# A Social Norms Approach to Community-Based Crime Prevention: Implicit and Explicit Messages on Neighborhood Watch Signs

## Project Abstract

Although "Neighborhood Watch" signs are a mainstay of the American landscape, recent developments in social psychology suggest that these signs might inadvertently undermine the goals of the program by conveying a normative message that "crime happens" in the area. To test this hypothesis, three laboratory experiments were conducted examining the causal impact of Neighborhood Watch sign presence and content on perceived crime rates, likelihood of victimization, and estimates of community safety and quality. Participants were recruited from University undergraduate courses. The studies utilized a simulated community tour in which participants were shown images of houses, and the presence and content of Neighborhood Watch signs was experimentally varied.

The first study evaluated the overall effect of Neighborhood Watch signs in a middle class community. Results showed that participants who viewed a community with a Neighborhood Watch sign containing a "High Crime" message reported a significantly higher likelihood of victimization, higher levels of community crime, and lower levels of perceived safety and community quality compared to those who saw a Generic, No Sign, or Low Crime message.

In the second study, we replicated the basic effects from Study 1, and extended the research to examine the moderating role of community socioeconomic status (SES). Results showed that in Middle SES communities, participants perceived more burglary and greater likelihood of victimization when there was a "Neighborhood Watch" sign posted compared to when no sign was posted. In high SES communities, the sign produced the opposite effect. This interaction is consistent with predictions derived from social psychological theory.

The third study explored the potential for the physical condition of Neighborhood Watch signs to moderate the impact of the signs in low and high SES communities. Results showed that across both low and high SES communities, the presence of a defaced sign caused increased perceptions of crime and burglary rates. In addition, in low SES communities, the presence of an aged sign led to increased perceptions of crime rates, burglary rates, and burglary victimization and a *decreased* perception that a burglar would be caught. As predicted, in high SES communities, the signs produced the opposite effect.

The findings from these laboratory experiments provide useful empirical evidence regarding the effects of publicly displayed crime prevention signs, and the results have important implications for Neighborhood Watch programs nationwide.

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# A Social Norms Approach to Community-Based Crime Prevention: Implicit and Explicit Messages on Neighborhood Watch Signs

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## Project Summary

### *Background*

The Neighborhood Watch program is the Nation's largest and most visible community-based crime prevention program. Indeed, the Neighborhood Watch sign itself has become a prominent mainstay of the suburban American landscape. However, recent developments in social psychological theory suggest that publicly-posted Neighborhood Watch signs might inadvertently undermine the program by conveying a normative message that crime is a problem in the community. A series of three laboratory experiments was conducted to evaluate the effects of Neighborhood Watch signs on perceived crime rates, likelihood of victimization, community safety, and estimates of home and community quality. The studies utilized a simulated community tour in which participants were shown images of houses and communities and were asked to rate them along several dimensions. The presence and content of Neighborhood Watch signs was experimentally varied across the three studies.

The first study focused on the development and testing of the community tour and sign stimuli, and evaluated the overall effect of Neighborhood Watch signs in an average middle class community. In the second study, replicated the basic effects from Study 1 and extended the research to examine the moderating role of community socioeconomic status (SES) on the effects of the signs. Finally, the third study explored the potential for the physical condition of

Neighborhood Watch signs to moderate the impact of the signs in low and high SES communities.

## *Key Finding*

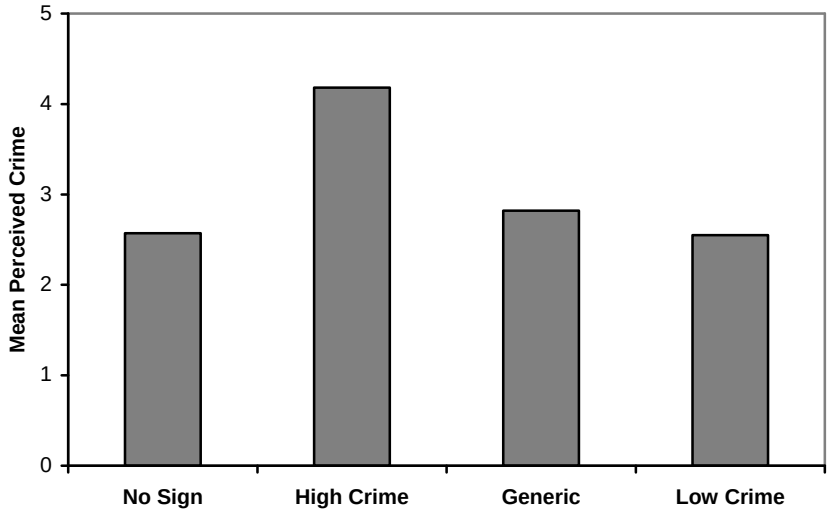
Across the three laboratory experiments we consistently demonstrated the potential for publicly-posted Neighborhood Watch signs to produce unintended consequences such as increased fear of crime and decreased perceptions of neighborhood safety. Moreover, the results showed that the outcomes associated with posting Neighborhood Watch signs are largely 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.

## *Study 1: Development and Testing of a Neighborhood Tour*

The goal of Study 1 was to assess the causal impact of Neighborhood Watch sign presence and content on perceptions of the community. 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 used by realtors. Outcomes and demographics were assessed using a questionnaire. We hypothesized that the normative content on Neighborhood Watch signs would affect perceptions of crime, likelihood of victimization, community safety, as well as intentions for self-protective behavior, and ratings of home and community quality. The results showed:

- Participants who viewed a community with a Neighborhood Watch sign containing a "High crime" message reported a significantly higher likelihood of victimization, higher levels of community crime, and lower levels of perceived safety and community quality, compared to those in the Generic, No Sign, or Low Crime conditions (see Figure 1).

**Figure 1: Mean Perceived Crime Rate by Sign Type**



- Participants who viewed a community with a Neighborhood Watch sign containing a "Low Crime" message reported the lowest levels of perceived crime and victimization, and the highest levels of perceived community safety and community quality.

- Participants who viewed the community in which a "Generic" Neighborhood Watch sign was posted reported slightly higher levels of perceived crime and victimization, and lower levels of community safety and community quality compared to those in the "No Sign" condition, but the effect was small and did not reach statistical significance with our current sample size (but see Study 2).

Overall, Study 1 provided evidence that the information presented on publicly-posted Neighborhood Watch signs can significantly affect perceptions of the community. In addition, the 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 further explored in Studies 2 and 3.

## *Study 2: Neighborhood Watch Signs in High, Medium, and Low SES Communities*

In the previous study, we experimentally tested the effects of Neighborhood Watch signs in a middle class community. Results showed that the normative content of Neighborhood Watch signs affected perceptions of crime rates, ratings of community quality, and perceived likelihood of crime victimization. The goal of Study 2 was to replicate the basic effects observed in Study 1 for the middle class community and to extend the research to examine the moderating role of community SES on the effects of the signs.

The Focus Theory of Normative Conduct suggests that publicly posted Neighborhood Watch signs may focus viewers' attention on the contextual cues of the community. Based on this theory, we hypothesized that "Neighborhood Watch" signs would operate differently as a function of the environment in which they were posted. More specifically, we expected that Neighborhood Watch signs, particularly those that conveyed a normative message about the level of crime in the area, would produce a boomerang effect in low SES communities such that the effects observed in Study 1 (increased perceptions of crime and likelihood of victimization, and decreased levels of perceived community safety and community quality) would be considerably stronger in low SES areas than in High SES areas. To test these hypotheses we utilized a simulated community tour in which either an injunctive, high crime descriptive, low crime descriptive, or no Neighborhood Watch sign (control) was posted in one of three neighborhoods (Low, Middle, or High SES). Outcomes and demographics were assessed using a questionnaire. Results of the experiment showed:

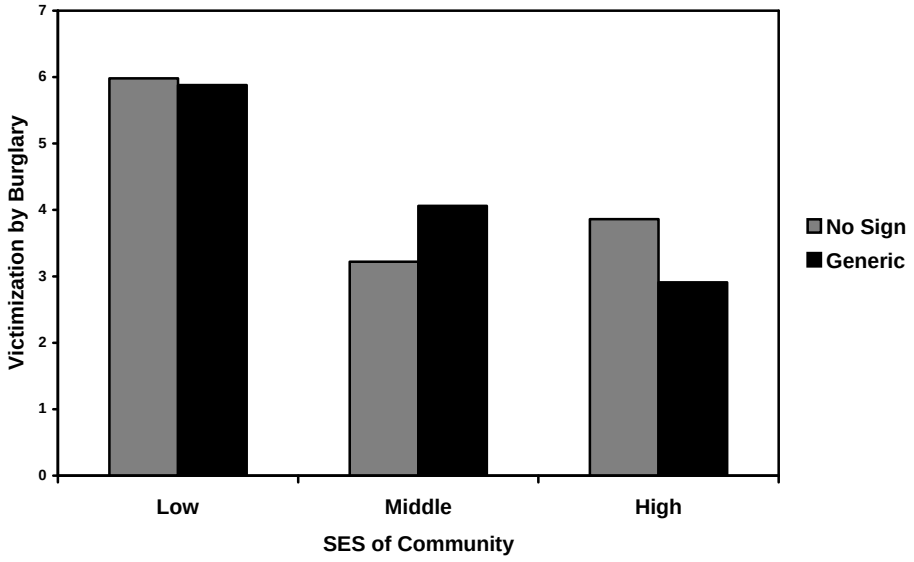
- Across variables, low SES communities were perceived as having higher levels of crime and being less safe than middle or high SES communities, regardless of Neighborhood Watch sign information or presence.

- The low SES communities demonstrated a ceiling effect, such that the community itself was perceived to be so dangerous that any additional effect produced by a Neighborhood

Watch sign was washed out. Due to this ceiling effect, we were unable to detect any effects of Neighborhood Watch signs in the low SES condition.

- As seen in Figure 2, the middle SES community did show the anticipated boomerang effect. Specifically, in Middle SES communities, participants perceived *more* burglary and *greater* likelihood of victimization when there was a generic "Neighborhood Watch" sign compared to when no sign was posted. Such effects were consistent with the predictions derived from the Focus Theory of Normative Conduct. That is, in Middle SES communities, the presence of a Neighborhood Watch signs focuses attention on contextual cues in the community which may indicate the presence of crime.

**Figure 2: Sign Type by Community SES Interaction for Victimization by Burglary**




- In High SES communities, the presence of the sign focuses attention on contextual cues that indicate low levels of crime. In the high SES communities, participants had *lower* perceptions of burglary rates and *less* fear of becoming a victim of burglary when a "Neighborhood Watch" sign was posted, compared to when no sign was posted.

Taken together, the results from Study 2 indicate that traditional Neighborhood watch signs were often associated with increases in fear of crime and victimization, particularly in middle class areas. These data provide clear evidence for the influence of sign presence and wording on perceptions of the community, beliefs about the prevalence of crime in the community, and worry about potential victimization.

## *Study 3: Physical Condition of Neighborhood Watch Signs in High and Low SES Communities*

Studies 1 and 2 were designed to test the effect of the language presented on Neighborhood Watch signs on perceptions of crime, worry about victimization, and perceptions of community

safety and quality. The goal of the third study was to examine the potential for the physical condition of Neighborhood watch signs posted in the community to convey information about the presence and acceptance of crime in the community. The study utilized a community tour in which a traditional Neighborhood Watch sign that was either new, aged, or defaced, was posted in one of two communities (High SES or Low SES).

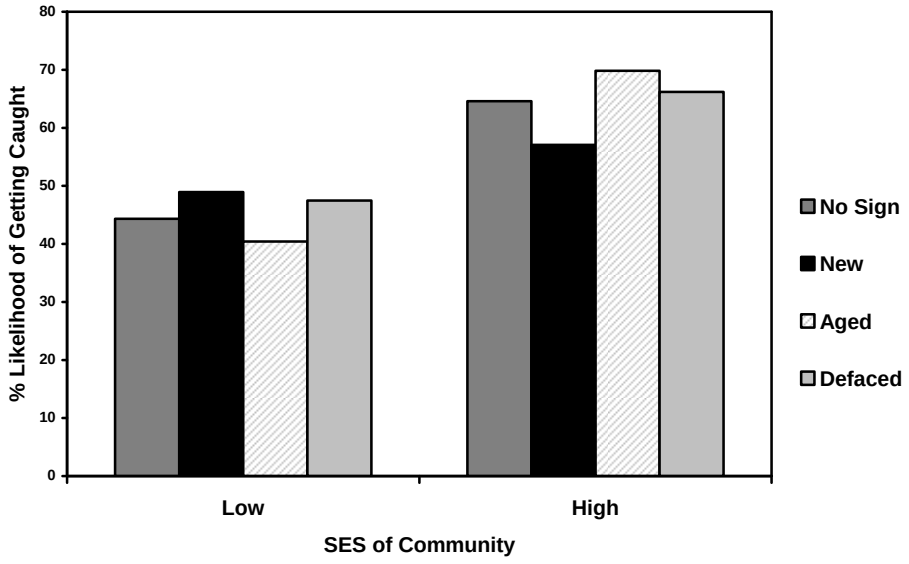
Based on the Focus Theory of Normative Conduct, we hypothesized that the defaced and aged signs would perform similar to the High Crime descriptive norm condition in Studies 1 and 2. Specifically, we predicted that such signs would produce higher estimations of crime rates, more worry about victimization, and lower ratings of community safety and quality. We further hypothesized that this effect would be moderated by the socioeconomic status (SES) of the community, such that the effect would be stronger for the low SES areas and weaker in the high SES areas. Results of the third experiment showed:

- As in Study 2, low SES communities were perceived as having higher levels of crime and being less safe than high SES communities, regardless of sign type.

- Across both low and high SES communities, the presence of a defaced sign caused increased perceptions of crime and burglary rates. Contrary to the findings from Study 2, the posting of a New Neighborhood watch sign was also associated with such increases.

- As predicted by the Focus Theory of Normative Conduct, significant Sign Type by Community SES interactions were observed on several variables. Specifically, in low SES communities, the presence of an aged sign led to *increased* perceptions of crime rates, burglary rates, and burglary victimization, and a *decreased* perception that a burglar would be caught. Conversely, in high SES communities, the presence of an aged sign led to *decreased* perceptions of crime rates, burglary rates, and burglary victimization and an *increased* perception that a burglar would be caught (see Figure 3).

**Figure 3: Likelihood That a Burglar Would Get Caught**



- Surprisingly, the presence of a new Neighborhood Watch sign resulted in an overall increase in perceived crime in both low *and* high SES communities and, in fact, produced effects similar to the defaced sign. Although the increase in perceived crime produced by the New Sign was not significant, the pattern of results is inconsistent with the results we obtained in Study 2. While we expected to see an increase in perceived crime in the low SES communities, the increase in perceived crime in the high SES communities was unexpected.

Consistent with the Focus Theory of Normative Conduct, our results suggest that an aged sign means something different when posted in a low compared to a high SES community. The aged sign was intended to convey a normative message that people are not involved in crime prevention practices. In the Low SES community, this appeared to draw attention to the contextual cues in the environment thus increasing perceptions of crime. In the High SES community, the same sign was associated with decreased perceptions of crime. Perhaps the aged sign is interpreted as there not being a need for active involvement due to the already low levels of crime.

## *Conclusions*

Based on the Focus Theory of Normative Conduct, and the idea of incongruent norms, a series of three laboratory experiments was conducted to examine the causal impact of Neighborhood Watch sign presence and content on perceived crime rates, likelihood of victimization, community safety, and estimates of home and community quality. The results of these laboratory studies show that the traditional Neighborhood Watch signs can result in *increases* in fear of crime and victimization. The laboratory data provided clear evidence for the influence of a descriptive norm for crime on beliefs about the prevalence of crime in the community and likelihood of potential victimization. Moreover, this normative information can lead to a decreased perception of community safety and quality.

Taken together, the results from the three reported laboratory experiments show the potential for publicly-posted Neighborhood Watch signs to produce boomerang effects. In high SES communities, which are already perceived to be relatively safe, the presence of a Neighborhood Watch sign can produce desirable effects that are consistent with the overall goals of the Neighborhood Watch program. Unfortunately, in low and medium SES communities where positive effects are most needed, publicly-posted Neighborhood Watch signs can lead to several undesirable outcomes.

## *Implications for Policy and Practice*

The power of social norms to influence an individual's beliefs and behaviors has been well documented (Cialdini et al., 1990; Schultz, Tabanico, Rendón, in press; Sherif, 1936). The present studies are no exception. Our data provide clear evidence for the influence of normative information about crime on beliefs about the prevalence of crime in the community and likelihood of potential victimization. These results have practical value for community-based crime prevention policy and practice. Community-based crime prevention programs, such as Neighborhood Watch, recognize that crime makes citizens fearful and socially isolated.

Although Neighborhood Watch programs try to reduce this fear and isolation by increasing social cohesion, the findings from this study suggest that the public posting of Neighborhood Watch signs which focus on crime can potentially undermine this goal.

In preparation for the present study, we documented a variety of real-world examples of signs posted in communities throughout the United States that focus on the high prevalence of crime in the community. This research has provided clear evidence that this approach could potentially have adverse effects on perceptions of the community. Fortunately, Neighborhood Watch signs focusing on the high prevalence of crime are fairly rare. However, there is tremendous variability in the type of information that is presented on Neighborhood Watch signs from one community to the next. As a result, the empirical evaluation of the effects of these signs could prove useful to Neighborhood Watch coordinators across the country as they select signs to post in their own communities.

**Implication #1: Avoid scare tactics and cues about crime problems.** While our focus here is on Neighborhood Watch signs, the results can apply more broadly to the dissemination of crime information to residents. Based on the Focus Theory of Normative Conduct, we found evidence that posting *any* crime prevention sign can focus attention on the contextual variables of the surrounding community, thereby activating a descriptive norm about crime prevalence. This effect is further exacerbated by including normative information in the text of the sign, such as "you are entering a high crime area."

**Implication #2: Recognize that Neighborhood Watch signs operate differently in high, medium, and low SES communities.** The results from these studies will help to identify the types of communities most likely to benefit from publicly posted crime prevention signs. Several evaluations of Neighborhood Watch programs have lamented the finding that the program is least effective in the areas that are most in need. That is, Neighborhood watch programs seem to work best in areas that are already low in crime and the benefits are weaker and short-lived in higher crime areas. The results of this Study provide theoretical support for the idea that Neighborhood Watch signs are perceived differently as a function of the environment in which they are posted with the most negative effects (increased perceptions of crime and victimization) occurring in Low and Middle class areas.

**Implication #3: Replace defaced or aged signs.** The results from Study 3 attest to the important of maintaining Neighborhood Watch signs that are currently posted in the community. Our results showed that the physical condition of the sign (a defaced or aged sign, for example) can activate a descriptive norm about the prevalence and tolerance of crime in the community. Such results suggest that practitioners and crime-prevention directors should pay special attention to the maintenance and replacement of posted Neighborhood Watch signs, particularly in Low SES communities.

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**FINAL REPORT**

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# Acknowledgments

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# Executive Summary

## *Background*

The Neighborhood Watch program is the Nation's largest and most visible community-based crime prevention program. Indeed, the Neighborhood Watch sign itself has become a prominent feature of the suburban American landscape. However, recent developments in social psychological theory suggest that publicly-posted Neighborhood Watch signs might inadvertently undermine the program by conveying a normative message that crime is a problem in the community. A series of three laboratory experiments was conducted to evaluate the effects of Neighborhood Watch signs on perceived crime rates, likelihood of victimization, community safety, and estimates of home and community quality. The studies utilized a simulated community tour in which participants were shown images of houses and communities and were asked to rate them along several dimensions. The presence and content of Neighborhood Watch signs was experimentally varied across the three studies.

The first study focused on the development and testing of the slide show and sign stimuli, and evaluated the overall effect of Neighborhood Watch signs in an average middle class community. In the second study, we replicated the basic effects from Study 1 and extended the research to examine the moderating role of community socioeconomic status (SES) on the effects of the signs. Finally, the third study explored the potential for the physical condition of Neighborhood Watch signs to moderate the impact of the signs in low and high SES communities.

## *Key Finding*

Across the three laboratory experiments we consistently demonstrated the potential for publicly-posted Neighborhood Watch signs to produce unintended consequences such as increased fear of crime and decreased perceptions of neighborhood safety. Moreover, the results showed that the outcomes associated with posting Neighborhood Watch signs are largely 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.

## *Results*

### Study 1

The goal of Study 1 was to assess the causal impact of Neighborhood Watch sign presence and content on perceptions of the community. We hypothesized that the normative content on Neighborhood Watch signs would affect perceptions of crime, likelihood of victimization, community safety, as well as intentions for self-protective behavior, and ratings of home and community quality. The findings from our experiment showed:

- Participants who viewed a community with a Neighborhood Watch sign containing a "High crime" message reported a significantly higher likelihood of victimization, higher levels of community crime, and lower levels of perceived safety and community quality, compared to those in the Generic, No Sign, or Low Crime conditions.

- Participants who viewed a community with a Neighborhood Watch sign containing a "Low Crime" message reported the lowest levels of perceived crime and victimization, and the highest levels of perceived community safety and community quality.

- Participants who viewed the community in which a "Generic" Neighborhood Watch sign was posted reported slightly higher levels of perceived crime and victimization, and lower levels of community safety and community quality compared to those in the "No Sign" condition, but the effect was small and did not reach statistical significance with our current sample size (but see Study 2).

- Overall, Study 1 provided evidence that the information presented on Neighborhood Watch signs can influence perceptions of the community.

**Study 2**

The goal of Study 2 was to replicate the basic effects observed in Study 1 and to extend the research to examine the moderating role of community SES on the effects of the Neighborhood Watch signs. The Focus Theory of Normative Conduct suggests that publicly posted Neighborhood Watch signs will focus viewers' attention on the contextual cues of the community. Based on this theory, we hypothesized Neighborhood Watch signs would produce a boomerang effect in low SES communities. The results showed:

- Across variables, low SES communities were perceived as having higher levels of crime and being less safe than middle or high SES communities, regardless of Neighborhood Watch sign information or presence.

- The low SES communities demonstrated a ceiling effect, such that the community itself was perceived to be so dangerous that any additional effect produced by a Neighborhood Watch sign was washed out. Due to this ceiling effect, we were unable to detect any effects of Neighborhood Watch signs in the low SES condition.

- The middle SES community did show the anticipated boomerang effect. Specifically, in Middle SES communities, participants perceived *more* burglary and *greater* likelihood of victimization when there was a generic "Neighborhood Watch" sign compared to when no sign was posted. Such effects were consistent with the predictions derived from the Focus Theory of Normative Conduct.

- In the high SES communities, participants had *lower* perceptions of burglary rates and *less* fear of becoming a victim of burglary when a "Neighborhood Watch" sign was posted, compared to when no sign was posted.

### Study 3

The goal of the third study was to examine the potential for the physical condition of Neighborhood Watch signs to convey information about the presence and acceptance of crime in the community. The study utilized a traditional Neighborhood Watch sign that was either new, aged, or defaced, and was posted in one of two communities (High SES or Low SES). We hypothesized that the defaced and aged signs would act similarly to the High Crime descriptive norm condition in Studies 1 and 2. Based on the Focus Theory of Normative Conduct, we predicted that such signs would produce higher estimations of crime rates, more worry about victimization, and lower ratings of community safety and quality. We further hypothesized that this effect would be moderated by the socioeconomic status (SES) of the community, such that the effect would be stronger for the low SES areas and weaker in the High SES areas.

- As in Study 2, low SES communities were perceived as having higher levels of crime and being less safe than high SES communities, regardless of sign type.

- Across both low and high SES communities, the presence of a defaced sign caused increased perceptions of crime and burglary rates. Contrary to the findings from Study 2, the posting of a New Neighborhood watch sign was also associated with such increases.

- As predicted by the Focus Theory of Normative Conduct, significant Sign Type by Community SES interactions were observed on several variables. Specifically, in low SES communities, the presence of an aged sign led to *increased* perceptions of crime rates, burglary rates, and burglary victimization, and a *decreased* perception that a burglar would be caught. Conversely, in high SES communities, the presence of an aged sign led to *decreased* perceptions of crime rates, burglary rates, and burglary victimization and an *increased* perception that a burglar would be caught.

Taken together, the results from the three reported laboratory experiments show the potential for publicly-posted Neighborhood Watch signs to produce boomerang effects. In high SES communities, which are already perceived to be relatively safe, the presence of a Neighborhood Watch sign can produce desirable effects that are consistent with the overall goals of the Neighborhood Watch program. Unfortunately, in low and medium SES communities where positive effects are most needed, publicly-posted Neighborhood Watch signs can lead to several undesirable outcomes.

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# Literature Review

## *The History of Neighborhood Watch*

Neighborhood Watch is a community crime prevention program that involves residents coming together in small groups (blocks) to share information about crime in their area. The program may include the dissemination of information on crime prevention, as well as making plans for community surveillance and crime reporting (Rosenbaum, 1986). In most cases, a local law enforcement or crime prevention officer arranges the initial block meeting. The subsequent meetings are conducted by a block leader and generally involve discussions about perceptions of the crime problem and what to do about it (National Sheriff's Association, 2004).

Although Neighborhood Watch programs are started with assistance from local law enforcement, they are usually implemented without any formal budget or funding source (National Sheriff's Association, 2004). As such, it is often the community or local law enforcement agency that bears the cost of installing "Neighborhood Watch" signs. Aside from size restrictions, there are no official standards that regulate or evaluate the type of information that is presented on Neighborhood Watch signs. In fact, a visit to the websites of several local law enforcement jurisdictions nationwide revealed considerable variation in the types of signs that are used (see for example www.nnwi.org).

Neighborhood Watch programs recognize that residents often become fearful and isolated because of crime, and therefore the programs aim to foster social contact and enhance social cohesion (Garofalo & McLeod, 1989; Rosenbaum, 1986). 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 & Kelling, 1982). Neighborhood cohesion is an important factor in reducing fear of crime and promoting a sense of self-efficacy in reducing one's likelihood of victimization (Hartnagel, 1979). If Neighborhood Watch programs can provide an increase in community cohesion, they should thereby decrease fear of crime among residents, and ultimately serve as a deterrent to crime (Greenberg et al., 1985; Lavrakas & Lewis, 1980).

## *The Effects of Neighborhood Watch on Community Residents*

While the argument that Neighborhood Watch can increase community cohesion and thereby reduce crime is compelling, there is surprisingly little evidence to support the efficacy of Neighborhood Watch programs (Rosenbaum, 1986; Rosenbaum, Lurigio, & Davis, 1998). In addition, most of the evaluation research conducted to date lacks a control group of any type, and is based primarily on comparisons of change across time following the introduction of the program (Garofalo & McLeod, 1989; Lurigio & Rosenbaum, 1986). Such designs are methodologically weak and are plagued by a number of threats to internal validity.

In the 1980s, several evaluation studies were conducted on Neighborhood Watch, many funded by the National Institute of Justice. The National Crime Prevention Council (1989) cited several studies and success stories that claimed to support the effectiveness of Neighborhood Watch in reducing crime and the fear of crime. However, few of these studies have been disseminated in peer-reviewed outlets, and the results are almost entirely summarized in technical reports. Indeed, we have found no evaluations of Neighborhood Watch published in peer-reviewed journals.

Poyner (1993) was able to identify 122 evaluations of crime prevention programs, 18 of which were identified as evaluations of neighborhood or block watch programs. Of the 18 evaluation studies of neighborhood watch programs, Poyner (1993) found that while 10 of the studies (55%) reported positive findings, there were serious methodological concerns that called into question their validity. The pattern was similar when the specific crime of residential burglary was examined. Additionally, Neighborhood Watch programs were rated as "doubtful" for the prevention of robbery and car crime, with one study actually reporting an increase in car crime. More recently, Sherman et al. (1998) identified 500 evaluation studies of crime prevention efforts that met minimum scientific standards. In summarizing the results from Neighborhood Watch programs, Sherman et al. (1998) classified them as a "what doesn't work" in crime prevention (p. 9).

Even the most methodologically sound and frequently cited studies have yielded mixed results. Rosenbaum (1986) provides a short summary of two rigorous evaluations: the Seattle evaluation (Lindsay & McGillis, 1986) and the Chicago evaluation (Rosenbaum et al., 1985). The Chicago evaluation compared the impact of the Neighborhood Watch program with a matched no-treatment control area, using pre-test and post-test data from each community. The results showed that residents in the Neighborhood Watch areas were aware of the program, and had high levels of participation in the program, but surprisingly fear of crime *increased* in three of the four matched neighborhoods, compared to the control condition. Rosenbaum (1986) argued that informal discussions about victimization experiences could lead to an increase in perceived vulnerability. While we agree with this conclusion, we further argue that discussion is not required to produce this effect—posting signs in the community is enough to convey to residents the normative message that "crime is a problem here."

## *Social Norms and the Focus Theory of Normative Conduct*

Social psychologists 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 behavior (cf. Hechter & Opp, 2001; Schultz & Oskamp, 2000). Social norms are "rules and standards that are understood by members of a group, and that guide and/or constrain social behavior without the force of laws" (Cialdini & Trost, 1998, p. 152). These rules of behavior are often a by-product of social interaction, and the norms can be stated explicitly or implied from contextual cues (Schultz, Tabanico, & Rendón, in press).

The Focus Theory of Normative Conduct (Cialdini, Reno, & Kallgren, 1990; Cialdini, Kallgren, & Reno, 1991) identified two types of social norms, each of which motivates

human 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 suggest that doing the same would likely be an adaptive choice (Allison, 1992; Solomon, Greenberg, & Pyszczynski, 1991). For example, the message that an area is a "high crime area" or "drug trafficking area" might suggest that crime is a typical behavior in that community. (These two examples were taken verbatim from prominently posted signs in a major metropolitan area.) Likewise, the message that an area is a "crime free zone" might 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 they 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" points to an injunctive norm that crime is not approved of, or that other people in the area disapprove of criminal behavior.

Another important element of the Focus Theory of Normative Conduct is that the ability of norms to guide action is stronger when the norm is activated. Moreover, when two inconsistent norms exist simultaneously, the norm that is activated, or made most salient, will have the greatest influence on subsequent behavior (Cialdini, Reno, and Kallgren, 1990). To test this notion, Cialdini et al. (1990) conducted a series of studies in which they varied the amount of litter present in various field settings (because of the relevance of this study to the proposed research, we describe it in some detail). The settings were either relatively clean to depict a low descriptive norm for littering (not many people litter here) or noticeably littered to depict a high descriptive norm for littering (people litter here). In addition to manipulating the descriptive norm for littering in the situation, the experimenters also manipulated the salience of the norm by having a confederate either drop trash into the environment or walk past it. Participants were given an opportunity to litter a handbill into either a clean or a littered environment, after witnessing the confederate either drop trash into the environment or walk past it. The experimenters observed whether or not the participants littered the handbills. Results showed that the most salient norm took precedence. First, Cialdini et al. (1990) found that participants littered significantly more into the littered environment than the clean environment, supporting the overall influence of descriptive norms on behavior. More importantly, the study revealed that 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.
Such findings have implications for activating normative beliefs through posted Neighborhood Watch signs.

Based on these findings, we would predict that posting an injunctive message against crime would be most effective in an area perceived to be low in crime (e.g. an affluent community), but the same sign could actually produce an increase in perceptions of

criminal activity in an area already perceived to be high in crime. Our reasoning is that just as seeing a confederate litter focused individuals on the environment (either clean or littered), so placing a sign about crime in a neighborhood may focus individuals on the prevalence of criminal activity there. For areas that are already perceived to be low crime, we would expect the sign to be similar to seeing a confederate litter into the clean environment. However, if the sign is posted in an area where the environmental cues suggest the presence of criminal activity, the sign could potentially be counterproductive and increase perceptions of crime.

## *Boomerang Effects*

Although normative messages have been used successfully to promote socially desirable behavior in recycling (Schultz, 1999) and anti-littering campaigns (Cialdini, Reno, & Kallgren, 1990), there is a growing body of literature which suggests that normative information has a strong potential to produce boomerang effects – that is, effects opposite to what is intended. Citing the Focus Theory of Normative Conduct, Cialdini (2003) warned that communicators attempting to persuade an audience to behave in accordance with social norms must be careful that they focus the audience on the norm that is consistent with the goal. Specifically, Cialdini (2003) stated "there is an understandable, but misguided, tendency to try to mobilize action against a problem by depicting it as regrettably frequent" (p.105). This is particularly problematic, according to Cialdini (2003) in situations that are "already characterized by high levels of socially censured conduct" (p. 107). In cases such as these, it is highly recommended that communicators focus the audience on the injunctive norm

Several recent studies have demonstrated the potential for normative information to backfire. For example, Cialdini et al. (in press) tested this hypothesis in the Petrified Forest National Park in Arizona. The park had posted signs that informed visitors about the large amount of petrified wood that is stolen from the park by visitors each year. According to the Focus Theory of Normative Conduct, the message should have focused on the social disapproval of the behavior (injunctive norm) rather than on the fact that many people steal wood from the park (descriptive norm). To test this hypothesis, the researchers placed marked pieces of wood along the trails and recorded how many pieces of marked wood were stolen when a sign that emphasized the descriptive norm was posted versus when a sign that emphasized the injunctive norm was posted. The descriptive emphasis sign read, "past visitors have removed petrified wood from the Park, changing the natural state of the Petrified Forest." Along with the wording were pictures of three visitors taking wood. The injunctive emphasis sign read, "please don't remove the petrified wood from the park." Along with the injunctive wording was a picture of a visitor stealing a piece of wood with a red circle and bar over the hand. Researchers measured the percentage of marked wood pieces that were stolen over a 5-week period. In support of the hypothesis, results of the study revealed that focusing visitors on the descriptive norm resulted in significantly more theft of wood than focusing visitors on the injunctive norm.

Other investigations of the boomerang effect created by normative information can be found in studies of public service announcements, and energy conservation (Cialdini, 2003; Cialdini & Schultz, 2003; Schultz, 2004). Most recently, Schultz et al. (in press) provided community residents with normative information about the level of energy consumption by other households in their community, and a comparison to their own level of consumption. The results showed that this information successfully caused a reduction in energy conservation among residents who were consuming more than the average. However, for residents who were initially consuming *less* than the average, the feedback produced a boomerang effect—these residents actually *increased* their energy use! That is, for residents who already engaged in the desired behavior, receiving a message that others practiced the desired behavior less often than they did actually produced a reduction in their desirable actions.

Fortunately, the study also suggested a pathway for eliminating these boomerang effects. In a second experimental condition, residents received an added injunctive element to the descriptive normative information. Those who consumed less than the average received a hand-drawn smiley face on the feedback card, whereas residents who consumed more than the average received a sad face. This added injunctive element successfully eliminated the boomerang effect, and households that consumed low levels of energy continued to do so even after receiving normative information indicating that others in their community consumed more than they did.

## *Theoretical Implications for Neighborhood Watch Signs*

There are no regulations as to the type of information presented on Neighborhood Watch signs, and our review of commercial vendors suggests that there is considerable variation. 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.” 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 of the signs convey a descriptive norm that “crime happens here.” Examples of such language includes: “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, the Tucson Police Department 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.” While these signs are well-intentioned, there is a clear misalignment of norms.

The use of incongruent norms is not limited to one sign in Tucson, Arizona. Examples can be found nationwide. For example, in Greensboro, North Carolina signs are posted along the streets saying that the area is “known for criminal activity” and that police are watching. In addition to the signs, officers have distributed fliers door-to-door letting people know about drug or prostitution arrests that have been made in the area (News & Record, 2003). Similarly, the Fraternal Order of Police in Wilmington, Delaware, posted

billboards that said "Warning! Entering Wilmington! Serious crime area!" and listed the number of homicides and shootings to date (Weave's Opinions, 2004). While the billboards were seen as a successful approach to increasing funding for the local police department, the impact of the sign on local residents seems questionable. Again, this approach focuses residents and potential criminals alike on the descriptive norm that crime is prevalent in the area, rather than on the injunctive norm that it is not approved of, or that crime is relatively infrequent.

## *Purpose of the Current Study*

Recent developments in social psychological theory suggest that publicly-posted Neighborhood Watch signs might inadvertently undermine the program by conveying a normative message that crime is a problem in the community. However, to date, no research has experimentally examined the outcomes associated with the posting of Neighborhood Watch signs. Although it appears that social norms may play a strong role in the way that Neighborhood Watch signage is perceived, these questions remain to be answered scientifically. Studying the impact of the signs in the laboratory provides rigorous control of contextual variables and provides an internally valid approach for examining the causal relationships between posted signs and outcome measures.

In the following sections, we report on the results of a series of three laboratory experiments that evaluate the effects of Neighborhood Watch signs on perceived crime rates, likelihood of victimization, community safety, and estimates of home and community quality. The studies utilized a simulated community tour in which participants were shown images of houses and communities and were asked to rate them along several dimensions. The presence and content of Neighborhood Watch signs was experimentally varied across the three experiments.

The first study focuses on the development and testing of the slide show and sign stimuli and evaluates the overall effect of the signs in an average middle class community. In the second study, we aimed to replicate the basic effects from Study 1 and extend the research to examine the moderating role of community socioeconomic status (SES) on the effects of the signs. Finally, the third study explored the potential for the physical condition of Neighborhood Watch signs to moderate the impact of the signs in low and high SES communities.

# Study 1: Development and Testing of a Neighborhood Tour

## *Overview*

The goal of Study 1 was to assess the causal impact of Neighborhood Watch sign presence and content on perceptions of the community. 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 used by realtors. Outcomes and demographics were assessed using a questionnaire. We hypothesized that the normative content on Neighborhood Watch signs would affect perceptions of crime, likelihood of victimization, community safety, as well as intentions for self-protective behavior, and ratings of home and community quality.

Results showed that participants who viewed a community with a Neighborhood Watch sign containing a "High crime" message reported a significantly higher likelihood of victimization, higher levels of community crime, and lower levels of perceived safety and community quality compared to those in the Generic, No Sign, or Low Crime conditions. Those in the "Low Crime" descriptive norm condition reported the lowest levels of perceived crime and victimization, and the highest levels of perceived community safety and community quality. Participants who viewed the community in which a "Generic" Neighborhood Watch sign was posted reported slightly higher levels of perceived crime and victimization, and lower levels of community safety and community quality compared to those in the "No Sign" condition, but the effect was small and did not reach statistical significance.

## *Method*

### Participants

Participants were 180 undergraduate students recruited from the Psychology Department's Human Participant Pool, and lower division general education courses at California State University, San Marcos. The sample size of 180 participants was selected in order to allow for 45 participants per cell, a sufficient sample size to provide for 80% power to detect a medium between-subjects effect for two means (Cohen, 1992).

### Materials

The first step in conducting our laboratory experiments was to develop the stimuli.

***Neighborhood Watch signs.*** Neighborhood Watch signs were purchased from a private vendor so that 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 utilized the traditional orange and white color scheme with black text. 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. Images of each of the three signs are presented in Appendix A. The wording on the three signs was as follows:

- Generic (Injunctive Norm, Program Only) – "Neighborhood Watch Program in Force" with the familiar picture of a burglar with a red circle and bar.

- Low Descriptive Norm – "Neighborhood Watch Program in Force: This area has been identified by the City as a Crime Free Zone" with the picture of a burglar with red circle and bar.

- High Descriptive Norm – "Neighborhood Watch Program in Force: This area has been identified by the City as a High Crime Area" with the picture of a burglar with red circle and bar.

***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 fifteen homes in various communities (Appendix B). Three of the 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.

In the three Neighborhood Watch conditions, five of the 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 and pasted into the slide show. This was done in an effort 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 slide show consisted of 20 images of the home and community, along with four instruction slides. The twenty images consisted of 10 images of the outside of the home and community (without the Neighborhood Watch sign in view), 5 images of the inside of the home, and 5 images of the home with the Neighborhood Watch sign in view (or no sign for the control condition). Pictures were taken with the homeowner's consent using a 5.0 megapixel digital camera. The slideshow was scripted so that each slide appeared for 15 seconds. The time duration was selected because pilot testing revealed that this was enough time for participants to scan the scene, see the Neighborhood Watch sign, and read it completely. A sampling of the slide show images used in Study 1 (Low Crime condition) are presented in Appendix C. The remaining three slide shows were identical in all respects except for the type of sign posted.

***Survey items.*** A questionnaire was used to assess the perceived crime rate in the community, perceived likelihood of victimization, perceived community safety, estimated value of the home, ratings of the home and community quality, self-protective behaviors, and demographic variables. In addition, two items asked participants to take the perspective of a potential burglar. The questionnaire also contained a manipulation check. The complete set of items is included as Appendix D

- ***Perceived crime rate*** – Perceived crime rate was measured with a series of questions addressing the "seriousness of crime problems in the community." The scale was developed by Thompson, Bankston, and St. Pierre (1992). Participants were asked to rate the seriousness of nine crime problems within the community (e.g., rape, assault, robbery, burglary) on a scale from 0 (not a problem) to 10 (a serious problem).

- ***Perceived likelihood of victimization –*** This scale, developed by Williams, McShane, and Akers (2000) lists fifteen 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 (adapted language is shown in parentheses). The item read "*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).

- ***Perceived community safety*** – Perceived community safety was assessed using four items that were utilized in previous research and shown to load on a single factor in a factor analysis (Austin, Furr, & Spine, 2002; Baba & Austin, 1989). Participants were asked to reply to the four statements using a 4-point Likert scale with responses ranging, from 1 (strongly disagree) to 4 (strongly agree). The four statements were: (1) in *this neighborhood people really do not need to lock their doors when they leave their homes for a short period of time,* (2) *people who live in this neighborhood have to worry about someone breaking into their home to steal things,* (3) *people in this neighborhood can walk around at night without fear of being attacked or bothered by strangers,* and (4) *people in this neighborhood can leave their personal property outside and unattended without fearing that it will be damaged or stolen.* Higher scores on this scale represent higher levels of perceived safety.

- ***Community ratings*** – Participants were asked to estimate the asking price of the "for sale" home in each sequence. In addition, participants were asked a series of individual items regarding the quality of the community. Statements such as, "*If I was a qualified buyer, I would consider purchasing this home,"* and *"This is a good neighborhood to raise a family"* were rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree).

- ***Self-protective behavior*** – 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: *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.*
- ***Burglar's perspective*** – Two items asked participants to take the perspective of a potential burglar. Participants were asked, "*if you were a burglar, how likely is it that you would burglarize this home?*" (1 = very unlikely; 5 = very likely), and "*if you were to burglarize this home, how likely is it that you would be caught?*" (0 – 100%).
- ***Manipulation check*** – Following measurement of the dependent variables, the questionnaire asked a series of questions to serve as a manipulation check. Participants were asked, "*Did you notice any Neighborhood Watch signs in the community? If yes, what did the signs say?"* The manipulation check was included in order to ensure that participants indeed saw and read the Neighborhood Watch sign or did not see a sign if there was not one present.

- ***Demographic variables*** – All demographic questions were placed at the conclusion of the questionnaire. This was done in an effort to minimize the salience of potentially influential variables such as age, gender, and income while responding to items regarding crime. The demographic variables that were measured included gender, age, income, marital status, and homeowner status. Participants were also asked to provide their home address.

### Procedure

Participants were told that the study was about "New Techniques in Home Sales." Participants were tested individually and were randomly assigned to view one of the four slide shows depicting a middle class community in which there was a home 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 investigating demographic variables related to fear of crime (e.g., Rountree & Land, 1996). As a result, separate blocked randomization procedures were used for men and for women. This was done in an effort to ensure that the proportion of men to women was consistent across condition.

Participants were randomly assigned using the procedure described above to view one of the four slide shows (A, B, C, or D). The researcher was blind to which slide show letter corresponded to each experimental condition. After providing informed consent, participants were seated in front of a desktop computer. Once seated, participants were told that they would be watching a 7-minute slide show depicting a home that was for sale in San Diego County, California. Participants were told that after viewing the slide show they would be completing a questionnaire about their perceptions of the community and the for-sale home.

In order to make the task more involving and realistic, the slide show began with an audio presentation of the following statement: "*You are going to be watching a slide show presentation depicting a home that is for sale. The images were designed to examine an alternative method in home sales. Before sending the slide show out to potential homebuyers, we would like to get your opinions about the presentation. Before watching the presentation, it would be helpful if you put yourself in the place of a potential homebuyer. That is, try to visualize that you are in the market to purchase a home, and your realtor has just sent you this presentation."* This audio imagery induction procedure was chosen in order to help put our college student sample in the position of a potential homebuyer. This procedure has been used successfully in previous research with college students in which subjects were asked to put themselves in the place of someone who was about to undergo coronary artery bypass surgery (Mahler, Kulik, & Hill, 1993).

After viewing the slide show for the community in which there was a home for sale, participants were instructed on screen to exit the slide show and then complete the post-session questionnaire. The questionnaire was secured in an envelope so that participants were not aware of the types of questions that would be asked until after they had viewed the slide show. After completing the questionnaire, participants placed all materials (slide show CD and questionnaire) back in the envelope and returned the items to the researcher. Participants were then given a written debriefing.

### Data Management

To ensure accuracy, survey data was entered into SPSS by two independent researchers. The data were screened for errors, and then the two datasets were compared. Of 12,530 total data cells, there were a total of 14 discrepancies between the two datasets (approximately 7 errors per data file) yielding an error rate of .056%. Discrepancies between the two datasets were resolved by consulting the original hard copy of the survey.

## *Preliminary Analyses*

### Scale Reliability

Cronbach's alpha was used to establish the reliability of all the scales used in this study: perceived crime rate (*alpha* = .96), perceived likelihood of victimization (alpha = .96), and the four perceived community safety items (*alpha* = .71). Because items demonstrated adequate reliability, scale scores were created for each of these measures. Ratings of home value and community quality were analyzed as individual items. Although it was not an established scale, the protective behavior items demonstrated adequate reliability to create a scale score (*alpha* = .78). The individual behaviors were also analyzed as single items, where appropriate.

### Factor analyses

The 29 items that comprised our various outcome measures were factor analyzed using a Principal Components extraction procedure with Varimax rotation. The analysis revealed four clear factors which explained 69% of the variance. The four factors corresponded exactly to the four outcome measures, providing evidence for divergent validity of our measures.

### Sample Characteristics

Of the original sample of 180, one participant was dropped from the analysis for incomplete data. The resulting sample consisted of 179 participants (128 females and 51 males). The proportion of males to females in the sample is reflective of the overall composition of the Psychology Department's Human Participant Pool, the majority of whom are female. The sample ranged in age from 18 to 35 (*Mean* = 19.86, *SD* = 3.19). Seventy-nine percent of the participants reported being single (never married or divorced), and most did not have children (98%). The majority reported living either with their parents (54%) or in campus housing (20%). Only two of the participants reported being homeowners themselves. The sample represented thirty-five communities in San Diego County as well neighboring Orange County, Los Angeles County, and Riverside County.

The randomization procedure resulted in relatively equal numbers of participants across condition: Generic Sign (*N*=45), High Crime (*N*=43), Low Crime (*N*=45), and No Sign (*N*=46). Although fewer males participated in this study relative to females, the ratio of men to women was consistent across condition (see Table 1).

**Table 1:** *Gender of Participants by Experimental Condition*

| | Experimental Condition | | | |
|---|---|---|---|---|
| Gender | Generic Sign | High Crime | Low Crime | No Sign |
| Male | 13 | 12 | 12 | 14 |
| Female | 32 | 31 | 33 | 32 |
| Total | 45 | 43 | 45 | 46 |

### Manipulation Check

In addition to reporting whether or not they had seen a Neighborhood Watch sign, participants in the experimental groups were also asked to recall the information that was printed on the sign. Coding guidelines were created to categorize each participant's response into one of three categories: incorrect response, correct response, or correct response plus additional information. The additional information category applied only to those in the high crime and low crime descriptive norm conditions. In order to be coded into this category, the response must first have met the criteria for being coded as a "correct" response. In addition, the response also had to make a direct reference to the

descriptive normative information presented on the sign. For example, for the high crime descriptive norm condition, responses such as "high crime," "crime zone," or "high crime area" were accepted. For the low crime descriptive norm condition, responses such as "low crime," "city certified safe zone," and "crime free" were considered acceptable responses.

Of the 179 participants who completed the manipulation check items, 98% of those in the experimental groups accurately reported seeing a Neighborhood Watch sign, and 100% of those in the no sign condition did not report seeing a Neighborhood Watch sign. Forty-seven percent of the participants in the high crime condition not only recalled seeing the sign, but also were able to recall the high crime descriptive norm information that was presented on the sign. In addition, 42% of those in the low crime condition were able to recall the low crime descriptive norm information presented on the sign.

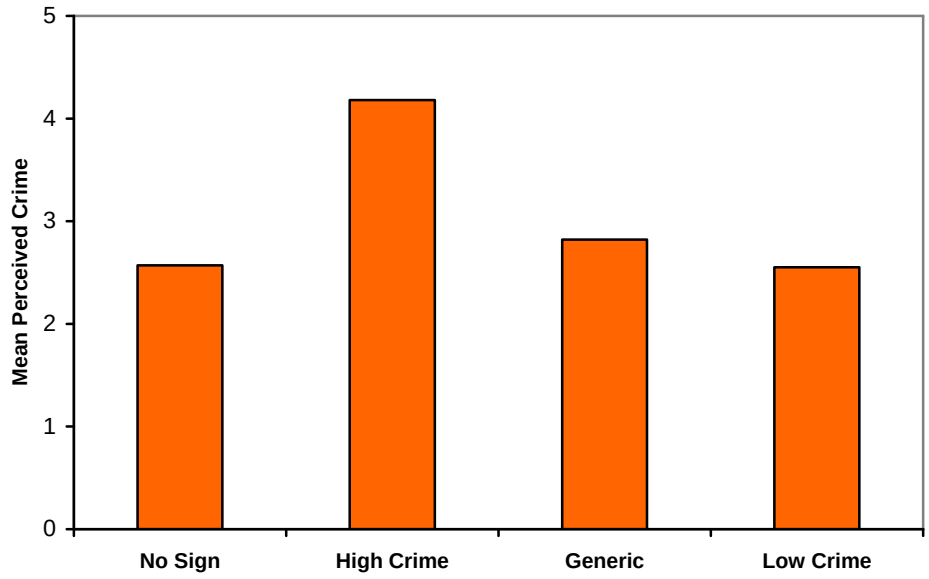
## *Results*

The study took the form of a 2 (Gender) x 4 (Sign Type) factorial ANOVA. Questionnaire measures of perceived crime rate, likelihood of victimization, perceived community safety, protective behaviors, and home/community ratings served as the dependent variables, with follow up planned comparisons. The frequency distributions for each dependent variable were graphed and examined. Because the distributions did not deviate substantially from a normal curve, analyses were conducted on the raw, untransformed data.

### Perceived Crime Rate

Results of a 2 (Gender) x 4 (Sign Type) factorial ANOVA with perceived crime rate as the dependent variable revealed a main effect for sign type, $F(3,171) = 7.98$, $p < .0001$. As predicted, follow-up planned comparisons showed that participants in the High Crime descriptive norm condition perceived crime to be significantly more of a problem in the neighborhood ($M = 4.18$, $SD = 2.33$) than participants in the No Sign ($M = 2.57$, $SD = 1.80$; $t(171) = 3.89$, $p<.0001$), Generic ($M = 2.82$, $SD = 1.73$; $t(171) = 3.25$, $p<.01$) , or Low Crime descriptive norm condition ($M = 2.55$, $SD = 1.99$; $t(171) = 3.91$, $p<.0001$). A graphical representation of these means is shown in Figure 1. There was no significant difference in the perceived crime rate for those in the Generic, Low Crime, or No Sign conditions. Neither the main effect for gender nor the interaction were significant.

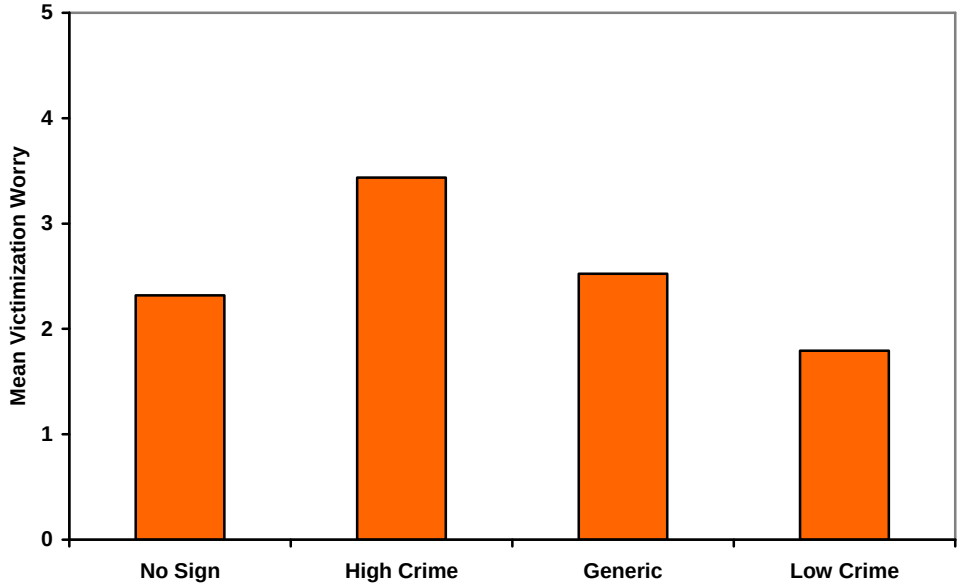
**Figure 1:** *Perceived Crime Rate by Sign Type*




## Perceived Likelihood of Victimization

Results of a 2 (Gender) X 4 (Sign Type) factorial ANOVA with perceived likelihood of 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 higher likelihood of being victimized by crime ($M = 3.41$, $SD = 2.14$) than participants in the No Sign ($M = 2.32$, $SD = 1.97$; $t(171) = 2.83$, $p<.01$ ), Generic ($M = 2.54$, $SD = 1.80$; $t(171) = 2.26$, $p<.05$) , or Low Crime descriptive norm condition ($M = 1.79$, $SD = 1.32$; $t(171) = 4.16$, $p<.001$). There were no significant differences between the No sign condition and the Generic and Low Crime conditions. However, as seen in Figure 2, participants in the Generic sign condition reported a higher likelihood of victimization than participants in the Low Crime condition. This difference was nearly significant ($t$ (171) = 1.93. $p$ = .05). Neither the main effect for gender nor the interaction were significant.

**Figure 2:** *Mean Victimization Worry by Sign Type*



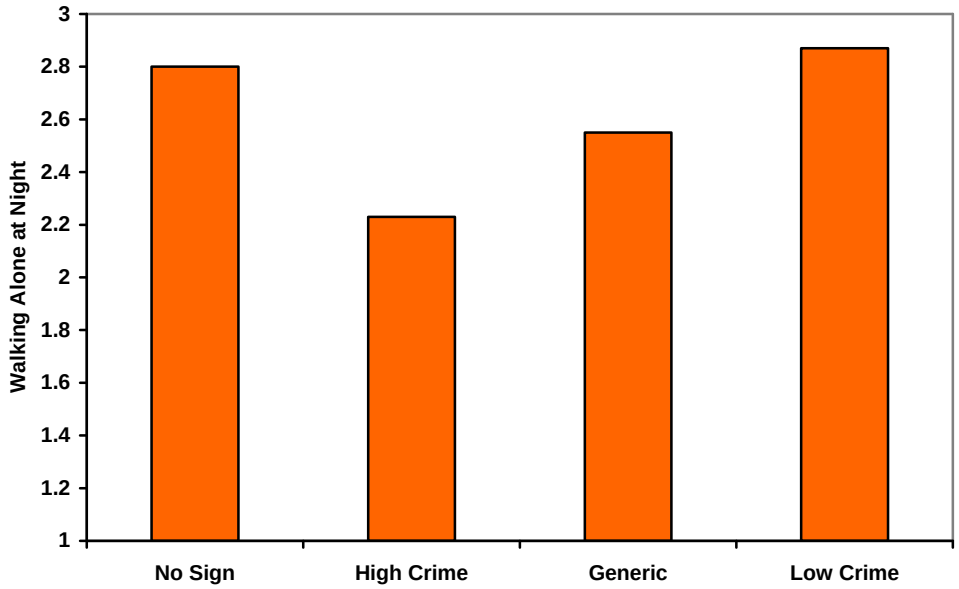

## Perceived Community Safety

Results of a 2 (Gender) X 4 (Sign Type) factorial ANOVA with perceived community safety as the dependent variable revealed a main effect for sign type, $F(3,170) = 9.72$, $p < .0001$. As predicted, follow-up planned comparisons showed that participants who viewed the community in which a High Crime sign was posted perceived the community to be significantly less safe ($M = 2.09$, $SD = .61$) than participants in the No Sign ($M = 2.57$, $SD = .53$; $t(170) = -4.21$, $p<.0001$), Generic ($M = 2.41$, $SD = .49$; $t(170) = -2.81$, $p<.01$), or Low Crime descriptive norm condition ($M = 2.67$, $SD = .51$; $t(170) = -5.05$, $p<.0001$). There were no significant differences between the No sign condition and the Generic and Low Crime conditions, but participants in the Generic sign condition perceived the community to be significantly less safe than participants in the Low Crime condition ($t$ (170) = 2.26. $p$ <.05). Neither the main effect for gender nor the interaction were significant.

***Walking alone at night.*** Much of the research on crime and the fear of crime has utilized a single item assessing an individual's fear of walking alone at night. As a result, we chose to analyze responses to a single item that was included as part of the Community Safety Scale. Results of a 2 (Gender) X 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, $p < .01$. As seen in Figure 3, follow-up comparisons revealed that participants in the High Crime ($M = 2.23$, $SD = .81$) reported that they would feel significantly less safe than participants Low Crime ($M = 2.87$, $SD = .63$; $t$ (170) = 3.91, $p$ <.0001), or No Sign ($M = 2.80$, $SD = .88$; $t$ (170) = 3.54, $p$ <.001) conditions. The difference between the High Crime and Generic conditions was nearly significant ($M = 2.55$, $SD = .66$; $t$ (170) = 1.92, $p$ =.06). Participants who viewed the community with a Low Crime sign posted reported that they

would feel safer than those who viewed the community with the Generic sign posted ($t$ (170) = 1.99, $p$ < .05). There was no difference between the Low crime and No Sign communities.

**Figure 3:** *Walking Alone at Night without Fear of Attack by Sign Type*




## Community Ratings

Two separate factorial ANOVAs were conducted to investigate the influence of the various Neighborhood Watch signs on two specific ratings of the community. Results of a 2 X 4 factorial ANOVA, with sign type and gender as the independent variables and the "*market price of the home"* as the dependent variable, revealed no significant effects or interactions.

A factorial ANOVA was also conducted with sign type and gender as the independent variables and the single item *"this is a good neighborhood to raise a family"* as the dependent variable. Results of the ANOVA revealed a main effect for sign type, $F$ (3,171) = 9.98, $p$<.0001. As predicted, follow-up planned comparisons showed that participants who viewed the community where there was a High Crime descriptive norm sign posted had lower ratings of the neighborhood as being a good place to raise a family ($M$ = 3.37, $SD$ = .98) compared to those who viewed the same community with No Sign ($M$ = 4.11, $SD$ = .64; $t$(170) = -5.56, $p$<.0001), Generic ($M$ = 3.93, $SD$ = .65; $t$(170) = -3.66, $p$<.0001), or Low Crime signs posted ($M$ = 4.22, $SD$ = .60; $t$(170) = -5.54, $p$<.0001). The analysis also revealed a main effect for gender such that females ($M$ = 4.01, $SD$ =.77) perceived the community to be a better place to raise a family than did males ($M$ = 3.69, $SD$ = .81), $F$ (1, 171) = 7.30, $p$ < .01.

### Self-Protective Behaviors

Results of a 2 (Gender) X 4 (Sign Type) factorial ANOVA with the scaled self protective behavior items as the dependent variable revealed a main effect for sign type, $F(3,171) = 4.87$, $p < .01$. Participants who viewed a community in which there was a Low Crime sign posted ($M = 2.47$, $SD = .80$) condition reported a *lower* likelihood of engaging in self-protective behaviors such as purchasing a guard dog or firearm, compared to those in the High Crime ($M = 3.16$, $SD = .93$; $t\ (171) = -3.77$, $p < .0001$), Generic ($M = 2.98$, $SD = .77$; $t\ (171) = -2.82$, $p < .01$), or No Sign conditions ($M = 2.81$, $SD = .95$; $t\ (171) = -1.88$, $p = .06$).

**Table 2:** *Likelihood of Engaging in Protective Behaviors by Sign Type*

| | Low Crime | No Sign | Generic | High Crime |
|---|---|---|---|---|
| Security Locks | 2.69 | 2.89 | 3.18 | 3.53 |
| Burglar Alarm | 2.93 | 3.28 | 3.58 | 3.93 |
| Guard Dog | 2.29 | 2.26 | 2.62 | 3.02 |
| Motion Sensors | 3.04 | 3.37 | 3.49 | 3.46 |
| Firearm for Protection | 1.40 | 2.13 | 1.95 | 2.02 |
| Safe for Valuables | 2.44 | 2.91 | 3.07 | 3.00 |
| **TOTAL** | $2.47_a$ | $2.81_b$ | $2.98_b$ | $3.16_b$ |

Note: Marginal means with different subscripts in the same row are statistically different, ($p < .05$).

### A Burglar's Perspective

Two separate factorial ANOVAs were conducted to investigate the influence of the various Neighborhood Watch signs on the two items which asked the participant to take the perspective of a potential burglar. Results of a 2 (Gender) X 4 (Sign Type) factorial ANOVA revealed no differences in the "likelihood of burglarizing the home" or the "likelihood of getting caught" across the experimental conditions. That is, when participants took the perspective of a potential burglar, they estimated that they would be equally likely to burglarize a home or to be caught, regardless of the type of sign that was posted.

## *Conclusions*

The results of Study 1 showed that the content of posted Neighborhood Watch signs can significantly affect perceptions of the community. Participants who viewed a community with a Neighborhood Watch sign containing a "High Crime" message reported significantly greater likelihood of victimization, higher levels of community crime, and lower levels of perceived safety and community quality compared to those in the Generic, No Sign, or Low Crime conditions. Conversely, those in the "Low Crime" descriptive norm condition reported the lowest levels of perceived crime and victimization, and the

highest levels of perceived community safety and community quality. Participants who viewed the community in which a "Generic" Neighborhood Watch sign was posted reported slightly higher levels of perceived crime and victimization, and lower levels of community safety and community quality compared to those 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 further explored in Studies 2 and 3.

# Study 2: Neighborhood Watch Signs in High, Medium, and Low SES Neighborhoods

## *Overview*

In the previous study, we experimentally tested the effects of Neighborhood Watch signs in a middle class community. Results showed that the normative content of Neighborhood Watch signs affected perceptions of crime rates, ratings of community quality, and perceived likelihood of crime victimization. In Study 2, we aimed to replicate this basic effect and extend the research to examine the moderating role of community SES on the effects of the Neighborhood Watch signs.

The Focus Theory of Normative Conduct suggests that publicly posted Neighborhood Watch signs will focus viewers' attention on the contextual cues of the community. Based on this theory, we hypothesized that "Neighborhood Watch" signs would operate differently as a function of the environment in which they were posted. More specifically, we expected that Neighborhood Watch signs, particularly those that conveyed a normative message about the level of crime in the area, would produce a boomerang effect in low SES communities such that the effects observed in Study 1 (increased perceptions of crime and likelihood of victimization, and decreased levels of perceived community safety and community quality) would be considerably stronger in low SES areas than in High SES areas. To test these hypotheses we utilized a simulated community tour in which either an injunctive, high crime descriptive, low crime descriptive, or no Neighborhood Watch sign (control) was posted in one of three neighborhoods (Low, Middle, or High SES). Outcomes and demographics were assessed using a questionnaire.

Results showed that across variables, low SES communities were perceived as having higher levels of crime and being less safe than middle or high SES communities, regardless of sign type. In fact, the low SES communities demonstrated a ceiling effect such that the community itself was perceived to be so dangerous that any additional effect produced by a Neighborhood Watch sign was washed out. In the middle and high SES conditions significant interactions between Sign Type and SES were observed on several key variables. Specifically, in the high SES communities, participants had lower perceptions of burglary rates and less fear of becoming a victim of burglary when a "Neighborhood Watch" sign was posted compared to when no sign was posted. Conversely, in middle SES communities, participants perceived more burglary and greater likelihood of victimization when there was a "Neighborhood Watch" sign compared to when no sign was posted. Such effects are consistent with the boomerang effect predicted by the Focus Theory of Normative Conduct.

# *Method*

## Participants

Usable date were obtained from 547 undergraduate students recruited from the Psychology Department's Human Participant Pool, and from other lower division general education courses at California State University and Palomar Community College in San Marcos. A minimum sample size of 540 participants was selected in order to allow for at least 45 participants per experimental condition, providing 80% power to detect a medium effect (Cohen, 1992). This larger sample size will provide greater statistical power to detect the trend found in the previous study which showed a reduction in perceived safety for communities with a generic Neighborhood Watch sign, compared to a no-sign control.

## Materials

***Neighborhood Watch signs.*** The Neighborhood Watch signs that were used were identical to those utilized in Study 1:

- Generic (Injunctive Norm, Program Only)
- Low Descriptive Norm
- High Descriptive Norm

***Community tour slide show.*** A total of 12 slide shows were utilized in this study, such that each of the four sign conditions was represented across each of three communities (Low, Middle, and High SES). The experiment used the same middle class community tours utilized in Study 1, and two additional sets of community tours were created to represent low and high SES communities. The for-sale home in each community was selected based on the results of an initial pilot study in which participants estimated the market value of fifteen homes in various communities (Appendix B). For each SES community, three of the 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. A sampling of the slide show images used in the low and high SES slide shows (Low Crime condition) are attached in Appendix E.

***Survey items.*** A questionnaire was used to assess outcomes and demographics. The survey was identical to that used in Study 1 and included measures of:

- Perceived crime rate
- Perceived likelihood of victimization
- Perceived community safety
- Community ratings
- Self-protective behavior
- Burglar's perspective
- Manipulation check
- Demographic variables

### Procedure

The experiment used the same procedure as in Study 1. However each of the three signs (and no sign control) was presented in one of three communities. Participants were told that they were participating in a study about "New Techniques in Home Sales." Participants were tested individually and were randomly assigned to view one of the twelve slide shows depicting a low, middle, or high SES community in which there was a home for sale. As with Study 1, separate blocked randomization procedures were used for men and for women to ensure that the proportion of men to women was consistent across condition. The researcher was blind to which slide show letter corresponded to each experimental condition.

After providing informed consent, participants viewed the slide show and then completed the survey items. Participants were then given a written debriefing explaining the purposes and hypotheses of the study.

### Data Management

To ensure accuracy, survey data was entered into SPSS by two independent researchers. The data were screened for errors, and then the two datasets were compared. Of 36,984 total data cells, there were a total of 153 discrepancies between the two datasets (approximately 76 errors per data file) yielding an error rate of .21%. Discrepancies between the two datasets were resolved by consulting the original hard copy of the survey.

## *Preliminary Analyses*

### Scale Reliability

Cronbach's alpha was used to establish the reliability of all the items used in this study. The items demonstrated respectable reliability and scale scores were created for each of these measures:

- Perceived crime rate (alpha = .96)
- Perceived likelihood of victimization (alpha = .97)
- Community safety (alpha = .69)
- Self-protective behaviors (alpha = .82)

Ratings of home value and community quality were analyzed as individual items.

### Factor analyses

The 29 items that comprised our various outcome measures were factor analyzed using a Principal Components extraction procedure with a Varimax rotation. The analysis revealed 4 clear factors which explained 70% of the variance. The factors corresponded to the four scales listed above, providing evidence for discriminant validity.

### Sample Characteristics

The sample consisted of 547 participants (394 females and 153 males) ranging in age from 18 to 53 (*Mean* = 21.18, *SD* = 4.65). Eighty-three percent of the participants reported being single (never married or divorced), and most did not have children (92%). The majority reported living either with their parents (47%), in a rented apartment (19%) or in campus housing (17%). Twenty-six participants (5%) were homeowners themselves. The sample represented sixty-one communities in San Diego County as well Orange County, Los Angeles County, and Riverside County.

As seen in Table 3 below, the randomization procedure resulted in relatively equal numbers of participants across condition. In addition, the ratio of men to women was consistent across condition.

**Table 3:** *Number of Participants per Experimental Condition*

| SES of Community | Neighborhood Watch Sign Type | | | |
|---|---|---|---|---|
| | Generic Sign | High Crime | Low Crime | No Sign |
| Low | 46 | 46 | 46 | 46 |
| Medium | 46 | 46 | 44 | 44 |
| High | 46 | 46 | 46 | 45 |
| Total | 138 | 138 | 136 | 135 |

### Manipulation Check

In addition to reporting whether or not they had seen a Neighborhood Watch sign, participants in the experimental groups were also asked to recall the information that was printed on the sign. Responses were coded using the identical procedure used in Study 1.

Of the 546 participants who completed the manipulation check items, 94% of those in the experimental groups accurately reported seeing a Neighborhood Watch sign, and 100% of those in the no sign condition did not report seeing a Neighborhood Watch sign. Fifty-one percent of the participants in the high crime condition not only recalled seeing the sign, but also were able to recall the high crime descriptive norm information that was presented on the sign. Only 23% percent of those in the low crime condition were able to recall the low crime descriptive norm information presented on the sign.

## *Results*

The study took the form of a 2 (Gender) x 3 (Community SES) x 4 (Sign Type) factorial ANOVA. Questionnaire measures of perceived crime rate, likelihood of victimization, perceived community safety, protective behaviors, and home/community ratings served as the dependent variables, with follow up planned comparisons. The frequency

distributions for each dependent variable were graphed and examined. Because the distributions did not deviate substantially from a normal curve, analyses were conducted on the raw, untransformed data.

### Perceived Crime Rate

Results of a 2 (Gender) x 3 (SES) x 4 (Sign Type) factorial ANOVA with perceived crime rate as the dependent variable revealed a main effect for Community SES such that the low SES community was perceived has having significantly more crime (than either the middle or high SES communities, $F(2, 521) = 37.30$, $p < .0001$. The analyses also revealed a main effect for sign type, $F(3,521) = 11.79$, $p < .0001$. Most relevant to our hypotheses, the interaction between Sign Type and SES approached significance, $F(6,521) = 2.084$, $p = .05$. Means and standard deviations for these effects are shown in Table 4 below.

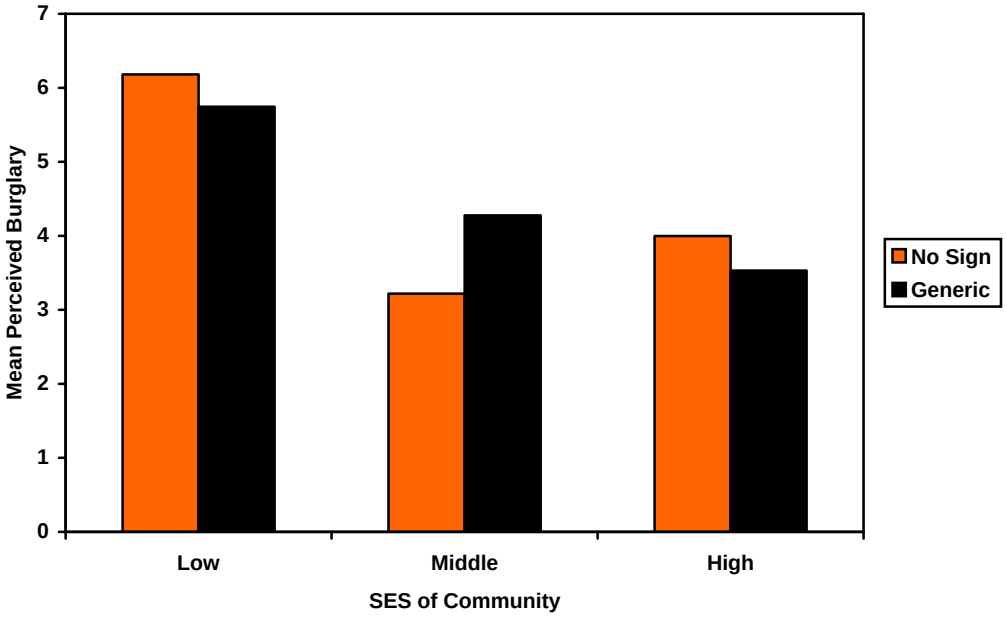
**Table 4 :** *Mean Perceived Crime by Experimental Condition*

| | **Neighborhood Watch Sign Type** | | | | |
|---|---|---|---|---|---|
| **SES** | High Crime | Generic Sign | No Sign | Low Crime | **TOTAL** |
| Low | 5.68 (*SD* = 2.07) | 4.85 (*SD* = 2.20) | 5.29 (*SD* = 2.18) | 4.96 (*SD* = 2.22) | $5.19_a$ (*SD* = 2.17) |
| Medium | 4.61 (*SD* = 2.43) | 3.45 (*SD* = 2.70) | 2.64 (*SD* = 1.93) | 2.68 (*SD* = 1.72) | $3.36_b$ (*SD* = 2.36) |
| High | 4.44 (*SD* = 2.20) | 2.71 (*SD* = 1.59) | 3.04 (*SD* = 1.92) | 3.08 (*SD* = 1.81) | $3.32_b$ (*SD* = 1.99) |
| **Total** | $4.91_a$ (*SD* = 2.29) | $3.67_b$ (*SD* = 2.37) | $3.68_b$ (*SD* = 2.32) | $3.58_b$ (*SD* = 2.16) | |

Note: Marginal means with different subscripts in the same row or column are statistically different, ($p < .05$).

Because the Neighborhood Watch program focuses heavily on preventing crimes such as residential burglary, we chose to perform a separate analysis for the item that referred directly to perceptions of burglary rates in the community. In addition to significant main effects for Sign Type and Community SES, the analysis revealed a significant interaction between Sign Type and Community SES. That is, in high SES communities, participants perceived burglary to be less of a problem when a Neighborhood Watch sign was posted ($M = 3.70$ out of 10, $SD = 1.94$) compared to when no sign was posted ($M = 3.87$, $SD = 2.12$). Conversely, in middle SES communities, participants perceived more burglary when there was a Neighborhood Watch sign ($M = 4.20$, $SD = 2.83$) compared to when there was no sign ($M = 3.20$, $SD = 2.29$). A graphic depiction of this interaction is shown in Figure 4 below.

**Figure 4:** *Sign Type by Community SES Interaction for Perceived Burglary*




As stated in our hypotheses, we expected Neighborhood Watch signs function differently in low compared to high SES communities. However, data in all of the Low SES conditions produced a ceiling effect such that the low SES community was perceived negatively regardless of the type of sign that was posted. Because of this ceiling effect, we were unable to detect the hypothesized effects. However, the results from the middle and high SES communities are consistent with what we would expect based on the Focus Theory of Normative Conduct.

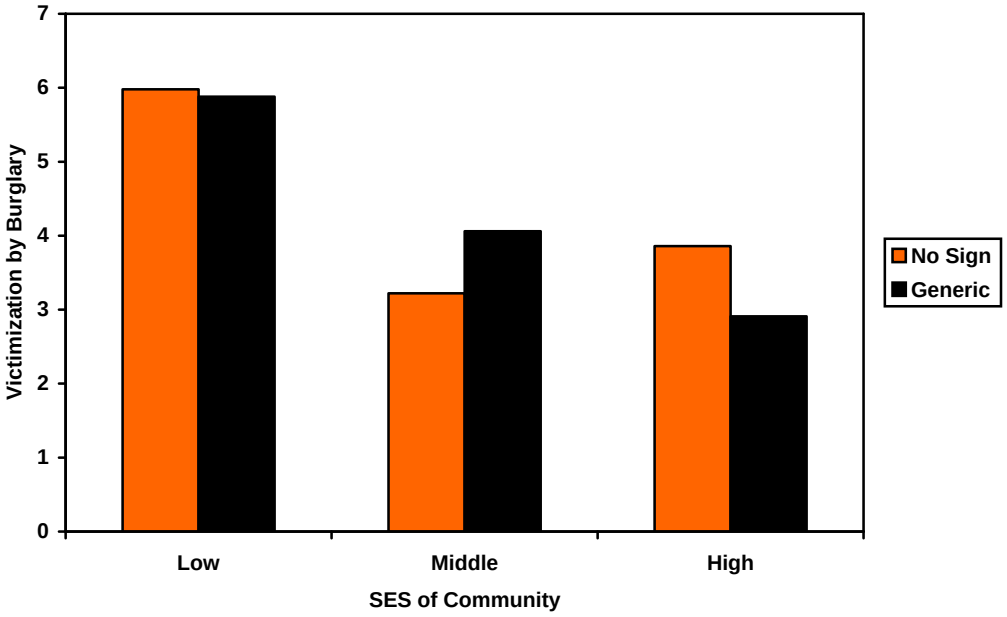
### Perceived Likelihood of Victimization

A similar pattern was observed for the dependent variable "perceived likelihood of victimization." Results of a 2 (Gender) x 3 (SES) x 4 (Sign Type) factorial ANOVA revealed a main effect for Community SES such that participants reported a higher likelihood of potential victimization in Low SES community ($M$ = 4.91 out of 10, $SD$ = 2.23) compared to the Middle ($M$ = 3.04, $SD$ = 2.31) and High SES communities ($M$ = 2.93, $SD$ = 1.99), $F(2, 522) = 34.36$, $p < .0001$. The analyses also revealed a main effect for sign type, $F(3,522) = 7.79$, $p < .0001$. There was also a main effect for Gender such that female participants reported a significantly higher likelihood of being victimized ($M$ = 3.76, $SD$ = 2.40) than males ($M$ = 3.30, $SD$ = 2.22), $F(1,522) = 4.60$, $p < .05$. Contrary to our hypothesis, there was no significant Community SES by Sign interaction.

When we analyzed only the item that referred directly to likelihood of being burglarized we found significant main effects for Sign Type and Community SES. In addition, the analysis revealed a significant interaction between Sign Type and Community SES, $F(6,520) = 2.79$, $p = .01$. That is, in high SES communities, participants had significantly lower worry about being victimized by burglary when a Neighborhood Watch sign was posted ($M$ = 2.91 out of 10) compared to when no sign was posted ($M$ = 3.86).

Conversely, in middle SES communities, participants perceived a greater likelihood of being victimized by burglary when there was a Neighborhood Watch sign ($M$ = 4.06) compared to when there was no sign ($M$ = 3.22). A graphic depiction of this interaction is shown in Figure 5 below.

**Figure 5:** *Sign Type by Community SES Interaction for Burglary Victimization*




### Perceived Community Safety

Results of a 2 (Gender) x 3 (SES) x 4 (Sign Type) factorial ANOVA with community safety as the dependent variable revealed a main effect for Community SES such that the Low SES community ($M$ = 1.92 out of 4)) was perceived as less safe than the Middle ($M$ = 2.37) or High SES communities ($M$ = 2.46), $F(2,521) = 40.07$, $p < .0001$. There was also a significant main effect for sign type [$F(3,521) = 14.47$, $p < .001$]. These means can be seen in Table 5 below. Higher scores indicate higher levels of perceived safety. Contrary to our hypotheses, the Sign by SES interaction was not significant.

**Table 5:** *Mean Community Safety by Experimental Condition*

| | Neighborhood Watch Sign Type | | | | |
|---|---|---|---|---|---|
| **SES** | Generic Sign | No Sign | Low Crime | High Crime | **TOTAL** |
| Low | 2.06 | 1.96 | 1.86 | 1.79 | $1.92_a$ |
| Medium | 2.51 | 2.47 | 2.48 | 2.01 | $2.37_b$ |
| High | 2.70 | 2.53 | 2.52 | 2.09 | $2.46_b$ |
| **Total** | $2.41_b$ | $2.33_b$ | $2.26_b$ | $1.98_a$ | |

Note: Marginal means with different subscripts in the same row or column are statistically different, ($p < .05$).

### Community Ratings

Two separate factorial ANOVAs were conducted to investigate the influence of the various Neighborhood Watch signs on two specific ratings of the community: "*market price of the home"* and "*this is a good neighborhood to raise a family."* Results indicated clear differences in the market value of the low, middle, and high SES homes. However, these estimations did not differ as a function of sign type, and there were no Sign by SES interactions. That is, the presence (or lack) and content of Neighborhood Watch signs did not significantly affect participant's perceptions regarding the value of the home, and the signs functioned similarly across the three communities.

Across all three communities, participants who viewed the community in which the High Crime sign was posted ($M$ = 2.79, $SD$ = 1.11) rated the community significantly lower than those in the Low Crime ($M$ = 3.61, $SD$ = .98), Generic ($M$ = 3.74, $SD$ = .91), or No Sign ($M$ = 3.48, $SD$ = .98) conditions. Contrary to our hypothesis, however, participants overall gave higher ratings to communities in which there was a Generic sign posted, compared to when no sign was posted. This pattern was consistent across community.

### Self-Protective Behaviors

Results of a 2 (Gender) x 2 (SES) x 4 (Sign Type) factorial ANOVA with the scaled self protective behavior items as the dependent variable revealed a main effect for sign type, $F(3,522) = 4.54$, $p < .01$. Participants who viewed a community in which there was a High Crime sign posted ($M$ = 3.46, $SD$ = .86) condition reported a significantly higher likelihood of engaging in self-protective behaviors such as purchasing a guard dog or firearm, compared to those in the Low Crime ($M$ = 3.14, $SD$ = 1.05), Generic ($M$ = 3.11, $SD$ = .89), or No Sign conditions ($M$ = 3.15, $SD$ = .95) There was also a main effect for community SES such that participants reported that would be more likely to engage in these behaviors in the low SES community ($M$ = 3.52, $SD$ = .89) compared to the middle ($M$ = 2.95, $SD$ = .95) or high SES communities ($M$ = 3.17, $SD$ = .91). Contrary to our expectations, the Sign Type by Community SES interaction was not significant.

### A Burglar's Perspective

Two separate factorial ANOVAs were conducted to investigate the influence of the various Neighborhood Watch signs on the two items which asked the participant to take the perspective of a potential burglar. Results of a 2 (Gender) x 3(SES) x 4 (Sign Type) factorial ANOVA with *"likelihood of burglarizing the home"* as the dependent variable revealed a significant main effect for sign type, $F$ (3,515) = 5.01, $p < .01$ and a significant main effect for Community SES, $F(3,515) = 4.33$, $p < .05$. Means and standard deviations for these effects are presented in Table 6 below. Responses for the likelihood of burglarizing the home ranged from 1 (very unlikely) to 5 (very likely). Overall participants reported that they were significantly less likely to burglarize homes where

there was a Generic sign posted (compared to the High Crime and No Sign conditions) and when the home was in a low SES community.

**Table 6:** *Mean Likelihood of Burglarizing the Home*

| | **Neighborhood Watch Sign Type** | | | | |
|---|---|---|---|---|---|
| **SES** | Generic Sign | Low Crime | No Sign | High Crime | **TOTAL** |
| Low | 2.91 (*SD* = 1.15) | 2.70 (*SD* = 1.01) | 2.93 (*SD* = 1.18) | 3.13 (*SD* = 1.04) | $2.92_a$ (*SD* = 1.10) |
| Medium | 2.93 (*SD* = 1.03) | 2.90 (*SD* = 1.09) | 3.14 (*SD* = 1.09) | 3.39 (*SD* = 1.13) | $3.10_b$ (*SD* = 1.10) |
| High | 2.76 (*SD* = 1.19) | 3.29 (*SD* = 1.08) | 3.53 (*SD* = 1.05) | 3.57 (*SD* = 1.19) | $3.28_b$ (*SD* = 1.17) |
| **Total** | $2.87_a$ (*SD* = 1.12) | $2.96_{ab}$ (*SD* = 1.08) | $3.20_b$ (*SD* = 1.13) | $3.36_b$ (*SD* = 1.12) | |

Note: Marginal means with different subscripts in the same row or column are statistically different, ($p < .05$).

Results of a 2 (Gender) x 3(SES) x 4 (Sign Type) factorial ANOVA with *"likelihood of getting caught"* as the dependent variable revealed a significant main effect for sign type, $F(3,516) = 5.44$, $p < .01$ and a significant main effect for Community SES, $F(2,516) = 27.47$, $p < .0001$. Means and standard deviations for these effects are presented in Table 7 below. Responses for the likelihood of getting caught ranged from 0 to 100%. Overall, participants believed that they would most likely be caught if they burglarized a home in a community where a Generic Neighborhood Watch sign was posted. Ratings of the likelihood of getting caught were significantly higher for the Generic sign (compared to the Low Crime and High Crime signs, but it did not differ from the No Sign condition. Participants also believed that they were relatively unlikely to be caught if they burglarized a home in a Low SES community.

**Table 7:** *Mean Likelihood of Getting Caught*

| | **Neighborhood Watch Sign Type** | | | | |
|---|---|---|---|---|---|
| **SES** | High Crime | Low Crime | No Sign | Generic Sign | **TOTAL** |
| Low | 44.63 (*SD* =23.04) | 46.09 (*SD* = 21.08) | 47.13 (*SD* = 24.75) | 51.89 (*SD* = 20.45) | $47.43_a$ (*SD* = 22.38) |
| Medium | 57.43 (*SD* = 25.42) | 61.33 (*SD* = 28.36) | 62.84 (*SD* = 28.73) | 67.32 (*SD* = 24.07) | $62.21_b$ (*SD* = 22.70) |
| High | 64.57 (*SD* = 24.59) | 63.53 (*SD* = 23.84) | 72.31 (*SD* = 17.26) | 70.24 (*SD* = 20.98) | $67.70_b$ (*SD* = 21.96) |
| **Total** | $55.41_b$ (*SD* = 25.56) | $56.78_b$ (*SD* =25.58) | $60.64_a$ (*SD* = 26.04) | $63.06_a$ (*SD* = 23.18) | |

Note: Marginal means with different subscripts in the same row or column are statistically different, ($p < .05$).

## *Replication*

With the support and resources provided by the University's Academic Programs, we conducted a web-based version of Study 2 in tandem with the lab experiment. The web experiment used the same stimuli and materials as the lab experiment, but it was presented online using a web interface. The purpose of the study was twofold. First, it provided a test of a web-based interface for collecting experimental data. Second, it allowed us to replicate the findings of Study 2 with a broader and more diverse sample. Participants for the web study were recruited through a random mailing to homeowners in San Diego County and through online courses at community colleges across Southern California.

### Web Participants

Usable data were obtained from 468 web participants. Participants in the web experiment were on average older (*Mean Age* = 28.7, *SD* = 12.8) and were more likely to own a home (30% homeowners) than those who participated in the lab study at the University (*Mean Age* = 21.2, 5% homeowners). Participants in the web study were also more likely to have children (36% had children compared to 8% in the lab study) and to be married (30% vs. 8% respectively).

### Web Results

Across variables, data from the web study replicated the main effect for community SES observed in the lab. Participants in both the lab and web experiments perceived more crime, were more worried about being victimized, perceived the community to be less safe, and reported a greater likelihood of engaging in self-protective behaviors in lower SES communities compared to middle or high SES communities.

The web study failed to consistently replicate the main effect for Sign Type that was observed in the lab. That is, the type of information presented on the sign did not influence participants' responses. We attribute this failure to replicate to the lower resolution and smaller size of the web slide show images. In the lab, the slide shows were shown full screen on a 19" computer monitor. To account for variations in the screen resolution settings of web participants, the web pictures were sized smaller, and it was difficult to discern the exact text on the sign in 4 out of the 5 sign pictures.

An interaction pattern between Sign Type and Community SES was observed across variables. For some variables the interaction did not reach conventional levels of significance, but in every case the pattern was consistent with the lab study and in the expected direction. Interestingly, in the web study, the presence of a "Generic" sign was associated with more worry about being victimized, lower perceptions of community safety, and an increased likelihood of engaging in self-protective behaviors in both low *and* middle SES communities compared to when no sign was posted. As expected, in High SES areas, the "Generic" sign led to decreased worry about victimization, increased perceptions of safety, and a decreased likelihood of engaging in self-protective behaviors.

## *Conclusions*

The goal of Study 2 was to replicate the basic effects observed in Study 1 for the middle class community and to extend the research to examine the moderating role of community SES on the effects of the signs. Based on the Focus Theory of Normative Conduct, we hypothesized that "Neighborhood Watch" signs would operate differently as a function of the environment in which they were posted. More specifically, we predicted that the presence Neighborhood Watch signs would produce a boomerang effect in low SES communities such that the effects observed in Study 1 (increased perceptions of crime and likelihood of victimization, and decreased levels of perceived community safety and community quality) would be considerably stronger in low SES areas than in High SES areas.

Across variables, low SES communities were perceived as having higher levels of crime and being less safe than middle or high SES communities, regardless of sign type. Significant interactions between Sign Type were observed on perceptions of burglary and worry about burglary victimization. Surprisingly, the data did not reveal the expected boomerang effect in Low SES communities. We attribute this to a ceiling effect in the data such that the low SES community was perceived to be so unsafe that any additional effects of the Neighborhood watch sign were undetectable. Interestingly, the middle SES condition did show the anticipated boomerang effect, whereby the addition of the sign to the community led to increased perceptions of crime rates (particularly burglary) and increased worry about being victimized by crime. The pattern of this interaction was consistent with what we would expect based on the Focus Theory of Normative Conduct. That is, in Middle SES communities, the presence of a Neighborhood Watch signs focuses attention on contextual cues in the community which may indicate the presence of crime. Similarly, in High SES communities, the presence of the sign focuses attention on contextual cues that indicate low levels of crime.

Despite the increases in fear associated with posted Neighborhood Watch signs, the traditional "Generic" Neighborhood Watch sign produced a number of positive outcomes. Overall, this sign produced higher ratings of community safety and was perceived to have some deterrent value. Across communities, participants reported a slightly lower likelihood of burglarizing the home and a greater likelihood of getting caught when a Generic sign was posted compared to when other types of signs were posted.

Taken together, the results from Study 2 indicate that participants believed in the deterrent value of the traditional Neighborhood Watch signs. However, traditional Neighborhood watch signs were often associated with increases in fear of crime and victimization, particularly in middle class areas. These data provide clear evidence for the influence of sign presence and wording on perceptions of the community, beliefs about the prevalence of crime in the community, and worry about potential victimization.

# Study 3: Physical Condition of Neighborhood Watch Signs in High and Low SES Neighborhoods

## *Overview*

Studies 1 and 2 were designed to test the effect of the language presented on Neighborhood Watch signs on perceptions of crime, worry about victimization, and perceptions of community safety and quality. The goal of the third study was to examine the potential for the physical condition of Neighborhood watch signs posted in the community to convey normative information about the presence and acceptance of crime in the community. The study utilized a community tour in which a traditional Neighborhood Watch sign that was either new, aged, or defaced, was posted in one of two communities (High SES or Low SES).

Based on the Focus Theory of Normative Conduct, we hypothesized that the defaced and aged signs would perform similar to the High Crime descriptive norm condition in Studies 1 and 2. Specifically, we predicted that such signs would produce higher estimations of crime rates, more worry about victimization, and lower ratings of community safety and quality. We further hypothesize that this effect would be moderated by the socioeconomic status (SES) of the community, such that the effect would be considerably stronger for the low SES areas and smaller in the high SES areas.

Results showed that across variables, low SES communities were perceived as having higher levels of crime and being less safe than middle or high SES communities, regardless of sign type. We also observed several main effects for Sign Type, such that the defaced sign was associated with increased perceptions of crime and victimization regardless of the community in which it was posted. Significant interactions between Community and Sign Type were observed on perceptions of crime and burglary and worry about burglary victimization. These results were consistent with our predictions based on the Focus Theory of Normative Conduct such that in low SES communities, the presence of an aged sign led to increased perceptions of crime and victimization by burglary. Conversely, in high SES communities, the presence of aged Neighborhood Watch signs were associated with decreased perceptions of crime and victimization.

## *Method*

### Participants

Usable date were obtained from 364 undergraduate students recruited from the Psychology Department's Human Participant Pool, and from other lower division general education courses at California State University and Palomar Community College in San Marcos. A minimum sample size of 360 participants was selected in order to allow for at

least 45 participants per experimental condition, providing 80% power to detect a medium effect (Cohen, 1992).

## Materials

***Neighborhood Watch signs.*** The study used the same Generic (Injunctive Norm, Program Only) sign that was utilized in Studies 1 and 2. However, three variations of the sign were used. Digital images of the aged and defaced signs are attached in Appendix F. The three experimental signs were modified as follows:

- New Sign – This sign contained the traditional "Neighborhood Watch Program in Force" text and was displayed in its original, undamaged form. This sign was identical to the "Generic" sign used in Studies 1 and 2.

- Aged Sign – This sign contained the traditional "Neighborhood Watch Program in Force" text and was modified to show signs of aging such as rust, fading, and scratches. The intent was to convey a descriptive norm that residents in the community are not involved in crime prevention practices.

- Defaced Sign – This sign contained the traditional "Neighborhood Watch Program in Force" text and was digitally modified with "spray paint" to depict a sign that had been vandalized. The intent was to convey a descriptive norm that "crime happens here."

***Community tour slide show.*** A total of 12 slide shows were utilized in this study such that each of the three signs conditions (and no sign control) was represented in each of two communities (Low or High SES). The experiment used the same community tours utilized in Study 2, except that the signs in each tour were replaced with one of the three signs described above. For each SES community, three of the 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.

***Survey items.*** A questionnaire was used to assess outcomes and demographics. The survey was identical to that used in Study 1 and included measures of perceived crime rate, perceived likelihood of victimization, perceived community safety, community ratings, and self-protective behavior. The questionnaire also included two items that asked participants to take the perspective of a burglar and estimate their likelihood of burglarizing a home and of getting caught. The manipulation check and demographics were assessed at the end of the questionnaire.

## Procedure

The experiment used the same procedure as in the previous two studies. However each of the three signs (and no sign control) was presented in one of two communities. Participants were told that they were participating in a study about "New Techniques in Home Sales." Participants were then randomly assigned to view one of eight shows depicting a low or high SES community in which there was a home for sale. As with

Study 1, separate blocked randomization procedures were used for men and for women to ensure that the proportion of men to women was consistent across condition.

### Data Management

To ensure accuracy, survey data was entered into SPSS by two independent researchers. The data were screened for errors, and then the two datasets were compared. Of 24,388 total data cells, there were a total of 165 discrepancies between the two datasets (approximately 82 errors per data file) yielding an error rate of .34%. Discrepancies between the two datasets were resolved by consulting the original hard copy of the survey.

## *Preliminary Analyses*

### Scale Reliability

Cronbach's alpha was used to establish the reliability of all the items used in this study. The items demonstrated respectable reliability and scale scores were created for each of these measures:

- Perceived crime rate (alpha = .95)
- Perceived likelihood of victimization (alpha = .96)
- Community safety (alpha = .74)
- Self-protective behaviors (alpha = .76)

Ratings of home value and community quality were analyzed as individual items.

### Sample Characteristics

The sample consisted of 364 participants (247 females and 117 males) ranging in age from 18 to 52 (*Mean* = 20.95, *SD* = 5.06). Eighty-three percent of the participants reported being single (never married or divorced), and most did not have children (95%). The majority reported living either with their parents (45%), in a rented apartment (26%), or in campus housing (15%). Only twelve of the participants (3%) reported being homeowners themselves. The sample represented thirty-five communities in San Diego County as well neighboring Orange County, Los Angeles County, and Riverside County.

As seen in Table 8 below, the randomization procedure resulted in relatively equal numbers of participants across condition.

**Table 8:** *Number of Participants per Experimental Condition in Study 3*

| SES of Community | Neighborhood Watch Sign Type | | | |
|---|---|---|---|---|
| | New Sign | Aged Sign | Defaced Sign | No Sign |
| Low | 46 | 44 | 45 | 46 |
| High | 45 | 46 | 46 | 46 |
| Total | 91 | 90 | 91 | 92 |

### Manipulation Check

Of the 363 participants who completed the manipulation check items, 95% of those in the experimental groups accurately reported seeing a Neighborhood Watch sign, and 100% of those in the "No Sign" condition accurately reported that they did not see Neighborhood Watch sign.

## *Results*

The study took the form of a 2 (Gender) x 2 (Community SES) x 4 (Sign Type) factorial ANOVA. Questionnaire measures of perceived crime rate, likelihood of victimization, perceived community safety, protective behaviors, and home/community ratings served as the dependent variables, with follow-up planned comparisons. The frequency distributions for each dependent variable were graphed and examined. Because the distributions did not deviate substantially from a normal curve, analyses were conducted on the raw, untransformed data.

### Perceived Crime Rate

Results of a 2 (Gender) x 2 (SES) x 4 (Sign Type) factorial ANOVA with perceived crime rate as the dependent variable revealed a main effect for Community SES such that the Low SES community was perceived has having significantly more crime ($M$ = 5.32, $SD$ = 1.78) than High SES communities ($M$ = 2.81, $SD$ = 1.73), $F(1, 347) = 172.46$, $p < .0001$. The analyses also revealed a main effect for sign type such that participants perceived more crime when a defaced sign was present compared to when an aged sign or no sign was posted, $F(3,347) = 4.44$, $p < .01$. Surprisingly, the presence of a new sign (identical to the "Generic" sign used in Study 2) resulted in an overall *increase* in perceived crime in both low and high SES communities and, in fact, produced effects similar to the defaced sign. Although the increase in perceived crime produced by the New Sign was not significant, the pattern of results is inconsistent with the results we obtained in Study 2. While we expected to see an increase in perceived crime in the low SES communities, the increase in perceived crime in the high SES communities was unexpected. Means and standard deviations for these effects are shown in Table 9 below.

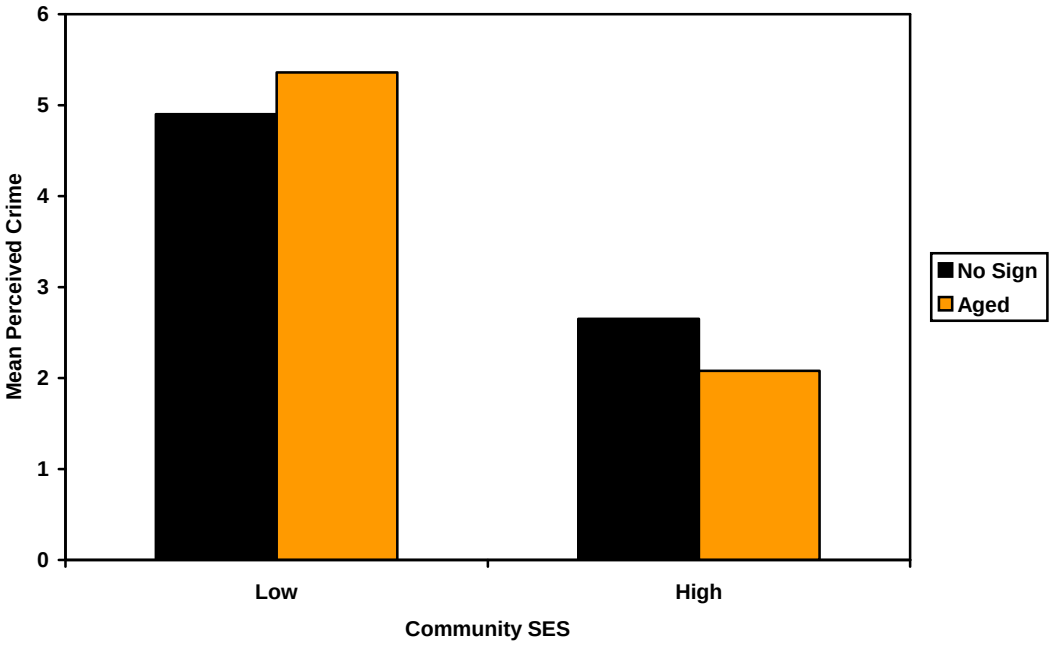
**Table 9 :** *Mean Perceived Crime by Physical Condition of Neighborhood Watch Sign*

| | **Neighborhood Watch Sign Type** | | | | |
|---|---|---|---|---|---|
| **SES** | Defaced | New | No Sign | Aged | **TOTAL** |
| Low | 5.88 (*SD* = 1.49) | 5.19 (*SD* = 1.80) | 4.90 (*SD* = 1.77) | 5.36 (*SD* = 1.94) | 5.32 (*SD* = 1.78) |
| High | 3.38 (*SD* = 1.93) | 3.14 (*SD* = 1.76) | 2.65 (*SD* = 1.71) | 2.08 (*SD* = 1.15) | 2.81 (*SD* = 1.73) |
| **Total** | $4.60_{a}$ (*SD* = 2.13) | $4.17_{ac}$ (*SD* = 2.05) | $3.78_{bc}$ (*SD* = 2.07) | $3.68_{bc}$ (*SD* = 2.28) | |

Note: Marginal means with different subscripts in the same row or column are statistically different, ($p < .05$).

Most relevant to our hypotheses, there was a significant interaction between Sign Type and Community SES, $F(3,347) = 2.89$, $p < .05$ such that in High SES communities, the presence of an aged Neighborhood Watch sign led to *decreased* perceptions of crime rates whereas in the Low SES community, the presence of an Aged sign led to *increased* perceptions of crime rates. A graphical depiction of this interaction is shown in Figure 6 below.

**Figure 6:** *Perceptions of Crime Produced by Aged Signs in Low and High SES Communities*




***Perceptions of Burglary.*** In the above analyses, estimations of the "vandalism" problem were included in participant's perceptions of overall crime. Additionally, residential burglary is a primary focus of the Neighborhood Watch program. As a result, we chose to perform a separate analysis for a single item from the scale that referred directly to perceptions of burglary rates in the community. Results followed a pattern similar to those reported above.

As seen in Table 10, the analyses revealed a main effect for Community SES such that participants perceived burglary to be more of a problem in Low SES communities ($M = 6.23$, $SD = 2.18$) than in High SES communities ($M = 3.62$, $SD = 2.30$), $F(1, 347) = 112.94$, $p < .0001$. The analyses also revealed a main effect for sign type, $F(3,347) = 3.162$, $p < .05$. Participants perceived burglary to be more of a problem when a defaced sign was posted compared to when no sign was posted, $t(374) = 5.55$, $p < .01$. Interestingly, the posting of a *new* Neighborhood Watch sign also slightly increased perceptions of burglary compared to the No Sign condition, $t(374) = 1.82$, $p = .07$. Although the difference did not reach conventional levels of significance, the pattern of results is inconsistent with our hypotheses. Furthermore, these findings fail to replicate the results obtained in Study 2.

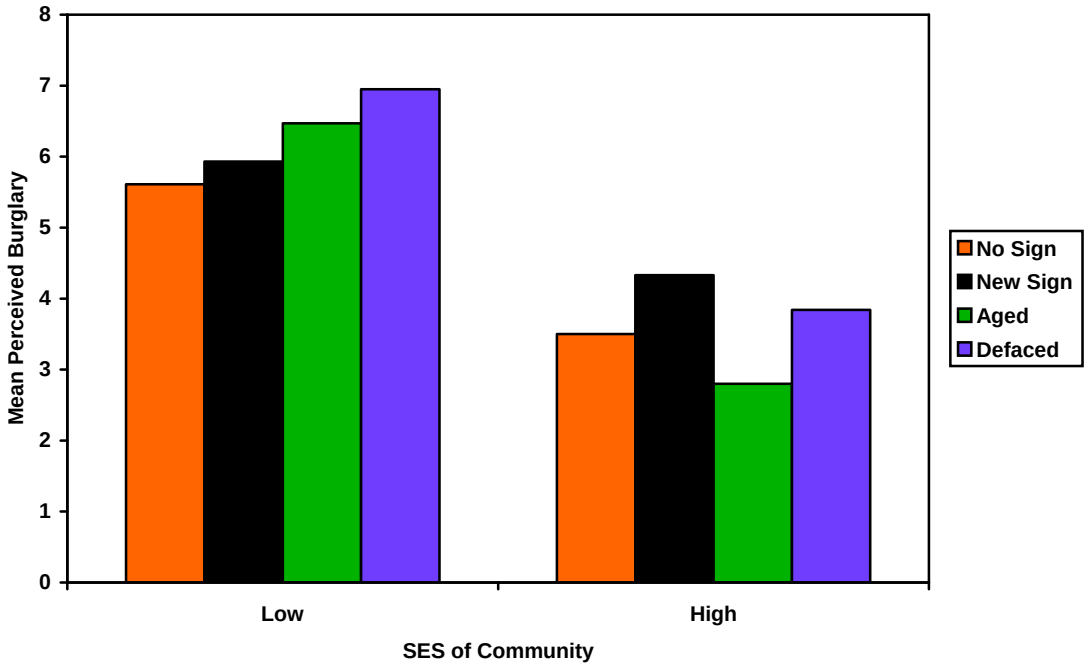
**Table 10:** *Mean Perceived Burglary by Physical Condition of Sign*

| | Neighborhood Watch Sign Type | | | | |
|---|---|---|---|---|---|
| **SES** | Defaced | New | Aged | No Sign | **TOTAL** |
| Low | 6.95 (*SD* = 1.99) | 5.93 (*SD* = 2.08) | 6.48 (*SD* = 2.24) | 5.60 (*SD* = 2.25) | $6.23_a$ (*SD* = 2.18) |
| High | 3.84 (*SD* = 2.59) | 4.33 (*SD* = 2.50) | 2.80 (*SD* = 1.60) | 3.50 (*SD* = 2.19) | 3.62 (*SD* = 2.30) |
| **Total** | $5.37_a$ (*SD* = 2.78) | $5.14_{ab}$ (*SD* = 2.42) | $4.60_b$ (*SD* = 2.67) | $4.55_b$ (*SD* = 2.44) | |

Note: Marginal means with different subscripts in the same row or column are statistically different, ($p < .05$).

Consistent with our hypothesis, there was a significant interaction between Sign Type and Community SES, $F(3,347) = 5.19$, $p < .01$ such that in High SES communities the presence of an aged Neighborhood Watch sign led to *decreased* perceptions of crime rates, whereas in the Low SES community, the presence of an Aged sign led to *increased* perceptions of crime rates. A graphical depiction of this interaction is shown in Figure 7 below.

**Figure 7:** *Burglary Perceptions Produced by the Physical Condition of Sign*

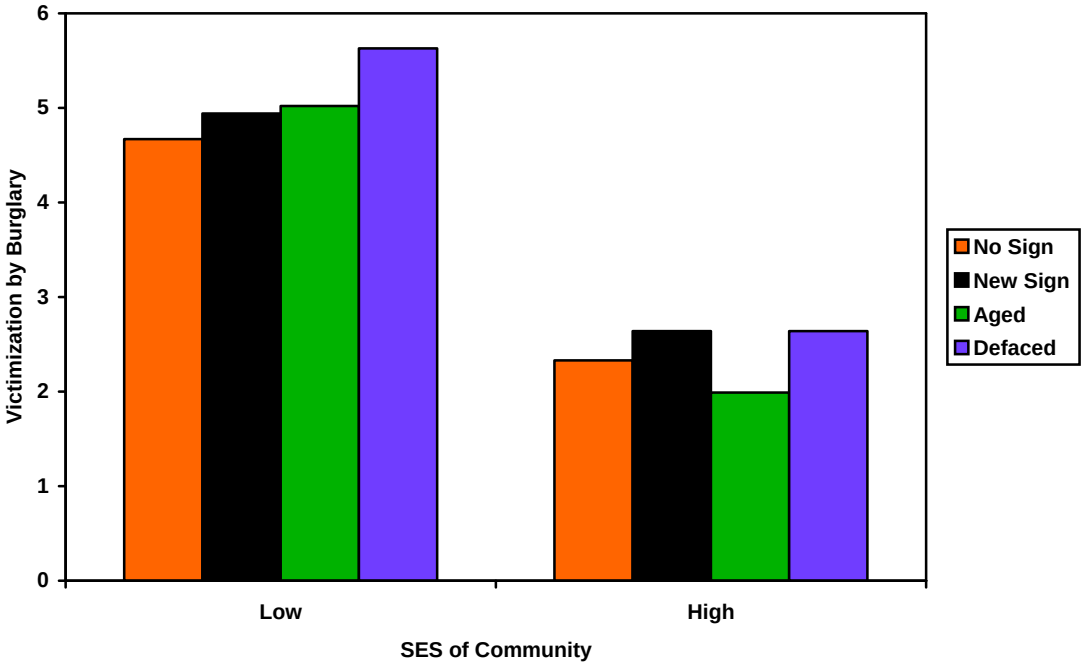


### Perceived Likelihood of Victimization

As in Study 2, results of a 2 (Gender) x 2 (SES) x 4 (Sign Type) factorial ANOVA with *perceived likelihood of victimization* as the dependent variable revealed a main effect for Community SES such that participants reported a higher likelihood of potential victimization in Low SES community ($M$ = 5.06 out of 10, $SD$ = 1.99) compared to the High SES community ($M$ = 2.40, $SD$ = 1.69), $F(1, 347) = 166.66$, $p < .0001$. However, neither the main effect for sign type nor the Community SES by Sign interaction were significant.

***Victimization by Burglary.*** When we analyzed only the item that referred directly to likelihood of being burglarized we found a significant main effects Community SES. In addition, the analysis revealed a significant interaction between Sign Type and Community SES, $F(3,347) = 3.56$, $p < .05$. As seen in Figure 8 below, the interaction followed a pattern similar to that reported above for perceived burglary. That is, in High SES communities, participants had lower worry about being victimized by burglary when an aged Neighborhood Watch sign was posted ($M$ = 2.00 out of 10) compared to when no sign was posted ($M$ = 2.33). Conversely, in Low SES communities, participants perceived a greater likelihood of being victimized by burglary when there was an aged Neighborhood Watch sign posted ($M$ = 5.02) compared to when there was no sign ($M$ = 4.66).

**Figure 8:** *Burglary Victimization by Physical Condition of Sign*




### Perceived Community Safety

Results of a 2 (Gender) x 2 (SES) x 4 (Sign Type) factorial ANOVA with community safety as the dependent variable revealed a main effect for Community SES such that the

Low SES community (*M* = 1.86 out of 4)) was perceived as less safe than the High SES community (*M* = 2.5), *F*(1,342) = 157.71, *p* < .0001. There was also a significant main effect for sign type [*F*(3,342) = 5.10, *p* <.01]. These means can be seen in Table 11 below. Higher scores indicate higher levels of perceived safety. Contrary to our hypotheses, the Sign by SES interaction did not reach a conventional level of significance, *F* (3,342) = 2.514, p = .06

**Table 11:** *Mean Community Safety by Physical Condition of Neighborhood Watch Sign*

| | Neighborhood Watch Sign Type | | | | |
|---|---|---|---|---|---|
| **SES** | No Sign | Aged | New Sign | Defaced | **TOTAL** |
| Low | 1.94 (*SD* = 0.47) | 1.82 (*SD* = 0.44) | 1.91 (*SD* = 0.41) | 1.77 (*SD* = 0.51) | 1.86 (*SD* = 0.46) |
| High | 2.68 (*SD* = 0.58) | 2.69 (*SD* = 0.51) | 2.48 (*SD* = 0.71) | 2.33 (*SD* = 0.44) | $2.55_{a}$ (*SD* = 0.58) |
| **Total** | $2.31_{a}$ (*SD* = 0.65) | $2.27_{a}$ (*SD* = 0.64) | $2.19_{ab}$ (*SD* = 0.64) | $2.05_{b}$ (*SD* = 0.55) | |

Note: Marginal means with different subscripts in the same row or column are statistically different, (*p* < .05).

### Community Ratings

Two separate factorial ANOVAs were conducted to investigate the influence of the various Neighborhood Watch signs on two specific ratings of the community: "*market price of the home"* and "*this is a good neighborhood to raise a family."* Results indicated clear differences in the market value of the low, middle, and high SES homes. However, these estimations did not differ as a function of sign type, and there were no Sign by SES interactions.

Results of a 2 (Gender) x 2 (SES) x 4 (Sign Type) factorial ANOVA with *good neighborhood to raise a family* as the dependent variable revealed a main effect for sign type such that communities in which a defaced sign was posted (*M* = 3.01 out of 5, *SD* = 1.02*)* were rated as lower quality than those in which a new sign (*M* = 3.38, *SD* = 1.01), an aged sign (*M* = 3.41, *SD* = 1.20), or no sign was posted (*M* = 3.34, *SD* = 1.12), *F*(3,348) = 6.06, *p* <.001].

Consistent with our hypotheses, there was also a significant interaction between Community SES and Sign Type. Although the difference was small, in the Low SES communities the presence of an aged sign decreased ratings of community quality whereas in the High SES condition, the aged sign increased ratings of community quality, *F*(3,348) = 3.17, *p* < .05.

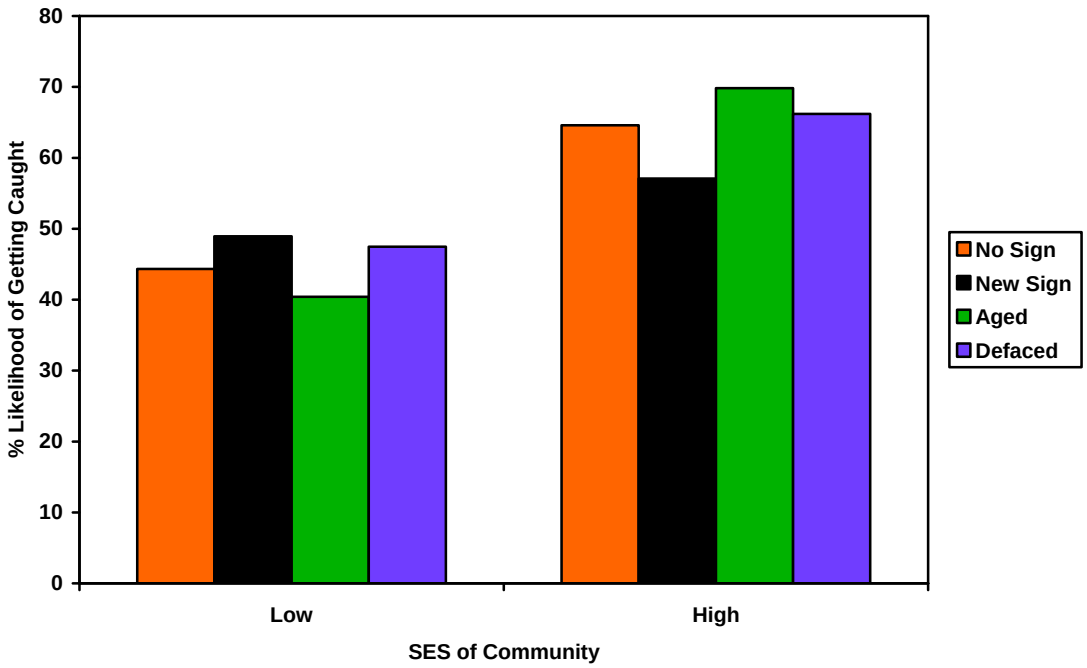
### A Burglar's Perspective

Two separate factorial ANOVAs were conducted to investigate the influence of the various Neighborhood Watch signs on the two items that asked the participant to take the

perspective of a potential burglar. Results of a 2 (Gender) x 3(SES) x 4 (Sign Type) factorial ANOVA with *"likelihood of burglarizing the home"* as the dependent variable revealed no significant main effects or interactions.

Consistent with the Focus Theory of Normative Conduct, a factorial ANOVA with *"likelihood of getting caught"* as the dependent variable revealed a significant Community SES x Sign Type Interaction, $F$ (3,340) = 4.41, $p$<.01. The interaction followed a pattern similar to that reported for other variables such that in the Low SES community, the presence of an aged Neighborhood Watch sign was associated with decreases in the perceived likelihood of getting caught. Conversely, in a High SES community, the presence of an aged Neighborhood Watch sign led to an increased perception of getting caught. Although the pattern of results is consistent with our predictions, the differences did not reach conventional levels of statistical significance. Contrary to our predictions, however, the presence of a new Neighborhood Watch sign led to an increased perception that a burglar would be caught in Low SES communities, and a decreased perception of getting caught in High SES communities. Again, these differences were small and did not reach statistical significance. A graphical representation of this interaction can be seen in Figure 9 below.

**Figure 9:** *Likelihood of Getting Caught by Experimental Condition*




## *Conclusions*

The goal of Study 3 was to examine the potential for the physical condition of posted Neighborhood Watch signs to focus on contextual cues about the presence of crime in the community. Based on the Focus Theory of Normative Conduct, we hypothesized that "Neighborhood Watch" signs, particularly those that were either aged or defaced would

operate differently as a function of the environment in which they were posted. More specifically, we predicted that such signs would produce a boomerang effect in low SES communities leading to increased perceptions of crime and likelihood of victimization, and decreased levels of perceived community safety and community quality. Conversely, we predicted that the presence of these signs in high SES areas would lead to decreased perceptions of crime and likelihood of victimization, and increased levels of perceived community safety and community quality.

Across variables, low SES communities were perceived as having higher levels of crime and being less safe than middle or high SES communities, regardless of sign type. This is consistent with the pattern we observed in Study 2. Across several variables, there was a main effect for Sign Type, such that the defaced sign was associated with increased perceptions of crime and victimization, regardless of the community in which it was posted. Significant interactions between Community and Sign Type were observed on perceptions of crime and burglary and worry about burglary victimization. These results were consistent with our predictions, such that in Low SES communities, the presence of an aged sign led to increased perceptions of crime and victimization by burglary. Conversely, in High SES communities, the presence of aged Neighborhood Watch signs were associated with decreased perceptions of crime and victimization.

One interesting finding that emerged from these data was that when asked to take the perspective of a burglar and estimate the likelihood of burglarizing the home, the type of sign that was posted in the community made no difference. However, consistent with the Focus Theory of Normative Conduct, participant's estimated likelihood of getting caught followed a pattern similar to that reported for other variables. Specifically, in the Low SES community, the presence of an aged Neighborhood Watch sign was associated with decreases in the perceived likelihood of getting caught. Conversely, in a High SES community, the presence of an aged Neighborhood Watch sign led to an increased perception of getting caught. Although the effects produced in Study 3 are consistent with our predictions, it is important to note that these findings do not replicate the results from Study 2. Specifically, in Study 2, the presence of a Generic sign led to a decreased likelihood of burglarizing, and an increased likelihood of getting caught for both high and low SES communities. While we do not have a concrete explanation for the difference in results between the two studies, we do know that many participants have a difficult time answering these particular items on the questionnaire. That is, many participants have reported that they find it difficult or uncomfortable to "take the perspective of a burglar" to complete these items. Unfortunately, this was the only method for assessing potential deterrent effects of Neighborhood Watch signs in the present lab study. As a result, the deterrent effect of Neighborhood Watch signs remains unclear. However, these questions could be answered in a larger field experiment, or in a lab study using a special population of individuals who have been previously convicted of burglary.

Consistent with the Focus Theory of Normative Conduct, our results suggest that an aged sign means something different when posted in a low compared to a high SES community. The aged sign was intended to convey a normative message that people are not involved in crime prevention practices. In the Low SES community, this appeared to

draw attention to the contextual cues in the environment thus increasing perceptions of crime. In the High SES community, the same sign was associated with decreased perceptions of crime. This is consistent with what we would expect based on the Focus Theory. Perhaps the aged sign is interpreted as there not being a need for active involvement due to the already low levels of crime.

Surprisingly, the presence of a new Neighborhood Watch sign resulted in an overall increase in perceived crime in both low *and* high SES communities and, in fact, produced effects similar to the defaced sign. Although the increase in perceived crime produced by the New Sign was not significant, the pattern of results is inconsistent with the results we obtained in Study 2. While we expected to see an increase in perceived crime in the low SES communities, the increase in perceived crime in the high SES communities was unexpected. Additionally, because we did not include a Middle SES condition in Study 3, we are unable to comment on the effects of the physical state of the signs in middle class communities. Although the strongest effects in Study 2 were observed in the Middle SES community, the present study was developed based on an anticipated effect for low SES and high SES communities. While beyond the scope of the current project, we are in the process of conducting a fourth experiment focusing only on middle SES communities in which new, aged or defaced Neighborhood Watch signs (or no signs) are posted.

# Implications for Policy and Practice

The power of social norms to influence an individual's beliefs and behaviors has been well documented (Cialdini et al., 1990; Schultz, 1999; Sherif, 1935). The present studies are no exception. Our data provide clear evidence for the influence of normative information about crime on beliefs about the prevalence of crime in the community and likelihood of potential victimization. These results have practical value for community-based crime prevention policy and practice. Community-based crime prevention programs, such as Neighborhood Watch, recognize that crime makes citizens fearful and socially isolated. Although Neighborhood Watch programs try to reduce this fear and isolation by increasing social cohesion, the findings from this study suggest that the public posting of Neighborhood Watch signs which focus on crime can potentially undermine this goal.

In preparation for the present study, we documented a variety of real-world examples of signs posted in communities throughout the United States that focus on the high prevalence of crime in the community. This research has provided clear evidence that this approach could potentially have adverse effects on perceptions of the community. Fortunately, Neighborhood Watch signs focusing on the high prevalence of crime are fairly rare. However, there is tremendous variability in the type of information that is presented on Neighborhood Watch signs from one community to the next. As a result, the empirical evaluation of the effects of these signs could prove useful to Neighborhood Watch coordinators across the country as they select signs to post in their own communities.

These studies represent the first attempt to apply psychological theories about social norms to understanding the impact of publicly posted crime prevention signs. The results from these laboratory experiments have important implications for Neighborhood Watch programs across the country by providing theoretically-grounded empirical evidence regarding the effects of these publicly displayed crime prevention signs. The results from the proposed studies will have direct application to community-based crime prevention programs in three ways.

**Implication #1: Avoid scare tactics and cues about crime problems.** While our focus here is on Neighborhood Watch signs, the results can apply more broadly to the dissemination of crime information to residents. Based on the Focus Theory of Normative Conduct, we found evidence that posting *any* crime prevention sign can focus attention on the contextual variables of the surrounding community, thereby activating a descriptive norm about crime prevalence. This effect is further exacerbated by including normative information in the text of the sign, such as "you are entering a high crime area." Moreover, the physical condition of the sign (a defaced or aged sign, for example) can also activate a descriptive norm about the prevalence and tolerance of crime in the community. Such results suggest that practitioners and crime-prevention directors should pay special attention to the maintenance and replacement of posted Neighborhood Watch signs, particularly in Low SES communities.

**Implication #2: Recognize that Neighborhood Watch signs operate differently in high, medium, and low SES communities.** The results from these studies will help to identify the types of communities most likely to benefit from publicly posted crime prevention signs. Several evaluations of Neighborhood Watch programs have lamented the finding that the program is least effective in the areas that are most in need. That is, Neighborhood watch programs seem to work best in areas that are already low in crime, and the benefits are weaker and short-lived in higher crime areas. The results of this Study provide theoretical support for the idea that Neighborhood Watch signs are perceived differently as a function of the environment in which they are posted with the most negative effects (increased perceptions of crime and victimization) occurring in Low and Middle class areas.

**Implication #3: Replace defaced or aged signs.** Finally, the results from Study 3 attest to the important of maintaining Neighborhood Watch signs that are currently posted in the community. Our results showed that the physical condition of the sign (a defaced or aged sign, for example) can activate a descriptive norm about the prevalence and tolerance of crime in the community. Such results suggest that practitioners and crime-prevention directors pay special attention to the maintenance and replacement of posted Neighborhood Watch signs, particularly in Low SES communities.

# Conclusions and Recommendations

Based on the Focus Theory of Normative Conduct, and the idea of incongruent norms, a series of three laboratory experiments was conducted to examine the causal impact of Neighborhood Watch sign presence and content on perceived crime rates, likelihood of victimization, community safety, and estimates of home and community quality. The results of these laboratory studies show that the traditional Neighborhood Watch signs can result in *increases* in fear of crime and victimization. The laboratory data provided clear evidence for the influence of a descriptive norm for crime on beliefs about the prevalence of crime in the community and likelihood of potential victimization. Moreover, this normative information led to a decreased perception of community safety and quality.

Results of the first experiment showed that participants who viewed a community with a Neighborhood Watch sign containing a “High crime” message reported a significantly higher likelihood of victimization, higher levels of community crime, and lower levels of perceived safety and community quality compared to those in the Generic, No Sign, or Low Crime conditions. Those in the “Low Crime” descriptive norm condition reported the lowest levels of perceived crime and victimization, and the highest levels of perceived community safety and community quality. Participants who viewed the community in which a “Generic” Neighborhood Watch sign was posted reported slightly higher levels of perceived crime and victimization, and lower levels of community safety and community quality compared to those in the “No Sign” condition, but the effect was small and did not reach statistical significance. The results from Study 1 showed clear evidence for the influence of normative information presented on Neighborhood Watch signs on perceptions of the community.

In the second study, we examined the moderating role of community SES on the effects of the signs. We hypothesized that "Neighborhood Watch" signs would operate differently as a function of the environment in which they were posted. Significant interactions between Sign Type and SES were observed on several key variables. Specifically, in the High SES communities, participants had lower perceptions of burglary rates and less fear of becoming a victim of burglary when a "Neighborhood Watch" sign was posted compared to when no sign was posted. Conversely, in Middle SES communities, participants perceived more burglary and greater likelihood of victimization when there was a "Neighborhood Watch" sign compared to when no sign was posted. Such effects are consistent with the boomerang effect predicted by the Focus Theory of Normative Conduct and suggest that Neighborhood Watch signs function differently as a function of the environment in which they are posted.

In the third study we examined the potential for the physical condition of posted Neighborhood Watch signs to convey normative information about the presence of crime in the community. Results revealed that traditional Neighborhood Watch signs, particularly those that were defaced, led to increased perceptions of crime and victimization. Consistent with the Focus Theory, the results also revealed that the presence of an aged sign functioned differently in Low compared to High SES communities. The aged sign led to increased perceptions of crime and victimization in Low SES communities. These results attest to the importance of maintaining Neighborhood Watch signs in these communities.

Community-based crime prevention programs, such as Neighborhood Watch, recognize that crime makes citizens fearful and socially isolated. Although Neighborhood Watch programs try to reduce this fear and isolation by increasing social cohesion, there is now considerable evidence to suggest that the posting of Neighborhood Watch signs that focus on crime as a problem may undermine this goal. As a result, a logical next step is to use sound research methodology to empirically derive and evaluate an alternative Neighborhood Watch sign that does not produce these effects.

### Limitations

The primary limitation of this study concerns external validity. First, while this study was strengthened by using a controlled laboratory environment, it was not without the cost of some element of realism. Although every effort was made to ensure that the community tour slide shows were as realistic as possible, the actual presence of various types of Neighborhood Watch signs in a field setting might produce very different results.

Another set of limitations with respect to this study concern the characteristics of the participants. Much of this is due to the use of undergraduate students as participants. The typical participant in this study was a single, female who did not own a home or have children. The characteristics of the sample severely limit the ability of these findings to generalize to other groups. Of particular concern was the large percentage of participants that reported not owning a home, and our slide show was portrayed as a presentation for a

potential homebuyer. Although previous research suggested that the audio induction procedure would help us achieve our goal of helping participants get in the role of potential homebuyers, we had no measure of the effectiveness of this approach in the present study, and as a result, it is uncertain as to how much they were actually able to get into this role. We did, however, present results of a replication of Study 2 which used a web-based interface. The web study used the same materials and procedure utilized in the lab, except that the slide show and questionnaires were administered through a web interface. The web format allowed us to recruit more broadly, resulting in a population that was older, and more likely to have children, to own a home, and to be married. The consistent pattern of results between the lab and web experiments attest to the external validity of our lab experiment.

A third limitation of the present work concerns the lack of a behavioral dependent variable. Research investigating the effects of normative information has typically examined changes in a specific behavior or self-reported behavior. For example, researchers have used such behavioral outcome measures as whether or not a person littered (Cialdini, Reno, & Kallgren, 1990), recycled (Schultz, 1999), engaged in theft (Cialdini et al., in press), or conserved energy in their home (Schultz et al., in press). The limitation in the present study is that we attempted to apply a behavioral theory to the self-reported perceptions of how one *might* think, feel, or act, if they were in a given situation. Without a concrete behavioral measure, it could be argued that the procedure provided participants with a basis for how to answer the questions. That is, findings for the high crime sign are not inconsistent with the suggestion that our participants may have simply answered in a way that was consistent with the information presented on the sign. In other words, if we told participants that the area was "high crime," they knew they should report that they area had more crime, and that they would be more likely to be victimized. Thus, it could be argued that our dependent variables were really only checking the effectiveness of our various manipulations.

While this explanation is consistent with the pattern of findings for the high crime condition and the findings in our pilot study, there is some indication in the data that this is not the case. First, the generic Neighborhood Watch sign did not contain any additional information that suggested anything about the level of crime in the area. Our data indicate that participants perceived the crime rate to be slightly higher in communities where the generic sign was posted. It appears that these effects may be quite small, however, and our sample size did not allow us to find significant differences. Nonetheless, the generic sign used in this study is very typical of those seen throughout the United States. As a result, the most interesting question that we asked in this study was not what effects the high crime signs would have on potential homebuyers – this outcome seemed rather obvious. Instead, we were most interested in the perceptions of the community in which the most common type of Neighborhood Watch sign was posted. The generic sign did not provide any explicit information that would indicate to participants how to answer.

A second indication that our dependent variables were not simply direct reflections of our manipulation was that the low crime condition did not produce the results that we

expected. In the community tour study, our results for the low crime condition were contrary to what we would have expected had participants simply reported back the information that was presented on the sign. For example, on the perceived crime, perceived likelihood of victimization, and community safety measures, the low-crime sign did not differ from the generic or no sign conditions. If the dependent variables were simply serving as a check on our manipulation, then we would have expected to see a consistent pattern of lower rates of perceived crime and victimization, and higher perceptions of safety and community quality. However, the low crime sign did not differ significantly from the presence of a Generic sign.

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# Appendix A: Neighborhood Watch Signs Tested in Studies 1 and 2

| | |
|---|---|
|  | **High Descriptive Norm** |
|  | **Low Descriptive Norm** |
|  | **Generic (Injunctive Norm Only)** |

# Appendix B: Community Tour Development

A pilot study was conducted to select the specific homes that would be incorporated into the community tour slide show. The primary purpose of the pilot study was to empirically derive three stimulus homes from a diverse selection of fifteen homes in various communities. The three homes were selected such that they would represent a low, medium, and high socioeconomic community.

## *Method*

### Participants

Participants were 40 undergraduate students recruited from courses at California State University San Marcos. The majority of the participants (55%) reported living in a rented house, apartment, or town home ($N$ = 22). Twenty-five percent reported living with family members ($N$ = 10), and 20% reported that they currently lived in a house, apartment, or townhome, which they owned ($N$ = 8).

### Materials

Materials for this study consisted of a 16 page questionnaire. The front page contained the instructions and a single item assessing the participants' current living situation. The remaining 15 pages of the questionnaire each contained three photographs of a stimulus house (front, left side, right side) along with a list of home details and six questions about the home.

*Stimulus homes.* Photographs of the front, and two sides of fifteen different homes served as the stimuli in this study. Photos of the fifteen homes are presented at the end of this section. Based on data from the U.S. Census, we selected three communities that were characteristically high, medium, or low income areas. Five homes were photographed in each of these communities. Each of the five homes in the high SES community (Rancho Bernardo, CA) was described as having 4 bedrooms, 3 bathrooms, and approximately 3,000 square feet. Each of the five homes in the medium SES community (San Marcos, CA) was described as having 3 bedrooms, 2 bathrooms, and approximately 2,000 square feet, and each of the five homes in the low SES community (Escondido, CA) was described as having 2 bedrooms, 1 bathroom, and approximately 1,000 square feet.

*Survey items.* Each page of the questionnaire contained six items designed to assess participants' perceptions of each stimulus home and community. The six items included of one item asking participants to estimate the market value of the home, and one item asking participants to rate the community as a "good neighborhood to raise a family." One item assessed community safety by asking participants to rate the likelihood that "people in this neighborhood can walk around at night without fear of being attacked

or bothered by strangers." The remaining two items asked participants to rate the seriousness of two crime problems (burglary and vandalism) using a scale from 0 (not a problem) to 10 (a serious problem). The six items were completed individually for each of the fifteen homes.

### Procedure

Participants were told that the purpose of the study was to investigate perceptions of home value and community quality in San Diego County. Participants were asked to view fifteen different homes and answer a series of questions about each. Each participant filled out the survey items independently. The surveys were shuffled such that the order of the fifteen homes presented in the survey was random.

Before completing the questionnaire, participants were given the following instructions:

"*The following pages contain pictures of homes for sale in various communities throughout San Diego County. Please take your time to examine each home. When you have finished studying each home, answer the questions that follow it. Once you have completed the questions for the first home, go on to the next home, and repeat this process until you have finished the questions for all 15 homes. Please do not turn back to any page once you have completed it, and do not skip ahead. Try to look at each home with a fresh set of eyes. In other words, try not to let your thoughts about one home influence your thoughts on any of the other homes."*

## *Results*

Survey data were analyzed descriptively, and then through factor analysis in order to select three homes to include in the community tour slide show (low, medium, and high).

### Market Price of the Home

For the five high SES homes, the mean market price ranged from 14.65 (*SD* = 3.37) to 16.92 (*SD* = 3.40). For comparison, a score of 14 corresponds to $700K, 15 = $750K, 16 = $800K, 17 = $850K. For the five medium SES homes, the mean market price ranged from 7.73 (*SD* = 3.01) to 12.05 (*SD* = 2.92). For comparison, a score of 7 corresponds to $350K, 8 = $400K, 9 = $450K, 10 = $500K, 11 = $550K, and 12 = $600K. For the five low SES homes, the mean market price ranged from 5.92 (*SD* = 2.78) to 8.07 (*SD* = 2.89). The estimated market values of each of the fifteen homes in the survey are depicted in Table 1 below. The shaded areas represent the homes that were selected as stimuli for our subsequent experiments.

### Community Ratings

Responses to the item, "this looks like a good neighborhood to raise a family" ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). As seen in Table 12, the high SES house (#5) received the highest rating for being a good neighborhood to raise a family (*M*

= 4.30, *SD* = 0.94), whereas the low SES house (#14) received the lowest rating (*M* = 2.58, *SD* = 0.75). The median score was received by a middle SES house (#8).

Responses to the item, "people in this neighborhood can walk around at night without fear of being attacked," ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The high SES house (#5) received the highest safety rating (*M* = 4.50, *SD* = 0.68), whereas the low SES house (#14) received the lowest rating (*M* = 2.46, *SD* = 0.76). The median score was received a middle SES house (#8).

**Table 12. Mean Home Ratings of Community Quality**

| Stimuli House | Community SES | Market Value | Good for Family | Walk at Night | Burglary | Vandalism |
|---|---|---|---|---|---|---|
| 1 | HIGH | 14.65 (*SD* = 3.37) | 4.10 (*SD* = .93) | 4.21 (*SD* = .73) | 2.32 (*SD* = 1.90) | 1.98 (*SD* = 1.72) |
| 2 | HIGH | 15.35 (*SD* = 3.10) | 4.23 (*SD* = .92) | 4.23 (*SD* = .77) | 2.33 (*SD* = 2.03) | 1.88 (*SD* = 1.77) |
| 3 | HIGH | 14.83 (*SD* =3.38) | 4.20 (*SD* = .79) | 4.25 (*SD* = .87) | 2.56 (*SD* = 2.02) | 2.00 (*SD* = 1.78) |
| 4 | HIGH | 15.25 (*SD* =3.48) | 4.28 (*SD* = .91) | 4.28 (*SD* = .76) | 2.43 (*SD* = 1.85) | 2.05 (*SD* = 1.78) |
| **5** | **HIGH** | **16.93** (*SD* = 3.40) | **4.30** (*SD* = **.94)** | **4.50** (*SD* = **.68**) | **2.00** (*SD* = **1.85**) | **1.56** (*SD* = **1.68**) |
| 6 | MEDIUM | 12.05 (*SD* =2.92) | 4.10 (*SD* = .71) | 3.98 (*SD* = .66) | 2.88 (*SD* = 1.83) | 2.48 (*SD* = 1.71) |
| 7 | MEDIUM | 11.30 (*SD* =3.27) | 4.13 (*SD* = .69) | 3.98 (*SD* = .70) | 2.98 (*SD* = 2.19) | 2.40 (*SD* = 1.72) |
| **8** | **MEDIUM** | **10.08** (*SD* =2.82) | **3.78** (*SD* = **.62)** | **3.74** (*SD* = **.68**) | **3.10** (*SD* = **2.00**) | **2.85** (*SD* = **1.97**) |
| 9 | MEDIUM | 8.43 (*SD* = 2.22) | 3.48 (*SD* = .60) | 3.41 (*SD* = .72) | 3.68 (*SD* = 1.82) | 3.50 (*SD* = 1.85) |
| 10 | MEDIUM | 7.73 (*SD* = 3.01) | 3.25 (*SD* = .81) | 3.08 (*SD* = .73) | 4.05 (*SD* = 2.21) | 3.90 (*SD* = 2.33) |
| 11 | LOW | 7.20 (*SD* = 2.50) | 3.05 (*SD* = .81) | 3.10 (*SD* = .64) | 4.08 (*SD* = 2.37) | 3.98 (*SD* = 2.35) |
| 12 | LOW | 6.93 (*SD* = 2.46) | 3.13 (*SD* = .65) | 2.93 (*SD* = .80) | 4.13 (*SD* = 2.29) | 4.23 (*SD* = 2.15) |
| 13 | LOW | 8.08 (*SD* = 2.89) | 3.23 (*SD* = .77) | 3.18 (*SD* = .71) | 3.85 (*SD* = 2.18) | 3.70 (*SD* = 2.24) |
| 14 | LOW | 6.13 (*SD* = 2.53) | 2.63 (*SD* =.70) | **2.46** (*SD* = **.76**) | 4.70 (*SD* = 2.54) | 5.03 (*SD* = 2.59) |
| **15** | **LOW** | **5.93** (*SD* = 2.78) | **2.58** (*SD* = **.75)** | 2.69 (*SD* = .86) | **5.05** (*SD* = **2.41**) | **5.10** (*SD* = **2.83**) |
| Note: Sample size = 40 | | | | | | |

### Perceived Crime

Participants were asked to rate the perceived seriousness of both burglary and vandalism separately. On a scale from 0 (Not a Problem) to 10 (A Serious Problem), the mean rating of burglary as a problem ranged from 2.00 to 5.05 across the fifteen homes. As seen in Table 1 above, burglary was rated to be the least problematic in the high SES homes, with house #5 receiving the lowest rating ($M$ = 2.00, $SD$ = 1.85). Although the mean score was fairly low, burglary was rated to be the most problematic among the low SES homes, with house #15 receiving the highest rating ($M$ = 5.05, $SD$ = 2.41). The median score was received by a middle SES house (#8).

On a scale from 0 (Not a Problem) to 10 (A Serious Problem), the mean rating of vandalism as a problem ranged from 1.56 to 5.10 across the fifteen homes. As seen in the table, vandalism was rated to be the least problematic in the high SES homes, with house #5 receiving the lowest rating ($M$ = 1.56, $SD$ = 1.68). Although the mean score was fairly low, vandalism was rated to be the most problematic among the low SES homes, with house #15 receiving the highest rating ($M$ = 5.10, $SD$ = 2.83). The median score was received a by middle SES house (#8).

### Factor Analysis

Estimations of the market value of the fifteen stimuli homes were factor-analyzed using a principal components extraction procedure with a Varimax rotation. Given that houses were selected to represent three SES areas (low, medium, and high SES), we extracted three factors. The three factors accounted for 82.25% of the total variance. Houses 11 through 15 loaded heavily on the first factor, which we labeled “Low SES.” Houses 1 through 5 loaded heavily on the second factor, which we labeled “High SES.” Houses 6 – 10, which we predicted would represent the medium income homes, showed a considerable amount of cross-loading on other factors. House 6 loaded most heavily on the third factor, followed by homes 8 and 9. See Table 13 below for the complete factor loadings for each home.

**Table 13. Factor Analysis of Market Value Estimations**

| Stimuli House | Rotated Factor Loadings | | | Communalities |
|---|---|---|---|---|
| | Factor 1 Low | Factor 2 High | Factor 3 Med | |
| House 1 | .19 | **.84** | .22 | .79 |
| House 2 | **.30** | **.88** | .16 | .90 |
| House 3 | .29 | **.85** | .17 | .84 |
| House 4 | .27 | **.89** | -.04 | .87 |
| House 5 | .08 | **.84** | .19 | .74 |
| House 6 | **.41** | **.35** | **.80** | .94 |
| House 7 | **.60** | **.61** | .13 | .75 |
| House 8 | **.71** | **.36** | **.40** | .79 |
| House 9 | **.69** | **.35** | **.39** | .75 |
| House 10 | **.78** | .25 | .07 | .67 |
| House 11 | **.85** | .20 | **.30** | .85 |
| House 12 | **.82** | .20 | .26 | .78 |
| House 13 | **.85** | **.30** | .20 | .86 |
| House 14 | **.91** | .12 | .16 | .86 |
| House 15 | **.95** | .22 | -.09 | .96 |

Note: Factor loadings .30 and above are in bold

## *Selection Criteria*

The primary criteria for the selection of a low, medium, and high SES home to serve as the stimuli in the community tour slide show was the market price of the home. Factor analysis revealed that homes 1 though 5, and homes 11 though 15 clearly loaded on separate factors. The third factor, medium SES was less clear. As a second step, mean scores for each home on the market value, community ratings, and perceived crime items were considered.

### High SES

The factor loadings for the five homes on the High SES factor ranged from .84 to .89. Although House 5 received a lower factor loading (.84), descriptive results indicated that House 5 received the highest mean rating of market value, the highest community ratings, and the lowest ratings of perceived burglary and vandalism. As a result, House 5 was selected to serve as the stimuli in the "High SES" slide show.

### Low SES

The factor loadings for the five homes on the Low SES factor ranged from .85 to .95. House 15 produced the highest loading on this factor (.95). In addition, descriptive results indicated the House 15 received the lowest mean rating of market value, and the highest ratings of perceived burglary and vandalism. House 14 received the lowest ratings of community quality, whereas House 15 received the second lowest ratings.

Based on the market value of the home as the primary selection criteria, house 15 was selected to serve as the stimuli in the "Low SES" slide show.

### Medium SES

The highest factor loadings on the Medium SES factor were for Houses 6 (.80), 8 (.40), and 9 (.30). However, each of these homes demonstrated a considerable amount of cross loading. Descriptive results revealed that House 8 consistently received the median rating on all outcome measures. As a result, House 8 was selected to serve as the stimuli in the "Medium SES" slide show.

## *Stimuli Homes*

| # | Front | # | Front | # | Front | # | Front |
|---|---|---|---|---|---|---|---|
| 1 |  | 2 |  | 3 |  | 4 |  |
| # | Front | # | Front | # | Front | # | Front |
| 5 |  | 6 |  | 7 |  | 8 |  |
| # | Front | # | Front | # | Front | # | Front |
| 9 |  | 10 |  | 11 |  | 12 |  |
| # | Front | # | Front | # | Front | | |
| 13 |  | 14 |  | 15 |  | | |

# Appendix C: Middle SES Community Tour Images

Below is a sampling of the images that were included in the Middle SES community tour slide show. The images below were drawn from the "Low Crime" experimental condition. On the next page, we have included a larger picture from the show so that the sign detail is legible. The images shown to participants were larger, and filled the complete computer screen.

**SLIDE 1**


**SLIDE 6**


**SLIDE 10**


**SLIDE 16**


VIEW FROM FRONT

3 bd, 2 bth 2,000 sq. feet San Marcos, CA

# Appendix D: Outcome Measurement Questionnaire

New Techniques in Home Sales

You have just viewed a slide show depicting a community in which there was a home for sale. Please answer the following questions about the community and the home you just viewed. Some of the questions may be difficult to answer, but we are just after your general perceptions.

**1. To the best of your ability, please estimate the market price of the for-sale home in the slide show (check one).**

| | | | | | |
|---|---|---|---|---|---|
| ☐ <$100K | ☐ $100K | ☐ $150K | ☐ $200K | ☐ $250K | ☐ $300K |
| ☐ $350K | ☐ $400K | ☐ $450K | ☐ $500K | ☐ $550K | ☐ $600K |
| ☐ $650K | ☐ $700K | ☐ $750K | ☐ $800K | ☐ $850K | ☐ $900K |
| ☐ $950K | ☐ $1 million | ☐ > $1 million | | | |

**2. If I was a qualified buyer, I would be interested in purchasing this home.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**3. This is a good neighborhood to raise a family.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

4. **People in this neighborhood probably socialize with each other a great deal.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

5. **Purchasing a home in this community would be a good investment.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**Please indicate your level of agreement with the following statements.**

1. **In this neighborhood, people really do not need to lock their doors when they leave their homes for a short period of time.**

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Strongly Disagree | | | Strongly Agree |

2. **People who live in this neighborhood have to worry about someone breaking into their home to steal things.**

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Strongly Disagree | | | Strongly Agree |

3. **People in this neighborhood can walk around at night without fear of being attacked or bothered by strangers.**

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Strongly Disagree | | | Strongly Agree |

4. **People in this neighborhood can leave their personal property outside and unattended without fearing that it will be damaged or stolen.**

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| Strongly Disagree | | | Strongly Agree |

**Of the following types of crime, please circle the response that best indicates your perceptions about the seriousness of each crime problem in this community:**

**1. Rape**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**2. Assault**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**3. Robbery**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**4. Murder**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**5. Burglary**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**6. Motor Vehicle Theft**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**7. Vandalism**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

**8. Larceny (the act of taking something from someone unlawfully)**

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Not a problem | | | | | Somewhat a problem | | | | | A serious problem |

Please indicate your level of agreement with the following statements.

**1. If I were to purchase a home in this community, I would get to know my neighbors.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**2. If I were to live in this community, I would participate in a community garage sale.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**3. It is likely that this community has shopping centers and other conveniences nearby.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**4. It is likely that children in this neighborhood walk together to school.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**5. It is likely that children in this neighborhood play together after school.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**6. It is likely that members of this community organize social events such as block parties on holidays.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**7. People in this community pretty much keep to themselves.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**8. It is likely that there are loud parties in this community on the weekends.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**9. People in this community decorate the exterior of their homes for the holidays.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**10. There is sufficient room for guests to park in this neighborhood.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

**11. This appears to be a quiet community.**

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

We would now like to know how you feel about your chances of being a victim of any of the following offenses if you lived in this community. On a scale from 0 (not at all worried) to 10 (very worried), how worried would you be about being a victim of:

| | | **Not at all worried** | | | | | | | | | | **Very Worried** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| **1** | **Robbery?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **2** | **Assault with a weapon?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **3** | **Assault without a weapon?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **4** | **Rape or attempted rape?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **5** | **Arson or attempted arson?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **6** | **Burglary?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **7** | **Motor vehicle theft?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **8** | **Fraud?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **9** | **Vandalism or malicious mischief?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **10** | **Murder?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **11** | **Drunk driving accident?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| **12** | **Overall, how worried would you be about becoming a victim of** any **of these crimes if you lived in this community?** | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Homeowners often take extra measures to protect themselves or their property. The next set of questions ask about what you would do if you were to purchase the home you viewed in the slide show. Please circle the appropriate response.

<u>If you were to purchase this home, how likely is it that you would……</u>

| | | | | | |
|---|---|---|---|---|---|
| 1. Install additional security locks? | **1** Very unlikely | **2** Somewhat unlikely | **3** Neutral | **4** Somewhat likely | **5** Very likely |
| 2. Install a burglar alarm? | **1** Very unlikely | **2** Somewhat unlikely | **3** Neutral | **4** Somewhat likely | **5** Very likely |
| 3. Obtain a guard dog? | **1** Very unlikely | **2** Somewhat unlikely | **3** Neutral | **4** Somewhat likely | **5** Very likely |
| 4. Install motion sensors or timers for outdoor lighting? | **1** Very unlikely | **2** Somewhat unlikely | **3** Neutral | **4** Somewhat likely | **5** Very likely |
| 5. Purchase a firearm for protection? | **1** Very unlikely | **2** Somewhat unlikely | **3** Neutral | **4** Somewhat likely | **5** Very likely |
| 6. Purchase a safe for valuables? | **1** Very unlikely | **2** Somewhat unlikely | **3** Neutral | **4** Somewhat likely | **5** Very likely |

**The next two questions ask you to take the perspective of a potential burglar. Please answer the following questions about the home you just viewed in the slide show.**

1. If you were a burglar, how likely is it that you would burglarize this home?

| **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|
| Very unlikely | Somewhat unlikely | Neutral | Somewhat likely | Very likely |

2. If you were to burglarize this home, how likely is it that you would be caught (0-100%)?

_____%

Please answer the following questions about the slide show.

**1. Did you notice any stop signs in the community? YES NO**

**If YES, how many stop signs did you see? _____**

**2. Did you notice any speed limit signs in the community? YES NO**

**If YES, what was the speed limit?_____**

**3. Did you notice any Neighborhood Watch signs in the community? YES NO**

**If YES, what did the signs say?_____**

**4. Did you notice any other signs in the community? YES NO**

**If YES, what did the signs say?_____**

Please complete the following demographic information.

1. What is your **gender**? ☐ MALE ☐ FEMALE

2. What is your **age**? _____years

3. What is your average **annual household income** before taxes?

☐ Less than $15,000 ☐ $15,000 - $35,000 ☐ $35,001 - $50,000

☐ $50,001 - $70,000 ☐ $70,001 - $100,000 ☐ Over $100,000

4. What is your **marital status**?

☐ Currently married ☐ Separated ☐ Widowed

☐ Never married ☐ Divorced ☐ Other:_____

5. Do you have **children**? YES NO

6. Which of the following best describes your **current** living situation?

☐ Own a house

☐ Own an apartment or townhome

☐ Rent a house

☐ Rent an apartment/townhome

☐ Live in a house with parent(s) or other family member(s)

☐ Live in an apartment/townhome with parent(s) or other family member(s)

☐ On campus housing/dormitory

☐ Other:_____
_____

Finally, we are interested in looking at Census data for the neighborhood in which you currently live. In order to look up this information, we need your home address. This information will not be used to contact you in anyway.

Street Address:_____City_____Zip_____

# Appendix E: Low and High SES Community Tour Images

Below is a sampling of the images that were included in the Low and High SES community tour slide shows. The images below were drawn from the "High Crime" and "Generic" experimental conditions. On the following pages, we have included a larger picture from each show so that the sign detail is legible. The images shown to participants were slightly larger, and filled the complete computer screen.

**Sample Images: Low SES Community Tour**

SLIDE 2

SLIDE 4

SLIDE 10

SLIDE 16

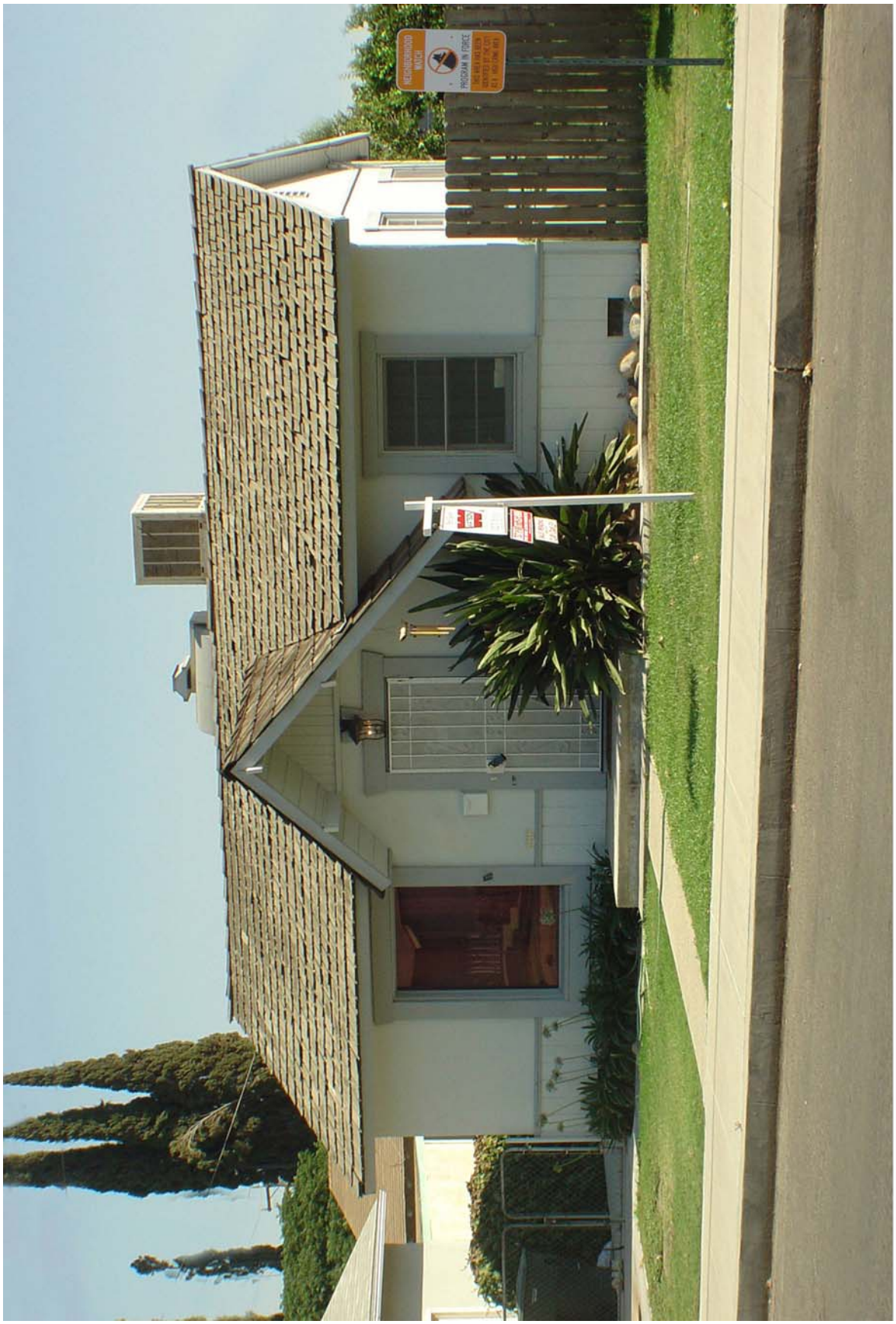
**Sample Images: High SES Community Tour**

SLIDE 1

SLIDE 6

SLIDE 10

SLIDE 16




VIEW FROM FRONT

2 bd, 1 bth 1,000 sq. feet Escondido, CA


**VIEW FROM FRONT**

**4 bd, 3 bth 3,000 sq. feet Rancho Bernardo, CA**

# Appendix F: Sample Images of Aged and Defaced Signs

Below is a sampling of the images that were included in the Low and High SES community tour slide shows. The images below were drawn from the "Defaced" and "Aged" experimental conditions. On the following pages, we have included a larger picture from each show so that the sign detail is legible. The images shown to participants were larger, and filled the complete computer screen.

Defaced Sign in Low SES Community

Defaced Sign in High SES Community

Aged Sign in Low SES Community

Aged Sign in High SES Community

**VIEW FROM FRONT**

**2 bd, 1 bth 1,000 sq. feet Escondido, CA**


VIEW FROM FRONT

4 bd, 3 bth 3,000 sq. feet Rancho Bernardo, CA