hardening as a form of guardianship, Hollis and colleagues (2013, p. 74, emphasis in original) clarify that “guardianship is *not* target hardening” because actions that make the target less suitable (harder) “do not increase availability of capable guardians.” Consistent with this clarification of routine activities theory, we conceptualize target hardening as distinct from another response to witnessing risky situations—bystander intervention.

Bystander Intervention

Bystander intervention refers to action taken by a third party (i.e., someone other than the victim or offender) to stop or prevent a potentially harmful situation. [Latané and Darley \(1970\)](#) outline a five-stage model of bystander intervention: (1) notice the event, (2) decide that the event is intervention appropriate, (3) take responsibility for intervening, (4) decide how to intervene, and (5) intervene. At each stage, there are potential barriers to the bystander moving forward to the next stage, but given the focus of the current study on perceived responsibility to intervene, we focus on modeling steps 1 and 3.

We account for the first stage (i.e., notice the event) by modeling the likelihood of an individual self-reporting having witnessed online harassment. This step is important, given that research shows witnessing or noticing events that might require bystander intervention is not randomly distributed but rather is shaped by routine activities (see, e.g., [McMahon et al., 2017](#); [Vander Ven, 2011](#)). For example, college students who participate in the campus party culture are more likely to be bystanders in the risky situations that frequently emerge in party settings (e.g., alcohol poisoning, physical altercations, and sexual assault) ([Vander Ven, 2011](#)). Even when exposed to a risky situation, certain factors (such as bystander intoxication in the campus party culture) may prevent a bystander from noticing an event that necessitates intervention ([Leone et al., 2018](#)). If a person does not witness or take notice of the event and decide that it requires intervention, then they will not move on to the next steps in the process—taking responsibility for intervening.

We then examine the effect of who respondents identify as responsible for intervention on the likelihood that they, themselves, intervened. The main barrier to this step, according to [Latané and Darley \(1970\)](#), is the “bystander effect,” or the tendency for bystanders to believe that others are responsible for intervening and, therefore, to not take personal responsibility for intervention. When this occurs, responsibility for intervention is diffused, and all present bystanders may decide not to intervene. As [Felson \(1995\)](#) argues, an individual is less likely to intervene when they assign responsibility to intervene to general others (e.g., law enforcement) or diffuse others (e.g., anyone else present, organizations rather than specific people). Supportive of this claim,

Burn (2009) found that of the five barriers corresponding to each stage of the intervention process, failure to take responsibility for intervening had the largest influence on reduced likelihood to intervene in situations where there was a potential for a sexual assault to occur. Likewise, Yule and Grych (2020) found that college students most commonly reported perceived responsibility as a barrier to intervening—relative to barriers at the other four stages of the intervention process—across 10 behaviors ranging from witnessing someone tell an offensive joke to witnessing physical violence or sexual coercion. Further, qualitative research suggests that bystanders may be less likely to intervene on behalf of a stranger whom they believe has friends present who will help them (Pugh et al., 2016).

A meta-analysis of research on the bystander effect found that the effect is weakened when bystanders perceive the situation as dangerous, when the perpetrator is present, and when “the costs of intervention were physical (compared with non-physical)” (Fischer et al., 2011, p. 517). In other words, bystanders may overcome the diffusion of responsibility when faced with what they perceive as a dangerous situation. In the case of online harassment, it is plausible that bystanders may not view the situation as dangerous because the perpetrator is not physically present, and the costs of intervention (at least the most immediate costs) are non-physical. Research on online harassment and bystander behaviors in response to online victimization can inform how perceptions of responsibility may influence the likelihood of intervention in the online realm.

Online Harassment and Online Intervention

According to a 2020 poll by the Pew Research Center, 41% of adults in the United States have experienced online harassment (i.e., physical threats, stalking, sustained harassment, sexual harassment, offensive name-calling, or purposeful embarrassment) (Vogels, 2021). Researchers have identified several methods of online target hardening, including “falsifying or withholding information online, using security software or filters, profile trackers, and privacy settings to deter would-be offenders” (Ireland, 2020, p. 3; see also Choi, 2008; Holt & Bossler, 2009), not adding strangers as friends, and setting their social networking profiles to private (Reyns et al., 2011).

Although limited, research has examined how online bystanders intervene to stop or prevent online harassment from happening to others. Henson et al. (2020) surveyed undergraduate college students and found that between three in 10 and five in 10 students had intervened when faced with a situation in which a person was experiencing online victimization in the past academic year. For example, 41% reported they “spoke up when [they] heard someone had repeatedly sent unwanted texts, IMs, emails or other electronic communications” (2020, p. 514). Henson and colleagues (2020) found that

students were more likely to have intervened when they had previously experienced online victimization themselves.

As mentioned above, bystanders may be deterred from intervening if they do not perceive online harassment to be an emergency with potential physical costs. For example, Obermaier and colleagues (2016) found that the more severe a cyberbullying incident was (as described to college student participants in an online experiment), the more likely they were to view the situation as an emergency and, in turn, the more likely respondents said they would be to intervene. Similarly, Kazerooni and colleagues (2018) conducted an experiment where study participants recruited via Amazon's Mechanical Turk were shown screenshots of posts on Twitter under one of two experimental conditions—either one person tweeting or four offenders tweeting (with tweets containing cyberbullying language). The experiment showed that “people who saw [four people tweeting cyberbullying messages] were more likely to feel personally responsible for the situation and more likely to express a willingness to directly intervene” relative to those who saw just one cyberbully (though a mediation effect was not examined) (Kazerooni et al., 2018). However, these experiments did not measure reported intervention behaviors that respondents had actually engaged in (as is done in the current study), only willingness to intervene, which differs from actual intervention both conceptually and empirically (see, e.g., Banyard, Moynihan, & Plante, 2005).

Supportive of this suggestion also are research findings that people tend to have low levels of fear of online victimization (Henson et al., 2013; Lindsay et al., 2016). For example, Henson and colleagues (2013) found that when asked to rate their fear of online interpersonal victimization by intimate partners, by friends/acquaintances, and by strangers, from 0 (not afraid at all) to 9 (very afraid), the mean responses were 0.66, 0.57, and 1.17, respectively. A corollary to the claim that low fear of victimization would reduce the likelihood of intervention is the possibility that individuals who believe that online harassment is a problem may be more likely to intervene than those who do not believe online harassment is a problem. According to a 2020 poll by Pew Research Center, 55% of U.S. adults say that “people being harassed or bullied online is a major problem,” and just 7% say it is “not a problem” (the remaining 37% said it was a “minor problem”) (Vogels, 2021).

Thus, the research reviewed above indicates that, when examining predictors of online bystander intervention, it is necessary to account for factors that influence the likelihood a person witnesses online harassment (i.e., the first step in the bystander intervention model), the degree to which individuals assign responsibility for intervention to different parties (i.e., the third step of the bystander intervention model), previous online victimization (Henson et al., 2020), and the degree to which a person views online harassment as a problem (Fischer et al., 2011).

Current Study

The current study integrates research on bystander intervention, target hardening, and online harassment to examine the effects of perceived responsibility to intervene on individual responses to witnessing online harassment. Research on bystander intervention has highlighted the significance of failing to take responsibility for intervention as a barrier to intervening. [Felson \(1995\)](#) argues that individuals may perceive others as responsible for intervening, ranging from themselves (e.g., those who use the platform), to assigned managers who control the place where victimization occurs (e.g., the platform itself), to general or diffuse others who are not necessarily using the place or directly involved in the functioning of the place (e.g., law enforcement or elected officials). Although distinct from bystander intervention, individuals may also respond to witnessing online harassment by taking target hardening steps. Whether they do so may be impacted by the degree to which they assign responsibility to address online harassment to others. In this context, we seek to describe whether individuals engage in online bystander intervention, target hardening, or inaction when faced with witnessing online harassment (RQ 1), and the degree to which individuals identify different parties as responsible for preventing online harassment (RQ 2). Then, we model the likelihood an individual has witnessed online harassment (and thereby had the opportunity to intervene) (RQ 3), and the likelihood the individual has engaged in bystander intervention to prevent online harassment (RQ 4). To answer our four research questions, we analyze survey data from an adult sample collected by the Pew Research Center (see [“American Trends Panel Wave 24,” 2017](#)).

Methods

Sampling Design and Data Collection

Data were collected as part of The Pew Research Center’s American Trends Panel—Wave 24, fielded online to a probability-based sample of 4248 respondents aged 18 and older between January 9th and January 23rd, 2017². This sample was reduced by removing non-internet users ($n = 83$), those who had not heard at least “a little” about online harassment ($n = 77$), and those who did not respond to the question asking who they felt should be responsible for online harassment ($n = 33$). The sample was further reduced to 3709 based on listwise deletion. Responses to this survey were weighted to adjust for selection into the sample, attrition, and representation for the target population (i.e., adults within the United States; for more on Pew’s methodology, see [SRBI et al., 2017](#)).

Table 1 provides descriptive statistics for the sample on all variables included in the current study. This sample is 52.26% female, 66.03% White, 11.27% Black, 14.24% Hispanic, and 8.46% other race/ethnicity. The average respondent in the sample is between 30 and 49 years old, has some college experience (but no degree) as their highest level of education, and has a household income of \$30,000 to under \$40,000 (see coding description). Furthermore, respondents are largely social media users (89.47%), are high-speed internet users (81.30%), and use the internet many times per day or constantly (64.60%).

Measures

The subsections below describe the measures used in the current study. The three Selection Models estimate the likelihood an individual has witnessed online harassment; the three corresponding Outcome Models estimate the likelihood an individual engaged in three different responses due to witnessing online harassment: (1) intervention, (2) target hardening, or (3) inaction. This modeling strategy is appropriate because several factors may impact exposure to online harassment (e.g., internet usage) and thus the opportunity to engage in one of the three responses. Therefore, our research questions require modeling the likelihood individuals witnessed online harassment behaviors (i.e., Selection Model) and then modeling each of the three responses to witnessing this behavior (i.e., Outcome Model). The use of Heckman's self-selection model, although appropriate, was deemed less efficient than the maximum-likelihood approach (for more, see Kennedy, 2008). The appropriateness of selection and outcome modeling strategy is evidenced in the statistically significant rho parameter in each of these models (see Table 3), which suggests that there is a significant amount of correlated error between the Selection Model and the Outcome Model that, if left unaccounted for, would bias the coefficients estimated in the Outcome Model (Guo & Fraser, 2014).

Selection models

Dependent variable. Descriptive statistics for the dependent variables for the Selection Models are reported in Table 1. The dependent variable of each Selection Model (estimated for each of the three responses to online harassment) is the likelihood an individual has witnessed online harassment. Thus, *witnessed online harassment* is a dichotomous variable indicating whether a respondent reported having ever witnessed *any* of the following: someone being called offensive names, someone being physically threatened, someone being harassed for a sustained period, someone being stalked,

Table 1. Descriptive Statistics (*N* = 3709) (Weighted).

<i>Constructs Variables</i>	<i>Mean/(Percent)</i>	<i>SD</i>	<i>Range</i>
Selection model variables			
<i>Witnessed Any Online Harassment</i>	71.83	—	0–1
<i>Respondent Demographics</i>			
Age	2.33	1.00	1–4
Female	(51.57)	—	0–1
Black ^a	(9.55)	—	0–1
Hispanic ^a	(14.11)	—	0–1
Other ^a	(8.73)	—	0–1
Education level	3.54	1.53	1–6
Income	5.02	2.41	1–9
Online exposure/Risk			
Social media user	(92.29)	—	0–1
High-speed internet user	(85.81)	—	0–1
Frequency of internet use	7.48	1.56	1–9
Outcome model variables			
Personal responses to witnessing online harassment			
Intervention	(32.93)	—	0–1
Target hardening	(53.93)	—	0–1
Inaction	(38.80)	—	0–1
Perceived Responsibility			
Users	2.59	0.59	1–3
Platforms	2.64	0.60	1–3
Law enforcement	2.41	0.64	1–3
Elected officials	2.09	0.74	1–3
Behavior Witnessed Index ^b			
Called offensive names	2.03	1.86	0–6
Threatened	(61.24)	—	0–1
Harassed	(28.78)	—	0–1
Stalked	(25.30)	—	0–1
Embarrassed	(17.00)	—	0–1
Sexually harassed	(49.77)	—	0–1
(21.29)	—	0–1	
Online Experiences and Perceptions			
Heard about the issue	3.22	0.67	1–4
How much of a problem	2.58	0.57	1–3
Online should be safe space	(51.48)	—	0–1
Online harassment victim	(45.59)	—	0–1

^aReference group is White. Age is coded 1 = 18–29 years old, 2 = 30–49, 3 = 50–64, and 4 = 65+. Income is coded on a nine-point categorical scale ranging from 1 = less than \$10,000 to 9 = \$150,000 or more.

^bThe items listed below comprise the behaviors witnessed index.

efforts to purposefully embarrass someone, and someone being sexually harassed.

Independent variables. Descriptive statistics for the independent variables used in the Selection Models are reported in Table 1. To account for selection for witnessing online harassment, each Selection Model controls for seven demographic variables. The respondents' *age* was reported categorically (1 = 18–29 years old, 2 = 30–49, 3 = 50–64, and 4 = 65+). The variable *female* (0 = male and 1 = female) measures respondents' self-reported sex. Respondents were only able to select one race among White, Black or African American, Asian or Asian American, mixed-race, or some other race. Additionally, respondents identified (1 = yes and 0 = no) if they were Hispanic, Latino, or of Spanish origin. As such, race and ethnicity were recoded as a series of dummy variables, *Black* (0 = not Black and 1 = Black non-Hispanic), *Hispanic* (0 = not Hispanic and 1 = Hispanic), and *other* (0 = not other and 1 = other non-Hispanic), with *White* (0 = not White and 1 = White non-Hispanic) being the reference category. *Education level* is measured on a six-point scale (ranging from 1 = less than high school to 6 = postgraduate) and *income* is measured on a nine-point categorical scale (ranging from 1 = less than \$10,000 to 9 = \$150,000 or more). To specifically account for the risk of witnessing online harassment, respondents were asked to report if they were a *social media user* (0 = no and 1 = yes) and if they were a *high-speed internet user* (0 = no and 1 = yes). Likewise, respondents reported on a nine-point scale their *frequency of internet usage* (ranging from 1 = never use the internet to 9 = use the internet constantly).

Outcome models

Dependent variables. Descriptive statistics for the dependent variables for the Outcome Models are reported in Table 1. Three dependent variables measure how individuals responded to online harassment by engaging in *intervention*, *target hardening*, or *inaction*. Respondents who reported having witnessed any of the online harassment behaviors (listed above) were asked “Have you ever responded or taken some sort of action when you have witnessed any of these behaviors?” with response options of “yes” and “no.” Those who answered “no” were categorized as responding with *inaction*.

Respondents who answered “yes” were asked to identify which behaviors they engaged in when they witnessed online harassment. Those who reported they engaged in any one of the following were identified (1 = yes and 0 = no) as having engaged in *intervention*: “flagged offensive content,” “reported another user to a website or platform,” “directly responded to another person’s harasser,” or “offered [their] support to someone being harassed.”

Respondents who reported having witnessed online harassment were also asked whether witnessing those behaviors “cause[d] [them] to take any of the following steps regarding [their] own online presence.” Those who reported that they engaged in any one of the following were identified (1 = yes and 0 = no) as engaging in *target hardening*: “set up or adjusted your privacy settings,” “changed any information in your online profiles,” “chose not to post something.” Note, *inaction* and *intervention* are mutually exclusive, as are *inaction* and *target hardening*. However, *intervention* and *target hardening* are not mutually exclusive (24.5% of the sample reported having engaged in both target hardening and intervention behaviors). We distinguish between these behaviors because they are theoretically distinct, and therefore may be differently affected by respondents’ perceptions of responsibility.

Independent variables. Descriptive statistics for the independent variables used in the Outcome Models are reported in Table 1. The key Outcome Model independent variables are responses to the question “How much of a role, if any, do you think each of the following groups should have in addressing online harassment?,” listing *users* (“other users who witness the behavior”), *platforms* (“online services such as social media platforms or other websites”), *law enforcement*, and *elected officials* as groups to rate from “no role” (= 1) to “minor role” (= 2) to “major role” (= 3) on a three-point scale. For these variables, higher values indicate a greater perceived responsibility for addressing online harassment.

To capture online experiences and perceptions, respondents were first asked to report how much they had *heard about the issue* of online harassment, with response options ranging from “none” to “a great deal” on a four-point scale. Higher values indicate hearing more about the problem of online harassment. Likewise, respondents were asked about “*how much of a problem, if at all*” is “people being harassed or bullied” online using a three-point scale ranging from “not a problem” (= 1) to “minor problem” (= 2) to a “major problem,” (= 3).

Because online harassment can occur in multiple forms, a *behavior witnessed index* was developed from the question “Have you ever witnessed any of the following behaviors directed at a particular person online?,” with respondents being asked to indicate “yes” or “no” for each of the following behaviors: “someone being called offensive names” (*called offensive names*), “someone being physically threatened” (*threatened*), “someone being harassed for a sustained period of time” (*harassed*), “someone being stalked” (*stalked*), “efforts to purposely embarrass someone” (*embarrassed*), and “someone being sexually harassed” (*sexually harassed*). Affirmative responses to these items were summed into a diversity of *behaviors witnessed index* (ranging from 0 to 6) with higher values indicating more types of online harassment being witnessed.

Relatedly, to account for their views about speech online, using a forced-choice response, respondents were asked to identify the statement closest to their views in terms of importance: “people being able to speak their minds freely online,” (= 0) or “people being able to feel welcome and safe online” (= 1). Thus, *online should be safe space* is a dummy variable that indicates respondents selected the latter response.

Given findings that prior victimization can influence an individuals’ use of crime prevention strategies (e.g., Reynolds et al., 2016; Schreck et al., 2018), whether a respondent had ever been an *online harassment victim* was included in this study. Respondents were asked whether they had experienced the six online harassment behaviors listed above (e.g., been sexually harassed, been called offensive names, and been physically threatened). *Online harassment victim* was then coded so that a respondent who provided an affirmative response to one or more of these items was identified as a victim (= 1), and a respondent who did not provide an affirmative response to any of these items was identified as not a victim (= 0). Likewise, the Outcome Models also controlled for the age and sex of the respondent (*female*) using the same coding strategy described in the Selection Model section. These two demographics are standard control measures in bystander intervention research (see, e.g., Banyard, 2011; Banyard et al., 2005; Coker et al., 2016). Gender, in particular, has received much attention in bystander intervention research, with some research suggesting that female-identifying individuals may be more likely to engage in bystander intervention (see, e.g., Banyard, 2011)³.

Analytical Strategy

To answer the research questions listed above, we employ a two-phase analytic strategy. The secondary dataset downloaded from the Pew Research Center included the weights that Pew computed through the aforementioned weighting procedures (SRBI et al., 2017), which were then applied by the researchers for the current study. Thus, all analyses were conducted with the weighted data. In the first phase, we report descriptive statistics for the types of online behavior witnessed as well as *intervention*, *target hardening*, and *inaction* in response to witnessing online harassment, with a specific focus on the frequency of each response. Likewise, we examine the descriptive statistics for how much responsibility for addressing online harassment respondents placed on each of the four groups (i.e., users, platforms, law enforcement, and elected officials).

In the second phase, using a maximum-likelihood selection model with logistic regression, we first estimate the likelihood of having witnessed online harassment or not (the Selection Model) and then estimate the respondent’s actions or inactions (i.e., *intervention*, *target hardening*, and *inaction*),

specifically attending to the effect that the perceived level of responsibility of *users, platforms, law enforcement, and elected officials* each have on the respondent's behavior (the Outcome Model). All analyses were conducted using R, version 4.0.2, using the following packages: *car, haven, psych, sampleSelection, survey, and weights*.

Results

RQ 1: How Do Individuals Respond to Witnessing Online Harassment?

As seen in [Table 1](#), substantial percentages of respondents reported witnessing “someone being called offensive names” (61.24%) and “efforts to purposely embarrass someone” (49.77%). Less common, but still substantive, respondents witnessed “someone being physically threatened” (28.78%), “someone being harassed for a sustained period of time” (25.30%), and “someone being sexually harassed” (21.29%). Respondents least frequently reported witnessing “someone being stalked” (17.00%). Most often, after witnessing an online harassment behavior, respondents reported having taken steps to protect themselves from online harassment (i.e., *target hardening*) (53.93%), with roughly one in three (32.93%) engaging in some form of *intervention* when they witnessed such behavior. Just over one in three (38.80%) responded to witnessing such events by doing nothing (i.e., *inaction*).

RQ 2: Who Do Individuals Believe is Responsible for Intervening in Incidents of Online Harassment?

When asked about how much of a role (again, ranging from 1 = no role, 2 = minor role, to 3 = major role) that users, platforms, elected officials, and law enforcement should play in addressing online harassment, respondents generally assigned the largest role to platforms (mean = 2.64, SD = .60), followed by users (mean = 2.59, SD = .59), law enforcement (mean = 2.41, SD = .64), and elected officials (mean = 2.09, SD = .74). Note that each group has a mean of 2.00 or greater, indicating that, on average, respondents believed that each of these groups had at least a minor role in addressing online harassment. As seen in [Table 2](#), about seven in 10 respondents (70.43%) felt that online platforms should have a major role in addressing the matter, whereas only 32.00% believed that elected officials should have a major role. Notably, nearly half of respondents (49.47%) felt that law enforcement should have a major role in addressing online harassment. Almost one in four respondents (23.13%) felt that elected officials should play no

Table 2. Perceived Role/Responsibility in Addressing Online Harassment ($N = 3709$) (Weighted).

	Perceived Role/Responsibility in Addressing Online Harassment			
	Users (Percent)	Platforms (Percent)	Law enforcement (Percent)	Elected officials (Percent)
No role	5.41	6.37	8.65	23.13
Minor role	30.23	23.19	41.88	44.88
Major role	64.36	70.43	49.47	32.00

Note. Columns may not sum to 100 due to rounding.

role in addressing online harassment, the largest percentage for “no role” across the four groups.

RQ 3: What Influences the Likelihood a Person has Witnessed Online Harassment?

Moving on to Table 3, the top half of the table presents the Selection Model by which individuals “select” into witnessing online harassment for each of the three outcomes investigated (i.e., *intervention*, *target hardening*, and *inaction*). The odds of witnessing online harassment increase, as expected, with exposure to the online environment (i.e., *social media user* and *frequency of internet use*). Conversely, as *age*, *education level*, and *income* increase, the odds of witnessing such behavior decrease significantly. Compared to men, women are less likely to have witnessed online harassment. Finally, compared to White respondents, Black respondents were significantly more likely to witness online harassment and Hispanics significantly less likely. Thus, this heterogeneity in witnessing online harassment across respondents’ demographic characteristics is important in and of itself.

RQ 4: How Do Perceptions of Responsibility Influence Bystander Reactions?

On the bottom half of the table, the Outcome Model presents estimates for the three outcomes (i.e., *intervention*, *target hardening*, and *inaction*) as a function of the key predictors. The coefficients (b) of the Outcome Model are conditioned on the effects of the Selection Model and should be interpreted as such. Accounting for the impacts of selection (i.e., Selection Model), three key findings emerge from the Outcome Model.

First, across several coefficients in each model, the level of responsibility respondents assigned to each group (i.e., *users*, *platforms*, *law enforcement*,

Table 3. Maximum-Likelihood Selection Regression Models ($N = 3709$) (Weighted).

Selection Model: Witnessing Online Harassment

	Intervention		Target Hardening		Inaction	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Demographics						
Age	-.326	.019***	-.335	.019***	-.328	.019***
Female	-.239	.033***	-.246	.033***	-.242	.033***
Black ^a	.158	.067*	.216	.063***	.171	.068*
Hispanic ^a	-.279	.041***	-.295	.041***	-.262	.041***
Other ^a	.128	.059*	.075	.059	.141	.059*
Education level	-.036	.013**	-.037	.013**	-.034	.013**
Income	-.026	.008**	-.031	.008***	-.028	.008***
Online risk/Exposure						
Social media user	.380	.062***	.331	.060***	.374	.062***
High-speed internet user	-.008	.005	-.030	.043	-.015	.045
Frequency of internet use	.081	.010***	.070	.010***	.077	.010***
Constant	.941	.118	1.146	.114	.989	.118

Outcome Model: Response to Witnessing Online Harassment

	Intervention		Target Hardening		Inaction	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Perceived responsibility						
Users	.310	.032***	.060	.030*	-.288	.032***
Platforms	.020	.032	.186	.034***	-.016	.033
Law enforcement	-.135	.033***	.110	.034**	.159	.033***
Elected officials	-.072	.028*	.031	.029	.051	.029
<i>Behaviors witnessed index</i>	.187	.011***	.142	.014***	-.174	.012***
Online experiences and perceptions						
Heard about the issue	.078	.026**	.036	.027	-.095	.027***
How much of a problem	.019	.032	.023	.032	.026	.031
Online should be safe space	.009	.035	-.032	.035	-.036	.035
Online harassment victim	.630	.047***	.189	.037***	-.625	.046***
Demographics						
Age	.148	.027***	-.110	.034**	-.128	.030***
Female	.254	.034***	.276	.048***	-.288	.035***
Constant	-1.915	.129	-1.170	.146	1.641	.129
Log likelihood	-3224.86		-3145.57		-3276.88	
rho	-.688	.097***	.594	.123**	.578	.126***

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$.^aReference group is *White*.

and *elected officials*) was significantly associated with the odds that the respondent engaged in different behaviors after witnessing online harassment. Specifically, the greater the role respondents thought *users* should have in addressing online harassment, the more likely they responded to online harassment with *intervention* and *target hardening*, and the less likely they were to have responded with *inaction*. The greater role respondents thought *platforms* should have in addressing online harassment, the more likely they were to have engaged in *target hardening*. However, the level of responsibility that respondents attributed to *platforms* in addressing online harassment was not significantly associated with *intervention* or *inaction*. The greater role respondents thought *law enforcement* should have in addressing online harassment, the less likely they were to have engaged in *intervention*, but the more likely they were to have engaged in *target hardening* or *inaction*. Finally, as respondents' role expectations for *elected officials* increased, respondents were significantly less likely to engage in *intervention* (the effects on *inaction* and *target hardening* were nonsignificant).

Second, although not directly related to perceived responsibility, we also want to note the significant effects of *behaviors witnessed index*, *heard about the issue*, and *online harassment victim*. Witnessing more types of online harassment was associated with significantly increased the likelihood of *intervention* and *target hardening*. Conversely, witnessing fewer types of online harassment was significantly associated with increased likelihood of responding with *inaction*. Likewise, having heard more about the problem of online harassment significantly increased likelihood of *intervention* and decreased likelihood of *inaction* in response to witnessing online harassment. The effect of having been a victim of online harassment was significant across all three models, with victims being more likely than non-victims to engage in *target hardening* and *intervention* and less likely than non-victims to have responded to witnessing online harassment by doing nothing (i.e., *inaction*).

Third, in line with previous research (Banyard, 2011; Banyard et al., 2005), women who witnessed online harassment were more likely to intervene and engage in *target hardening* and were less likely to respond with *inaction* than men. Additionally, for those who witnessed online harassment, the odds of *intervention* increased with *age*. Conversely, the odds of *target hardening* and *inaction* decreased with *age* for those witnessing online harassment.

Discussion

The pervasive use of the internet by a global society has provided another arena in which people may be victimized. This online access also provides an opportunity for users to take action to stop or prevent victimization from occurring when they witness deviant or criminal behavior online. Still, depending on who internet users feel are responsible for addressing this conduct,

the dispersion of responsibility may lead to inaction, per Latané and Darley's (1970) intervention model. Thus, the current study sought to examine how the perceived responsibility for addressing online harassment across four groups affects the likelihood that respondents engage in intervention, target hardening, or inaction upon witnessing online harassment. We do this by analyzing data collected in 2017 as part of Wave 24 of the Pew Research Center's American Trends Panel. Using a maximum-likelihood selection model, we are able to account for factors (e.g., sociodemographic characteristics and exposure to an online environment) that may influence the likelihood a person witnesses online harassment—and thereby has the opportunity to respond to such behavior—which is a potential source of bias that has plagued prior research on bystander intervention (McMahon et al., 2017). This modeling strategy first accounts for the variation in selection—in our case, witnessing online harassment (RQ 3)—and then allows for estimating unbiased effects of the independent variables on the dependent variables in the Outcome Models—in our case, intervention, target hardening, or inaction (RQ 4)—conditioned upon the effects of the Selection Model.

Considering the factors that affect the likelihood the respondent has witnessed online harassment (RQ 3), we find that their likelihood to have responded to online harassment by intervening is significantly greater when they think users should play a larger role in preventing it (RQ 4). One limitation of the current study is that we cannot be certain that respondents were thinking of their own response when indicating the role they thought "users" should have. However, the significant and positive association between *users* and *intervention* suggests that those who indicate a greater role in addressing online harassment for users tend to take greater personal responsibility for intervening. Thus, this finding—and the finding that *users* is significantly and negatively associated with *inaction*—is consistent with prior research that shows individuals must see themselves as personally responsible for stopping or preventing a harmful situation in order to actually intervene (e.g., Burn, 2009; Felson, 1995; Latané & Darley, 1970; Pugh et al., 2016; Yule & Grych, 2020).

Likewise, our findings support the idea that when responsibility is more diffused (i.e., delegated to specific or general others), individuals are less likely to intervene. Felson (1995) argued that individuals may perceive responsibility as "assigned" to specific people, "diffuse" across multiple people with less precision, or "generalized" across all bystanders or potential guardians. As mentioned above, the *users* measure could arguably be capturing diffuse or general responsibility if respondents were thinking of users *other than themselves*. However, given the divergent effects of the other "who is responsible..." measures—*platforms*, *law enforcement*, and *elected officials*—we argue that the *users* measure more closely captures personal

responsibility, and the other measures are more akin to assigned, diffuse, or general responsibility.

As expected, respondents were significantly less likely to intervene online as the level of responsibility they placed upon law enforcement and elected officials increased. These findings suggest that when responsibility was diffused or generalized to these external, non-specific roles, respondents were less likely to proceed through the steps of the bystander intervention process (Latané & Darley, 1970) and actually intervene. Although indicating a greater role for platforms did not significantly impact the likelihood to intervene, that could be because “online services such as social media platforms or other websites” may be interpreted as referring to the specific entity that hosts the website where the harassment occurs. Therefore, the role for platforms may be most similar to “assigned” responsibility, which, according to Felson (1995), would have a lesser effect on intervention likelihood than “diffuse” or “general” responsibility.

We also examined the effects of the level of responsibility respondents thought users, online platforms, law enforcement, and elected officials should have for addressing online harassment on the likelihood the respondent had engaged in target hardening in response to witnessing online harassment. We find that the greater role respondents thought users, platforms, and law enforcement should have, the more likely they were to have engaged in target hardening in response to witnessing online harassment. Most research on target hardening examines such behaviors as predictors of victimization risk rather than target hardening as an outcome (for exceptions, see Madeira-Hernandez et al., 2020; Reyns et al., 2016; Schreck et al., 2018) and none to our knowledge have examined the effects of perceived responsibility for preventing a harmful situation on target hardening behaviors. The lack of consideration of perceived responsibility in research on target hardening is likely because perceived responsibility is a concept from bystander intervention research, not routine activities research. Thus, as routine activities scholars seek to better understand the effects of target hardening, it may be informative to consider the factors that influence the likelihood to engage in target hardening, including individuals’ perceptions of who is responsible for preventing victimization.

In addition to the perceived responsibility measures, we find that other factors also affect respondents’ behaviors in response to witnessing online harassment. Notably, some of these factors are related to the respondents’ awareness of, or experiences with, online harassment, such as the number of different types of online harassment behaviors they had witnessed, whether they had been victims of online harassment, and how much the respondent has heard about the problem of online harassment. With the exception of *heard about the issue* having a nonsignificant effect on *target hardening*, each of those measures was significant in each of the three models, with positive

effects on *intervention* and *target hardening* and negative effects on *inaction*. Thus, having greater awareness of, or experience with, a form of victimization may increase the likelihood a respondent intervenes to stop that form of victimization or takes steps to protect themselves. These findings are in line with [Butler and Fisher's \(2020\)](#) proposition that certain individuals who have a special knowledge of an issue or a unique stake in addressing that issue (whom they refer to as “mavens”) will be more likely to spread the norm of bystander intervention; in this study, we find that individuals who might be characterized as similar to mavens are more likely to engage in intervention and self-protective target hardening measures.

Findings from the current study move the knowledge base toward better understanding the nature of online bystander behavior, but the current study is not without its limitations, and thus several research questions remain surrounding this new domain for bystander intervention. First, the current study does not fully model the five steps of the bystander intervention process. In the dataset used for secondary analysis in the current study, there were no measures that could be used to capture whether respondents viewed the event they witnessed as warranting intervention ([Latané & Darley's \[1970\]](#) Step 2); nor did the dataset contain items that could be used to measure the mechanisms by which the respondent determines *how* to respond to the event (or whether to respond with some combination of target hardening and intervention strategies) ([Latané & Darley's \[1970\]](#) Step 4). Future research should aim to fully model this process, for which the current study as well as the aforementioned experiments (i.e., [Obermaier et al., 2016](#); [Kazerooni et al., 2018](#)) may be a useful guide.

Another limitation is that respondents were only asked “How much of a role, if any, do you think each of the following groups should have in addressing online harassment?” and then indicated their response (“no role,” “minor role,” or “major role”) for users, platforms, law enforcement, and elected officials. They were not asked to indicate who they believe should have been responsible for addressing the specific harassment incident they reportedly witnessed. Again, experimental designs—such as one where respondents are presented with a controlled simulation of online harassment and are then asked to indicate who they believe should be responsible for addressing the harassment as well as how they would personally respond (see, e.g., [Obermaier et al., 2016](#); [Kazerooni et al., 2018](#))—may be useful for future research to fill this gap. Finally, as mentioned above, we do not know for certain that respondents were thinking of their own personal responsibility when they indicated the degree to which “users” should be responsible for addressing online harassment. Nonetheless, our findings are in line with the theory that the more proximal, rather than diffuse responsibility is perceived, the more likely an individual is to intervene ([Felson, 1995](#)).

Our results suggest paths forward for future researchers, and eventually, practitioners. First, although The Pew Research Center's American Trends

Panel data provide some indication of the frequency of the actions that bystanders take when they witness online harassment, it is unclear how effective these responses are at preventing or stopping the harassment. Therefore, research is needed into the effectiveness of bystander behaviors to identify best practices that could be used to craft prevention programs.

Likewise, some further theoretical work is needed in adapting bystander intervention strategies from the terrestrial world to the online domain. For instance, the larger bystander intervention literature professes the four Ds of intervening based on [Latané and Darley's \(1970\)](#) early research—Direct, Distract, Delegate, and Delay. These tactics are situational, and it is unclear whether or how they apply to online situations such as online harassment. In sum, the application of current bystander intervention strategies is not straightforward; the field would benefit from work explicitly focused on types of interventions across online types of victimization and variable situations.

Following these two avenues for further research, more research is needed to adapt the principles of bystander intervention to different types of online crimes and to examine the effectiveness of these strategies. The present study investigated online harassment in a general sense. Still, there are specific forms of online harassment, such as cyberstalking, cyberbullying, or online sexual aggression, that might be prevented if willing bystanders were aware of the best ways to do so. Best practices for intervention could theoretically be catered to these specific types of online crimes, but first, more research is needed that focuses on what works, for whom, and under what circumstances it could work.

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Notes

1. The terms “bystander intervention” and “guardianship in action” both refer to action taken by a third party (i.e., not the victim or offender) to stop or prevent a potential

crime or victimization incident from occurring. Thus, we use these terms interchangeably.

2. The authors of the current study were not involved in the original data collection. The dataset is publicly available from the Pew Research Center at <https://www.pewresearch.org/internet/dataset/american-trends-panel-wave-24/>
3. Race, education level, and income are not used as control variables in the Outcome Model because although they may affect access to and use of the Internet—and therefore likelihood of witnessing online harassment—there is not, to our knowledge, consistent research demonstrating that race, income, or education level affect likelihood to intervene.

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