CRIMINAL BEWARE: A SOCIAL NORMS PERSPECTIVE ON POSTING PUBLIC WARNING SIGNS*

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Recent studies have suggested that crime-prevention strategies tend to interact with characteristics of the community in such a way that what works in one community might not work in another. In this article, we extend this finding to fear of crime and residents' perceptions of crime using a Focus Theory of Normative Conduct framework. Data are reported from three experiments that examine the impact of publicly posted Neighborhood Watch signs on perceived crime rates and worry about victimization. The studies used a virtual community tour to assess the causal impact of Neighborhood Watch sign presence and content. Across the experiments, we consistently find the potential for publicly posted Neighborhood Watch signs to produce unintended consequences such as increased fear of crime and worry about victimization. Moreover, the outcomes associated with posting the signs are influenced not only by the information printed on the sign but also by an interaction between the signs themselves and the environmental context in which they are posted.

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Neighborhood Watch has become the nation's most widely implemented community-based, crime-prevention program. In the 30 years since its inception, the program has become "the nation's flagship citizen-partnership program" (Ashcroft, 2004) and is now the largest structured crime-prevention activity in the nation (National Crime Prevention Council, 2001). Despite the prevalence of the program, surprisingly few rigorous empirical studies show that Neighborhood Watch can be an effective deterrent to crime (Cirel et al., 1977; Greenberg, Rohe, and Williams, 1985; Lavrakas and Lewis, 1980; Lindsay and McGillis, 1986; Poyner, 1993; Rosenbaum, 1986; Sherman et al., 1998). A recently published meta-analysis of the existing Neighborhood Watch evaluation studies revealed considerable variation in the conclusions about the effectiveness of Neighborhood Watch in both the United States and the United Kingdom, with some evaluations concluding that the program is effective at deterring crime and others concluding that it is ineffective (Bennett, Holloway, and Farrington, 2006). In fact, some of the most carefully controlled studies show nonsignificant effects and even *increases* in fear of crime among residents following initiation of the program (Rosenbaum, 1986).

Nearly all of the peer-reviewed research on the Neighborhood Watch program has examined the effectiveness of the program as a whole. However, Neighborhood Watch programs have many different elements that are represented to varying degrees across the hundreds of programs nationwide. Given the mixed conclusions in regard to the impact of Neighborhood Watch programs, a needed next step is to examine the elements of the program to figure out what works and what does not; that is, to unpack the program and to test its underlying elements.

One of the most notable and distinguishing aspects of the program is the prominent posting of Neighborhood Watch signs. At a general level, Neighborhood Watch signs convey a clear normative message that "crime is not tolerated here." As such, a promising approach to the evaluation of Neighborhood Watch signs comes from research on social norms and normative beliefs. The process of normative social influence and applications of social norms theory to address specific social problems have been conducted across a range of behavioral domains, like recycling (Schultz, 1999), energy conservation (Schultz et al., 2007), and anti-littering campaigns (Cialdini, Reno, and Kallgren, 1990). However, recent studies by Cialdini (2003) and Schultz et al. (2007) suggest that, in some circumstances, presenting normative information can backfire to produce an effect that is opposite to what is intended.

The potential for normative messages to produce these boomerang effects is also consistent with recent research that shows an interaction of crime-prevention activities with characteristics of the community (Miethe and McDowall, 1993; Wilcox, Madensen, and Tillyer, 2007). On the one

hand, results show some evidence for main effects—for example, guardianship behaviors (e.g., installing a burglar alarm, owning a dog, and/or having a weapon at home) decrease the likelihood of burglary victimization. Wilcox, Madensen, and Tillyer reported an 11 percent reduction in burglary rates for each protective behavior (measured from 0 to 6). Similarly, they showed a decrease of 21 percent for homes that were in a more defensible space (e.g., physical characteristics of the property that make it more easily watched). But on the other hand, they also found considerable evidence for interaction effects, whereby the effectiveness of a particular crime-prevention strategy interacted with characteristics of the surrounding community to moderate their impact (see also Outlaw, Ruback, and Britt, 2002).

In the current article, we begin to explore the interactional effects of one community-based, crime-prevention strategy—posted Neighborhood Watch signs—and we provide a theoretically derived prediction about the types of communities in which it will be most (or counter) effective. Our focus in this article is on perceptions of crime and fear of crime and not on crime rates per se, although we sketch some connections between the two in the Discussion section.

NORMATIVE SOCIAL INFLUENCE

Psychologists and sociologists have had a long-standing interest in social norms, and a sizeable volume of research has examined the role of normative beliefs in an individual's attitudes, concerns, and behaviors (cf. Hechter and Opp, 2001; Kerr, 1995; Schultz, Tabanico, and Rendón, 2008). Social norms are the common and accepted behaviors for a specific situation; "rules and standards that are understood by members of a group, and that guide and/or constrain human behavior without the force of laws" (Cialdini and Trost, 1998: 152). These rules and standards are often a by-product of social interaction, and the norms can be stated explicitly or implied from contextual cues. Furthermore, consequences for deviating from these norms come from social networks rather than from the legal system. Although social norms refer to the actual levels of a specified behavior within a group, normative beliefs are an individual's cognitions and evaluations of the behavior. Normative beliefs reside within the individual and can vary in the degree to which they accurately reflect reality.

The Focus Theory of Normative Conduct (Cialdini, Kallgren, and Reno, 1991; Cialdini, Reno, and Kallgren, 1990) distinguishes between two types of social norms, each of which motivates behavior in a unique way. First, *descriptive norms* refer to an individual's beliefs about what is typically done or what most people do in a particular situation. Because descriptive norms provide information about how others behave, they imply that

doing the same would likely be an adaptive choice (Allison, 1992; Solomon, Greenberg, and Pyszczynski, 1991). For example, the message that an area is a "high crime area" or "drug trafficking area" (messages taken from actual signs posted in a major metropolitan area) might suggest that crime is common in that community. Likewise, the message that an area is a "crime free zone" would suggest the opposite—that crime is not typical in that community. The second type of social norm is the *injunctive norm*. Injunctive norms operate by conveying a message about what is approved or disapproved of in a particular situation. In other words, injunctive norms are messages that point to what other people think *should* be done, and as a result, they motivate behavior by promising social rewards for acting in accordance with the norm (or social sanctions for deviating from the norm). For example, a message that a community is an "active neighborhood watch area" or a picture of a criminal with a red circle and bar through it points to an injunctive norm that crime is not approved of and that other people in the area disapprove of criminal behavior.

Although injunctive and descriptive norms can be individually influential, it is when they are aligned (or misaligned) that the effects become particularly potent. Moreover, when two inconsistent norms exist simultaneously, the norm that is activated, or made focal, will have the greatest influence on subsequent behavior (Cialdini, Reno, and Kallgren, 1990). As an illustration, Cialdini, Reno, and Kallgren conducted a series of studies in which they varied the amount of litter present in various field settings. Participants were given an opportunity to litter a handbill into either a clean or a littered environment after witnessing a confederate either drop trash into the environment or walk past it. Results showed that participants littered significantly more often in the littered environment than in the clean environment, which supports the overall influence of descriptive norms on behavior. More importantly, the results also showed an interaction in which the *most* littering occurred after witnessing a confederate drop trash into a littered environment, whereas the *least* littering occurred when participants saw a confederate drop trash into a clean environment. Cialdini, Reno, and Kallgren argue that witnessing a person litter into a clean environment made salient the descriptive norm of not littering and, thereby, motivated behavior that conformed to this norm.

Such findings have implications for activating normative beliefs through publicly posted signs. Based on these findings, we would predict that posting a sign with a descriptive norm about crime would produce commensurate changes in perceptions of community safety and crime rates. However, we would also expect an interaction. That is, the posted sign would make focal the contextual cues of the surrounding environment and, depending on the cues, would either increase or decrease perceptions of crime rates. In the context of Neighborhood Watch, posting a sign in a

community perceived to be low in crime (e.g., an affluent community) should increase feelings of safety and reduce worries about victimization, but the same sign could actually produce an increase in such perceptions in a neighborhood already perceived to be high in crime (e.g., a low income area). We predicted that just as seeing a confederate litter focused individuals on the environment (either clean or littered), placing a sign about crime in a neighborhood will focus individuals on the prevalence of criminal activity there. Although such a hypothesis is consistent with the Focus Theory of Normative Conduct, it has yet to be tested empirically using public-posted messages.

The 2000 National Crime Prevention Survey found that 41 percent of the U.S. population lived in a community that had a Neighborhood Watch program (National Crime Prevention Council, 2001). In addition, our conversations with numerous law enforcement agencies across the country suggest that more than one million Neighborhood Watch signs are posted throughout the United States. Because of the potential for norms to influence behavior in unintended ways and the lack of empirical research that documents the outcomes associated with posting Neighborhood Watch signs, research is needed that examines normative messages portrayed by these signs (particularly in cases in which the normative message may be inadvertently counterproductive). The current research focuses on the normative components of Neighborhood Watch signs and their role in fear of crime and worry about victimization. Because no research to date has investigated the impact of Neighborhood Watch signs on the community, basic research in a controlled laboratory environment is a necessary first step to identifying effects that subsequently can be tested in a field context.

EXPERIMENT 1

The goal of our first experiment was to assess the causal impact of Neighborhood Watch sign presence and content on perceptions of community safety. Three Neighborhood Watch signs were incorporated into a series of slide-show presentations. The slide shows consisted of a collection of color digital photos of houses and community features similar to those photos used by realtors at websites that list homes for sale. Outcomes and demographics were measured using a questionnaire. We hypothesized that the normative content on Neighborhood Watch signs would affect fear of crime and worry about victimization.

Participants were undergraduate students recruited from the Psychology Department's Human Participant Pool at California State University. A target sample size of 180 participants was selected to allow for 45 participants per cell, a sufficient sample size to provide for 80 percent power to

detect a medium between-subjects effect for two means (Cohen, 1992). Demographic information for participants, across all three experiments, is shown in table 1. Because the assignment of participant to condition was random, the experimental conditions within each experiment were similar in their demographic composition, although minor differences did exist. Sample sizes for each experimental condition are shown in table 2.

Table 1. Demographic Characteristics of Participants in Three Experiments

		Gender		Age		Never Married	Have Children	Own a Home
	N	M	F	Mean	SD	%	%	%
Experiment 1	179	51	128	19.86	3.19	79	2	3
Experiment 2	229	69	160	27.65	11.61	52	35	29
Experiment 3	363	117	246	20.88	4.86	83	4	5

ABBREVIATIONS: M = male; F = female; SD = standard deviation.

NEIGHBORHOOD WATCH SIGNS

Neighborhood Watch signs were purchased from a private vendor, so they would appear professional and realistic. The graphic design, size, and language of the signs used in this study were based closely on actual signs posted in communities throughout the United States. The signs used the traditional orange and white color scheme with black text. All of the signs included the familiar picture of a burglar with a red circle and bar to indicate an injunctive norm for disapproval of criminal behavior. The three Neighborhood Watch signs that were used represented an injunctive norm alone, a low descriptive norm for crime, or a high descriptive norm for crime. The wording on the three signs was as follows:

- Generic (injunctive norm, program only)—"Neighborhood Watch Program in Force."
- Low Descriptive Norm—"Neighborhood Watch Program in Force: This area has been identified by the City as a Crime Free Zone."
- High Descriptive Norm—"Neighborhood Watch Program in Force: This area has been identified by the City as a High Crime Area."

COMMUNITY TOUR SLIDE SHOW

Digital color images of a for-sale home and the surrounding neighborhood of a middle-class community in North County, San Diego, were used as stimuli for the study. The for-sale home was selected based on the results of a pilot study in which participants estimated the market value of 15 homes in various communities. Based on data from the U.S. Census, we

Table 2. Sample Sizes, by Condition, Across Three Experiments

	Condition		
	SES	**Sign Type**	***n***
Experiment 1	Middle	Generic	45
	Middle	No sign	46
	Middle	Low crime	45
	Middle	High crime	43
		TOTAL *N*	179
Experiment 2	Low	Generic	40
	Low	No sign	54
	Middle	Generic	37
	Middle	No sign	28
	High	Generic	27
	High	No sign	43
		TOTAL *N*	229
Experiment 3	Low	New	46
	Low	Aged	44
	Low	Defaced	45
	Low	No sign	46
	High	New	45
	High	Aged	46
	High	Defaced	46
	High	No sign	45
		TOTAL *N*	363

selected three communities that were high, middle, or low income areas. Five for-sale homes were photographed within each of these communities, and the images were used as stimuli in a pilot study. Participants in the pilot study were asked to view each of the 15 different homes (in randomized order) and answer a series of questions about each (e.g., market price). The pilot survey data were analyzed descriptively to select three homes to include in the community tour slide shows developed for our subsequent studies. Experiment 1 used the home identified as middle socioeconomic status (SES).

With the homeowner's consent, exterior and interior photos were taken of the stimulus home using a 5.0 megapixel digital camera. The slide show was scripted so that each photograph appeared for 15 seconds. Pilot testing revealed that this was enough time for participants to scan the scene, see the Neighborhood Watch sign, and read it completely. Three slide shows were designated as Neighborhood Watch communities with one of

the three sign types posted, and the fourth slide show served as a control with no posted crime-prevention signs.

Each slide show consisted of 20 images of the home and community with 10 images of the exterior of the home and community (without the Neighborhood Watch sign in view), 5 images of the interior of the home, and 5 images of the front exterior of the home with the Neighborhood Watch sign in view (or no sign for the control condition). In the three Neighborhood Watch slide shows, five images were replaced with identical images in lighting and angle but with one of the three Neighborhood Watch signs prominently displayed. Images of the Neighborhood Watch signs were digitally edited into the slide show. This alteration was done to ensure that the four slide shows were identical in all other respects except for the presence and type of the Neighborhood Watch signs posted in the community. Each sign was digitally "aged" to give it a natural appearance in the community, and the images were pilot-tested to ensure a realistic appearance.

SURVEY

A questionnaire was used to assess perceptions of the community, home value, fear of crime, and worry about victimization.

- Victimization Worry Scale. This scale, developed by Williams, McShane, and Akers (2000), lists 15 offenses for which respondents are asked to estimate their chances of victimization during the coming year. For the purposes of this study, the wording of the base question was adapted slightly (the adapted language is shown in parentheses). The item read as follows: "We would now like to know how you feel about your chances of being a victim of any of these offenses during this coming year (if you lived in this community). On a scale from 0 to 10, how worried are you (would you be) about being a victim of. . .?" Each offense was rated from 0 (not worried at all) to 10 (very worried), and the resulting Cronbach's alpha was .96.
- Fear of Crime. Historically, much of the research on crime and fear of crime has used a single item to assess an individual's fear of walking alone at night. Participants rated one item in regard to the extent to which they believed that residents in the community could "walk alone at night without fear of attack."

PROCEDURE

Participants were told that the study was about "New Techniques in Home Sales." No mention was made of crime or of the Neighborhood Watch program. Participants were tested individually and were randomly

assigned to view one of the four slide shows that depicted a middle-class community in which a home was for sale. Pilot testing revealed a significant overall tendency for women to report being more fearful of crime than men. This tendency has been found in much of the literature that has investigated demographic variables related to fear of crime (e.g., Rountree and Land, 1996). As a result, separate blocked randomization procedures were used for men and women to ensure that the proportion of men to women was consistent across condition and to create experimental conditions with equal sample sizes.

The study used a double-blind procedure such that the researcher was blind to experimental condition. After providing informed consent, participants watched the 7-minute slide show and then completed a questionnaire about their perceptions of the community and the for-sale home.

RESULTS

Analyses were conducted on complete data from 179 participants. Results of a 2 (gender) × 4 (sign type) factorial analysis of variance (ANOVA) with worry about victimization as the dependent variable revealed a significant main effect for sign type (F (3,171) = 4.74, $p < .01$). As predicted, follow-up planned comparisons showed that participants who viewed a community in which a high-crime descriptive norm sign was posted perceived a significantly greater likelihood of being victimized by crime (M = 3.41, SD = 2.14) than participants in the no sign (M = 2.32, SD = 1.97; $t(171) = 2.83$, $p < .01$; $d = .53$), generic (M = 2.54, SD = 1.80; $t(171) = 2.26$, $p < .05$; $d = .44$), or low-crime descriptive norm condition (M = 1.79, SD = 1.32; $t(171) = 4.16$, $p < .001$; $d = .95$). The difference between the generic sign and the control (no sign) condition was not significant, but the trend was toward greater worry about victimization in the generic sign condition. Neither the main effect for gender nor the interaction effects were significant.

Results of a 2 (gender) × 4 (sign type) factorial ANOVA with responses to the item "walking alone at night without fear of attack" as the dependent variable revealed a main effect for sign type ($F(3,170) = 5.54$, $p < .01$). Follow-up comparisons showed that participants in the high-crime condition (M = 2.23, SD = .81) reported that they would feel significantly more fearful than participants in the low-crime (M = 2.87, SD = .63; $t(170) = 3.91$, $p < .001$; $d = –.89$) or no sign (M = 2.80, SD = .88; $t(170) = 3.54$, $p < .001$; $d = –.67$) conditions. Participants who viewed the community with a low-crime sign posted reported that they would feel less fearful than those who viewed the community with the generic sign posted ($t(170) = 1.99$, $p < .05$). The difference between the generic sign and the control (no sign) condition was not significant, but again, the trend was toward greater fear in the generic sign condition.

The results of experiment 1 showed that the content of posted Neighborhood Watch signs can significantly affect perceptions of community safety. Participants who viewed a community with a Neighborhood Watch sign that contained a "high-crime" message reported significantly greater worry about victimization and greater levels of fear compared with those in the generic, no sign, or low-crime conditions. Conversely, the individuals in the low-crime descriptive norm condition reported the lowest levels of worry about victimization and fear of crime. It is important to point out that high descriptive norm messages are not uncommon in Neighborhood Watch programs around the country. In addition, many other media and publicly disseminated materials highlight the severity of crime in communities. Thus, although the results from this first experiment might appear to be common sense, it is important to demonstrate the effect empirically.

More interesting theoretically are the effects for the generic Neighborhood Watch sign. Results showed that participants who viewed the community in which a generic Neighborhood Watch sign was posted reported slightly greater levels of worry about victimization and fear of crime, compared with the individuals in the "no sign" condition, but the effect was small and did not reach statistical significance with the current sample size. However, this pattern suggests that the mere posting of a Neighborhood Watch sign may be sufficient to influence perceptions of the community in a negative way. This possibility was explored further in our second experiment.

EXPERIMENT 2

The goal of our second experiment was to replicate the basic findings from experiment 1 and to extend the findings to examine the moderating role of community SES on the effects of the posted signs. Based on the Focus Theory of Normative Conduct, we hypothesized that the signs would operate differently as a function of the environment in which they were posted. Specifically, we predicted that the basic posting of a message about crime would make salient the environmental context of the community, thereby decreasing worry about victimization in a high-SES community but *increasing* worry in a low-SES community.

Participants in experiment 2 were community residents and homebuyers recruited through a variety of community outreach efforts. The purpose of the recruitment procedure was to draw a more diverse sample than is typically found on university campuses, and for whom the issue of community crime and victimization might not be personally relevant. Our goal was not to obtain a representative sample, but a sample with a greater percentage

of homeowners and single-family residents than in experiment 1 of university students.[1] A demographic summary of the participants in each of the three experiments is shown in table 1. As shown in the table, the participants in experiment 2 were older, more likely to be married, own a home, and have children than the university students who participated in experiments 1 and 3.

The experimental procedure used in experiment 2 was similar to that used in experiment 1, but all materials were administered via the Internet. Using an online web interface, participants were randomly assigned to an experimental condition. Note that, because of the simple random assignment procedure, sample sizes were not identical across conditions. In experiment 1, we used a blocked random assignment procedure that resulted in similar sample sizes and in an equal number of males and females in each cell. However, random assignment to condition is a fundamental strength of this study, and including gender as a variable in the statistical analysis eliminates it as a potential confound. Given the unequal sample sizes across the experimental conditions, the reported means for main effects are equally weighted marginals.

The design was a 2 (gender) $\times$ 2 (Neighborhood Watch sign, no sign control) $\times$ 3 (community SES: low, middle, or high) factorial ANOVA. Our target sample size was 270, which would allow for 45 participants per cell (assuming an equal distribution across conditions). The final sample sizes for each condition are shown in table 2. The online community tour was constructed in the same manner as experiment 1, and it was designed to simulate those slide shows widely used to sell real estate. The web experiment took the same middle-class community tours used in experiment 1 as well as two additional sets of community tours to represent low- and high-income communities. A total of six slide shows were used, such that Neighborhood Watch sign presence or absence was represented across each of three communities (low, middle, and high SES). The dependent measures consisted of survey items completed after the virtual tour with items adopted from experiment 1.

Our focus in this experiment was on the generic Neighborhood Watch sign compared with a no sign control condition. Drawing on the Focus Theory of Normative Conduct, we hypothesized that posting a Neighborhood Watch sign in a low-SES community would produce a *greater* perceived likelihood of victimization, whereas in a high-SES community, the

1. The methods and materials used in this second experiment were also used in a separate experiment with university students. Although we do not report the details of that study here, the findings are consistent with those found for this sample of the general public. The details of the study are available from the authors and are described in a technical report submitted to the National Institute of Justice.

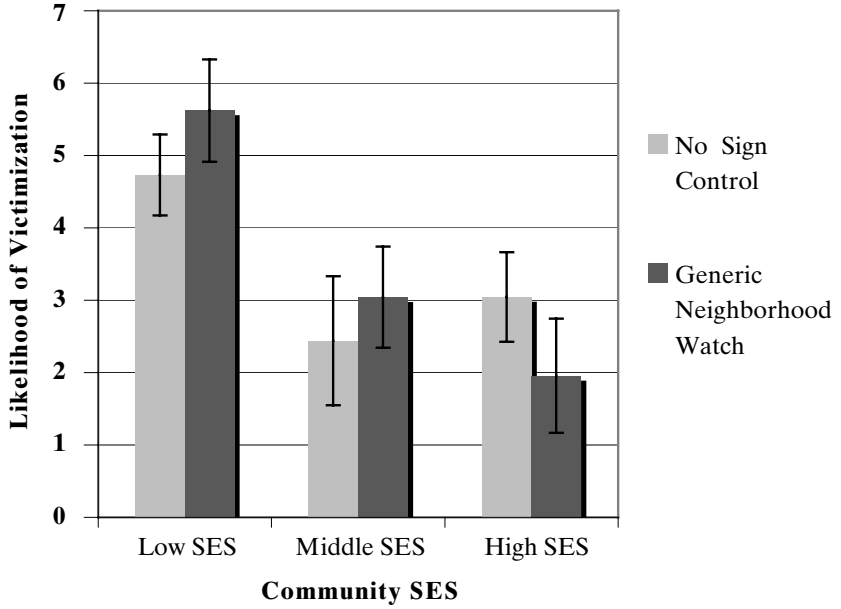
presence of a Neighborhood Watch sign would result in a *lesser* likelihood of victimization. That is, the sign by itself (without any additional normative information) would make aspects of the physical environment more salient and, thereby, make focal the heightened perception that "crime happens" in low-SES areas.

RESULTS

Analyses are based on data from 229 participants. Data were analyzed using a 2 (gender) × 3 (community SES) × 2 (Neighborhood Watch sign or control) ANOVA. Our first analysis examined scores on the worry about victimization scale (15 items, *alpha* = .97; Williams, McShane, and Akers, 2000). Results revealed a main effect for community SES ($F(2,217) = 37.43$; $p < .001$), such that participants reported a greater likelihood of victimization in the low-SES community ($M = 5.18$ out of 10, SD = 2.12) compared with the middle-SES ($M = 2.74$, SD = 2.01) and high-SES communities ($M = 2.50$, SD = 1.80). The analyses also revealed a sign type × SES interaction ($F(2,217) = 4.57$; $p = .01$). As predicted, pairwise comparisons showed that in the low-SES condition, the presence of a Neighborhood Watch sign resulted in *greater* reported concerns about victimization ($M = 5.62$; SD = 2.25), compared with the control condition ($M = 4.73$, SD = 2.04; $t(217) = 1.84$, $p < .10$; $d = .41$). Conversely, in the high-SES condition, sign presence caused less worries about victimization ($M = 1.96$, SD = 2.04) compared with the control ($M = 3.04$, SD = 2.27; $t(217) = -2.24$, $p < .05$; $d = -.50$). Results for the middle-SES condition were similar to low-SES, although the effect was not as strong: sign ($M = 3.04$; SD = 1.95) and control ($M = 2.44$, SD = 2.34; $t(217) = 1.22$, NS) (see figure 1).

Results of a 2 (gender) × 3 (community SES) × 2 (Neighborhood Watch sign or control) ANOVA with responses to the item "walking alone at night without fear of attack" as the dependent variable also revealed a main effect for community SES ($F(2,217) = 20.82$, $p < .001$), such that participants reported greater levels of fear in the low-SES community ($M = 2.15$ out of 4, SD = .69) compared with the middle- ($M = 2.68$, SD = .75) and high-SES communities ($M = 2.91$, SD = .53). Although the sign type by SES interaction was not significant, the pattern of means is consistent with our prediction and similar to that observed for worry about victimization. In low- and middle-SES communities, the presence of a Neighborhood Watch sign led to a heightened fear of crime compared with the control condition. But, in the high-SES condition, the effect was reversed, with participants reporting reduced fear when the sign was present.

Figure 1. Worry About Victimization Across Experimental Condition



Note: Error bars show the 95 percent confidence interval of the mean.

In addition to the worry about victimization and fear of crime measures used in experiment 1, the web experiment included an additional dependent measure of self-protective behaviors. Using a scale from 1 (very unlikely) to 5 (very likely), participants were asked to report on their likelihood of engaging in six self-protective behaviors if they were to purchase the for-sale home. The six behaviors were as follows: install additional security locks, install a burglar alarm, obtain a guard dog, install motion sensors or timers for outdoor lighting, purchase a firearm for protection, and purchase a safe for valuables. Results revealed a main effect for community SES ($F(2,217) = 8.26$; $p < .001$), such that participants reported a greater likelihood of taking self-protective measures in the low-SES community ($M = 3.53$ out of 5, SD = .78) compared with the middle- ($M = 3.18$, SD = .89) and high-SES communities ($M = 3.00$, SD = .84). The sign type × SES interaction approached significance ($F(2,217) = 3.37$; $p = .08$). The pattern of means was consistent with predictions, whereby in low-SES communities, posting a generic sign resulted in a greater likelihood of engagement in self-protective behaviors compared with when no sign was posted. Conversely, in high-SES communities, posting a generic sign

resulted in a lower likelihood of engagement in self-protective behaviors compared with when no sign was posted.

EXPERIMENT 3

The results from the first two experiments provide evidence for the predicted interaction of publicly posted signs about crime and the physical context of the community. However, the Neighborhood Watch signs used in the experiments were new (albeit aged slightly to appear natural). But in reality, Neighborhood Watch signs remain posted for years, and they often show signs of wear, damage, and even graffiti or defacement. Indeed, one explanation that has been given for high levels of crime and fear of crime in certain communities is the breakdown of informal social control processes that are believed to contribute to the maintenance of social order (Wilson and Kelling, 1982). For example, the broken windows theory suggests that signs of disorder and crime, such as graffiti or broken windows, indicate a breakdown of informal social controls and can lead to the rapid deterioration of a community (see also Keizer, Lindenberg, and Steg, 2008). In this third experiment, we continued to examine the effect of posted Neighborhood Watch signs by using signs that were new, severely aged, or defaced with graffiti.

We reasoned that a new sign conveys a different normative message than an aged sign or a sign that has been defaced. New signs demonstrate recent community engagement and a strong injunctive norm against criminal activity. As such, we hypothesized that a new sign would weaken the impact of community SES on fear of crime and worry about victimization. That is, a new sign should be less likely to increase fear of crime in low-SES communities, relative to an aged or defaced sign, because it communicates a strong injunctive norm against crime and a greater level of community engagement.

Participants in our third experiment were 363 university students. The minimum sample size of 360 participants was selected to allow for 45 participants per cell, which is a sufficient sample size to provide for 80 percent power to detect a medium between-subjects effect for two means (Cohen, 1992). See table 2 for final sample sizes across experimental conditions.

Experiment 3 used the same generic (injunctive norm, program only) sign that was used in experiments 1 and 2. In addition, we created two variations that are as follows: an aged sign and a defaced sign. The aged sign contained the identical generic wording, but it was modified to show indications of aging, such as bending, rust, fading, and scratches. The defaced sign was modified to reflect an act of vandalism, and it was spray painted with stylized “tagging.”

A total of eight slide shows were used in experiment 3, such that each of the three signs (and a no sign control) was represented in each of two communities (low or high SES). The experiment used the same community tour procedure reported in experiment 1. For each SES, three slide shows were designated as Neighborhood Watch communities with one of the three sign types posted, and the fourth served as a control. As with our previous studies, a questionnaire was used to assess outcomes and demographics. Our focus below is on worry about victimization.

Like experiments 2 and 3, the participants were tested individually using a double-blind procedure. Experiment 3 was described as "New Techniques in Home Sales," and participants were assigned randomly to an experimental condition using a blocked assignment procedure such that the sample sizes across conditions were similar, and each condition was balanced on the number of males and females.

We focused our analyses on worry about victimization. However, because one of the conditions depicted a criminal act (vandalism), we focused our analyses on the single item that pertained specifically to burglary. The item read as follows: "On a scale from 0 (not at all worried) to 10 (very worried), how worried would you be about being a victim of burglary."

The results from a 2 (SES: high and low) $\times$ 4 (Sign: new, aged, defaced, control) factorial ANOVA with worry about burglary as a dependent variable showed several effects. As before, the results showed a significant main effect for SES ($F(1,355) = 164.08$, $p < .001$), with participants who viewed the low-SES home expressing more worry about victimization ($M = 6.45$, SD = 2.27, $n = 181$) than participants who viewed the high-SES home ($M = 3.36$, SD = 2.38, $n = 182$). More relevant to our hypotheses, the results showed a significant sign type $\times$ SES interaction ($F(3,355) = 2.82$, $p < .05$). The mean scores showed that for the low-SES home, all three Neighborhood Watch signs produced an increase in worry about burglary, which include the new sign ($M = 6.13$, SD = 2.19, $n = 46$), aged sign ($M = 6.66$, SD = 2.16, $n = 44$), and defaced sign ($M = 7.04$, SD = 2.25, $n = 45$), compared with the no sign control ($M = 6.00$, SD = 2.39, $n = 46$). Paired comparisons showed that the differences between the no sign control and the aged and defaced signs were statistically significant. However, for the high-SES home, the pattern showed smaller effects, with the aged sign producing lower rates of worry ($M = 2.65$, SD = 1.95, $n = 46$) than the no sign control ($M = 3.29$, SD = 2.18, $n = 45$). The new sign and defaced sign did not differ significantly from control.

DISCUSSION

The results from the three reported experiments show that posted Neighborhood Watch signs have a causal impact on worry about victimization, fear of crime, and self-protective behaviors. However, consistent with the Focus Theory of Normative Conduct, the effect is not always in the desired direction. In the first experiment, we found that the content of a publicly posted Neighborhood Watch sign directly affected perceptions of community safety in a middle-class community. In the second experiment, we found evidence for an interaction of sign presence with community SES. In high-SES communities, posting a generic Neighborhood Watch sign led to a decrease in perceived likelihood of victimization and fear of crime, which is consistent with the goals of the program. However, in the low-SES communities, the presence of a Neighborhood Watch sign had an opposite effect—it increased fear of crime and decreased perceptions of community safety. In the third experiment, we showed that the physical condition of the Neighborhood Watch signs affected worry about victimization, but the effect was particularly prevalent in the low-SES area where aged signs and defaced signs led to *increases* in worry. In a high-SES community, the aged sign resulted in lower levels of worry and no effect existed for a tagged sign.

The reported interactions are consistent with recent studies of burglary and the individual- and community-level predictors of burglary victimization. In their multilevel analysis of residential survey data, Wilcox, Madensen, and Tillyer (2007) found considerable evidence for the interaction of individual protective behaviors with community characteristics. That is, the effectiveness of a particular guardianship strategy interacted with characteristics of the surrounding community to moderate its effectiveness. In summarizing their findings, Wilcox, Madensen, and Tillyer (2007: 794) state that such interactions:

> . . . have important crime-prevention implications. Most crime-prevention policy is "single level" in nature, focusing on either individual/situational prevention practices or community-based crime prevention. Our findings suggest that such strategies need to be considered in conjunction with one another. Individual or microsituational guardianship measures will not yield the same crime-reduction benefit in all environmental contexts.

Our results are consistent with this basic pattern of interactions and go one step further. Our findings begin to offer a theoretical account for why particular crime-prevention activities might interact with community-level characteristics. In our case, we argue that publicly posted Neighborhood Watch signs make salient the contextual aspects of the community and serve to exacerbate preexisting differences.

These findings have important implications for community-based, crime-prevention efforts. Currently, no concrete regulations exist as to the type of information presented on Neighborhood Watch signs, and our review of commercial vendors suggests that considerable variation is present nationwide. On the one hand, most Neighborhood Watch signs convey a strong injunctive message against criminal activity. Samples of such language include "We report all suspicious activity to the police" and "we look out for each other." On the other hand, however, we also believe that the signs convey a descriptive norm—both implicitly and explicitly. Implicitly, the mere posting of the sign suggests that "crime is a problem here"—otherwise, why would the community need such a sign? Explicitly, several signs convey a descriptive norm that "crime happens here." Examples of such language include "High profile enforcement area," "Drug trafficking area," and "Crime in this area will be aggressively prosecuted" (messages taken from actual Neighborhood Watch signs). In another example, law-enforcement officials in a large metropolitan area posted signs that read "you are entering an active neighborhood watch area—high profile enforcement area—drug/prostitution violations will be aggressively prosecuted—license plates are subject to random police checks." Although these signs are well intentioned, a clear misalignment of norms is present.

Given the findings from the reported experiments, how might the Focus Theory of Normative Conduct inform future efforts to reduce these unintended consequences? Here we offer three suppositions. First, posted signs should avoid scare tactics and cues about the high prevalence of a problem. In an applied test of the Focus Theory of Normative Conduct and publicly posted signage, Cialdini (2003) reported a greater incidence of theft of wood pieces from Arizona's Petrified Forest when signs focused on the descriptive norm of theft as a problem. As a result, Cialdini warns that, "in situations that are characterized by high levels of socially censured conduct, it is a serious error to focus an audience on what is done there" (2003: 105). As we demonstrated in experiment 1, the content of the messages posted on Neighborhood Watch signs directly can affect perceptions of community safety and crime rates. In particular, Neighborhood Watch signs that focus on crime as a problem can lead to heightened perceptions of fear and worry about victimization. Neighborhood Watch programs recognize that crime makes citizens fearful and socially isolated. Although the programs try to reduce this fear by increasing social cohesion, the findings from these experiments suggest that the public posting of Neighborhood Watch signs that focus on crime can potentially undermine this goal.

Relatedly, our results suggest that worry about victimization and fear of crime work at a general level rather than at a level that is crime specific. Indeed, one of our primary dependent variables was a 15-item "Worry

About Victimization" scale, adapted from Williams, McShane, and Akers (2000). This scale contains questions about various offenses, which range from property crime (e.g., burglary or car theft) to violent crime (e.g., assault or murder). Although such offenses are distinct, the high degree of internal reliability for these items suggests that they reflect a broad-based concern about victimization. A supplemental factor analysis revealed that these 15 items all loaded on a single factor. This pattern suggests that although Neighborhood Watch programs tend to target property crime, their impact on community perceptions extend to social disorder more generally. Such findings are consistent with work by Keizer, Lindenberg, and Steg (2008) who show that when norm-violating behaviors are perceived to be more common, the overall goal of acting appropriately is weakened, thereby fostering a range of "disorderly" behaviors. In their studies, seeing graffiti on the wall increased the probability of littering; and in another study, the presence of graffiti increased the probability of stealing money in a found envelope.

Second, program developers should recognize that posted signs operate differently in different community contexts. Importantly, in situations in which the message on the sign is incongruent with the physical characteristics of the community, the sign has the potential to backfire. This basic effect extends far beyond community-based crime messages; for example, anti-littering, graffiti, recycling, water conservation, highway speeding, and many other areas of applied behavioral research all present situations in which the norm conveyed by the physical environment can conflict with the goals of a publicly posted message. Third, it is worth exploring the possibility of making the publicly posted signs private—in the case of the Neighborhood Watch program, this exploration means moving the signs from the posted community context to the private windows of residents. Such a change might reinforce the commitment of individual residents to community safety and simultaneously eliminate the "focal" effects of the publicly posted signs in low-income communities.

It is important to point out that our results do not speak directly to the deterrent value of the Neighborhood Watch program. Our focus was on *perceptions* of the community and crime rates, not on actual acts of crime. A long tradition of research exists that has differentiated between crime rates and perceptions of crime rates. Surprisingly, the two are only weakly correlated, and often, perceptions differ dramatically from reality. To illustrate, although crime rates in the United States have decreased steadily during the past 15 years, fear of crime has remained relatively stable. And in fact, survey data have shown that perceptions of crime rates have *increased* during the past few years despite the historically low levels and

precipitous drop during the 1990s. From a policy perspective, public officials and law enforcement are often more attentive to perceptions and fear of crime than to crime rates themselves.

The data reported in this article provide the first experimental data that examine the direct causal impact of publicly posted Neighborhood Watch signs. Drawing on social-psychological theory and the Focus Theory of Normative Conduct, we have argued that the impact of such signs on community perceptions will vary as a function of the physical community in which they are placed. Our findings show that although the signs generally produced the desired impact of reduced fear and increased safety in high-SES communities, they can backfire in low-SES communities. Although Neighborhood Watch provides a nice context in which to test these effects, we believe that the results generalize more broadly to other publicly posted cues about crime. For example, posted surveillance cameras in parking lots or retail locations convey a descriptive norm that "crime happens here," as do viewable burglar bars on residential windows, and security screen doors. In essence, these precautions reflect a tension between deterrence and public perceptions. Although cameras, bars, and security screens may "harden" a target and reduce its vulnerability to victimization, in communities already prone to crime, they also can contribute to a community of fear and a norm of crime.

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