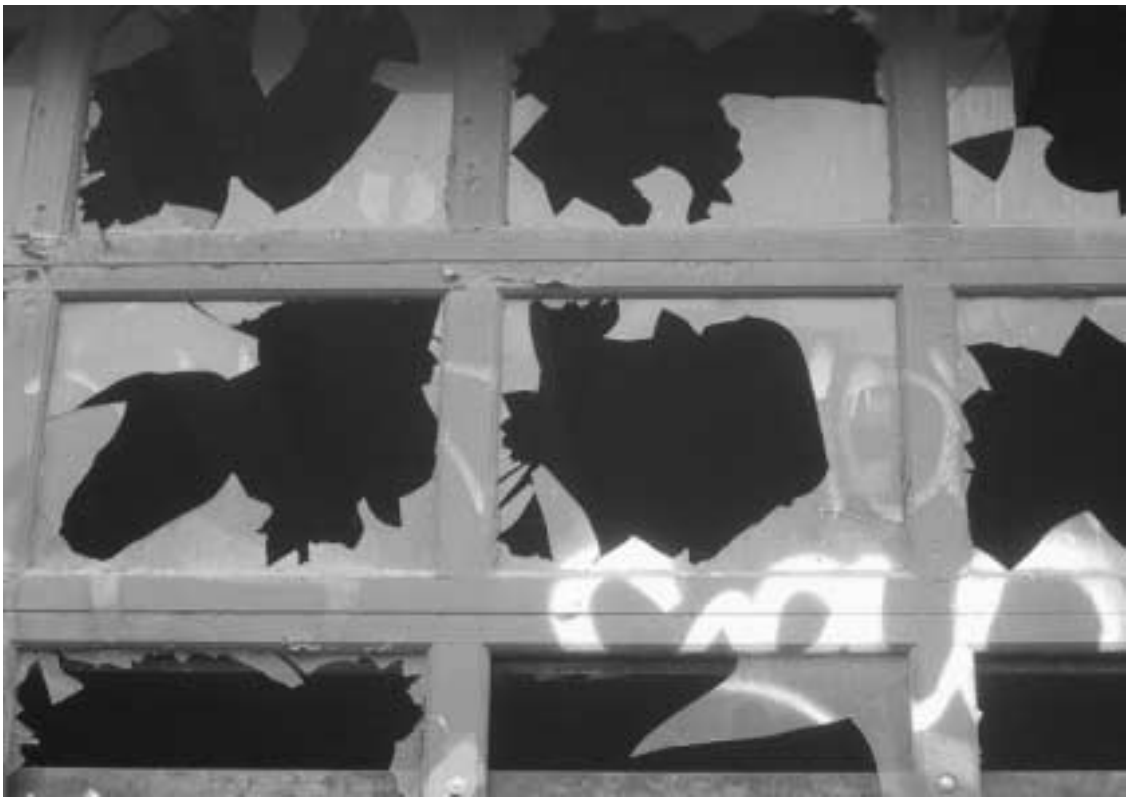
Project Criminaliteit en Veiligheid

Broken Windows: The Effect of Disorder on Fear



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Abstract

The present study had the purpose to investigate the effect of perceived disorder on feelings of fear as predicted in the broken-windows theory. Most previous research ignores substantively important features of the relationship between disorder and fear, mainly due to the nearly exclusive focus on the correlation between the two.

Our findings provide empirical support for an effect of disorder on feelings of fear, as well as on feelings of safety, avoidance behavior and perceived risk of victimization. Further, our findings support the hypothesis that the effect of disorder on fear is stronger in low socio-economic status neighborhoods compared to high socio-economic status neighborhoods.

Introduction

In the past two decades, several case studies have been instituted to investigate the concept of neighborhood disorder. Although interest in the effects of disorder has a long history, few ideas have become more influential than the “broken windows” theory. According to the broken windows theory of urban decline, a causal link exists between street disorder and serious crime (Wilson & Kelling 1982). The presumed reason is that a community that tolerates disorderly cues like graffiti, garbage, and abandoned cars signals to citizens that the area is unsafe (Kelling & Coles, 1996). Potential wrongdoers, as stated by Wilson and Kelling (1982), “believe they reduce their chance of being caught if they operate on streets where potential victims are already intimidated by prevailing conditions.” Accordingly, visual signs of disorder will result in two separate impacts.

First, disorder will generate more disorder and elevate crime levels (Kelling & Coles, 1996; Skogan, 1990; Wilson & Kelling, 1982). As stated, neighborhoods where signs of disorder are prevailing signal to potential offenders that crime will be tolerated in that area. Therefore, these areas are likely to draw attention of offenders who feel they will not be punished for their crimes (Kelling & Coles, 1996).

Probably the first and most profound support of the broken windows theory was given by Zimbardo (2004) who designed an experiment to demonstrate that human behavior is influenced by symbols of order and disorder more than a decade prior to the famous

article by Wilson and Kelling. After placing two abandoned cars, one in a neighborhood where socio-economic status was high and one in a neighborhood where socio-economic status was low, he observed the way people in those different areas responded to the abandoned cars. He found that the environment (high versus low socio-economic status) influenced criminal behavior. In the neighborhood where socio-economic status was low, the car was stripped down within minutes, whereas the car in the neighborhood where socio-economic status was high remained untouched for more than a week. After he demolished a window of the car himself, people responded by devastating the car immediately. The experiment showed that signs of disorder lead to criminal behavior in people.

Second, cues of disorder will generate feelings of fear (Covington & Taylor, 1991; Doran & Lees, 2005; Ferraro, 1994 Kelling & Coles, 1996; Ross & Jang, 2000) and fear related behavior (Kelling & Coles, 1996; Ross & Jang, 2000). This relationship between disorder and fear of crime has been established by Ross and Jang (2000) who found that individuals who report greater amounts of disorder in their neighborhood have significantly higher levels of fear and mistrust than those who live in neighborhoods characterized by social control and order. Widespread fear among residents can trigger a gradual but relentless cycle of disorder, crime and neighborhood decline (Matthews, 2005). It has been stated that fear of crime will lead to fear-related behavior (Doran & Lees, 2005). People are expected to draw back from areas in which they feel unsafe and will respond accordingly by avoiding those areas (Wilson & Kelling, 1996). Further, incivilities have shown impacts on fear (Robinson et al, 2003; Ross & Jang, 2000; Skogan, 1981; Taylor, 2001, in Robinson et al, 2003; Wilson & Kelling, 1982), satisfaction and worry (Robinson et al., 2003). However, the assumption that perceived disorder predicts fear of crime has been criticized (Taylor, 1997). Critics such as Taylor (1999) have suggested that the correlation might in fact also be the result of a reversed causal relationship: residents who experience more fear of crime than others report more disorder than residents who experience less fear. Hence, fear makes residents perceive more incivilities. In other words, the correlation between disorder and fear does not provide information about the causality of the relationship. While earlier research mainly investigated the correlational relationship between fear and disorder (Sampson &

Raudenbush, 1999), the main purpose of the present study is to test whether there exists a causal link between disorder and anxiety, as well as perceptions of safety and implications of avoidance behavior.

First, we hypothesize that visible signs of disorder generate feelings of fear. It has been argued that neighborhood disorder is associated with urban decline which can lead to anger, demoralization, and fear among the area's residents (Skogan, 1990). Skogan and Maxfield (1981) suggest that fear of crime in urban neighborhoods is generally realistic. The higher official crime rates in a neighborhood, the more likely are residents to feel unsafe. Together, these findings suggest that it is adaptive for people to react fearful to disorder.

Second, we hypothesize that low socio-economic status neighborhoods will generate more feelings of fear than will high socio-economic status neighborhoods. We assume that structural characteristics, especially cues of poverty and low socio-economic status, are strongly associated with physical disorder (Sampson & Raudenbush, 1999) and will therefore generate feelings of fear as well. Neighborhoods where socio-economic status is low are associated with disorder and crime. This association is not influenced by the actual presence of disorder, but probably by the knowledge that low socio-economic status mostly goes together with disorder. Although disorder is often defined as incivility that disturbs (urban) life (Kelling & Coles, 1996), few neighborhood studies actually contain direct measures of this concept. Disorder refers to the physical appearance of a neighborhood. The present study defines physical disorder as the presence of graffiti, litter and unkempt yards or housing exteriors, a definition offered by several researchers (Hunter, 1978; Lewis & Maxfield, 1980).

Method

Overview

This study aims to test whether disorder leads to feelings of fear and whether low socio-economic status neighborhoods generate more feelings of fear than high socio-economic status neighborhoods. Further we were interested in the effect of disorder and neighborhood status on perceived safety and behavioral intentions to avoid the place. To test these hypotheses we showed subjects pictures of high and low socio-economic status

neighborhoods with disorder present or absent, and examined the effect of these pictures on anxiety and perceptions of safety. The stimulus material consisted of four pictures which varied on the dimensions of neighborhood status and disorder.

Pilot

A pretest of the stimulus material with thirty-two students at the University of Groningen revealed that the main variables, disorder and type of neighborhood varied on the assumed dimensions. The pilot study consisted of a 2 (neighborhood: high socio-economic status vs. low socio-economic status) x 2 (disorder: present vs. absent) between-subject design. To each subject one of four experimental conditions was presented in the form of a picture. Subjects had to indicate on a 7-point scale how well the place shown on the picture was maintained and whether it was neglected. A Disorder x Neighborhood Status ANOVA revealed that differences in judgment about how well the place on the picture was maintained were significantly lower for the two pictures containing disorder (F (1, 31) = 7.6, $p < .01$) compared to the pictures where disorder was absent. This effect was also significantly lower for the low socio-economic status neighborhood than for the high socio-economic status neighborhood. (F (1, 31) = 22.9, $p < .00$). Places shown on pictures containing disorder were perceived by the subjects as being significantly more neglected than those without disorder (F (1, 31) = 8.5, $p < .01$). The low socio-economic status neighborhood was perceived as being significantly more neglected than the high socio-economic status neighborhood (F (1, 31) = 10.3, $p < .01$).

Participants and Design

This experiment consisted of a 2 (neighborhood: high socio-economic status vs. low socio-economic status) x 2 (disorder: present vs. absent) between-subject design. Participants were 78 undergraduate law-students at the University of Groningen ranging in age from 20 to 28 years, 42,3% were male and 57,7% were female.

Procedure

The experiment was conducted in a lecture hall. It was taken care of sufficient distance between students assigned to the different conditions. Subjects were randomly assigned

to one of the four experimental conditions. Students were informed by their lecturer that they would participate in an experiment about perception of the environment. To each subject one of four pictures was presented plus a questionnaire, which took them about 10 minutes to complete. Subjects were asked to look closely at the picture and imagine themselves being in that situation.

Measurement of affective state:

The first part of the questionnaire measured the current affective state of the subjects (at this moment, are you: calm, cheerful, excited, angry, anxious, stressed, relaxed) on a 7-point scale ranging from 1 (not at all) to 7 (very much).

Measurement of perception of safety:

The second part of the questionnaire contained questions about the perception of safety. Subjects had to indicate how safe they would feel at the place shown on the picture on a 7-point scale ranging from 1 (not safe at all) to 7 (very safe) and how likely they thought one would become the victim of crime at that place (four items: how likely do you think it is that you would be harassed, threatened, robbed, assaulted at the place that is shown on the picture) on a 7-point scale ranging from 1 (very unlikely) to 7 (very likely). Furthermore subjects had to indicate whether they would leave their bicycle at that place without concern and whether they would feel safe being there alone in the dark on a 7-point scale ranging from 1 (absolutely not) to 7 (absolutely).

Manipulation Check

A manipulation check was included consisting of two statements about whether the place on the picture was well maintained and whether it was neglected measured on a 7-point scale ranging from 1 (do not agree at all) to 7 (agree very much).

After the experiment, participants were debriefed and thanked.

Results

Measurement of dependent variables

The four items concerning the likelihood of victimization of crime were averaged into a measure of perceived likelihood of victimization (Cronbach's $\alpha = .92$). Two items concerning intentions to avoidance behavior (leaving ones bicycle at the place shown on the picture and whether one would feel safe being there alone in the

dark) were averaged into a measure of avoidance behavior (Cronbach's α = .68). Furthermore, a general assessment of safety (how safe would you feel at the place shown on the picture) and a measure of anxiety (at this moment, do you feel anxious) were included in the analyses as well as two questions about the maintenance of the place shown on the picture. The latter were used as a manipulation check.

The effects of disorder (present vs. absent) and neighborhood status (high socio-economic status vs. low socio-economic status) on anxiety were analyzed using a Disorder x Neighborhood Status ANOVA. The analysis revealed a significant main effect for neighborhood status, F (1, 77) = 7.5, $p < .01$, and disorder, F (1, 77) = 6.7, $p = .05$. This means that subjects confronted with the low socio-economic status picture experienced more feelings of fear than subjects with the high socio-economic status picture. The presence of disorder increased feelings of anxiety Feelings of fear were found to be highest in the low socio-economic status neighborhood where disorder was present, and lowest in the high socio-economic status neighborhood where disorder was absent. This supports both our hypotheses. There was no significant Disorder x Neighborhood status interaction.

In order to assess the intentions of avoidance behavior a Disorder x Neighborhood status ANOVA was used. The analysis revealed a main effect for disorder, F (1, 77) = 8.2, $p < .01$. Intentions of avoidance behavior were higher when disorder was present (M = 4.33) then when disorder was absent (M = 3.42). The analyses also revealed a main effect of neighborhood status, F (1, 77) = 8.8, $p < .01$. Avoidance behavior was lower in the high socio-economic status neighborhoods (M = 3.39) than in the low socio-economic status neighborhoods (M = 4.34). This means that in low socio-economic status neighborhoods with disorder, subjects would avoid leaving their bicycle and would feel unsafe alone in the dark. No significant Disorder x Neighborhood status interaction was found.

A Disorder x Neighborhood status ANOVA was used to test the effects of disorder and neighborhood status on the general assessment of safety. The main effect of neighborhood status was significant, F (1, 77) = 15.3, $p < .01$. The high socio-economic status neighborhood was perceived as saver (M = 4.95) than the low socio-economic

status neighborhood (M = 3.85). The main effect of Disorder and the Disorder x Neighborhood Status interaction were both not significant.

The effects of disorder and neighborhood status on the likelihood of victimization were examined by performing a Disorder x Neighborhood Status ANOVA. This analysis revealed a significant main effect of neighborhood status, F (1, 77) = 11.7, $p < .01$. The participants perceived the high socio-economic status neighborhood as saver (M = 2.55) than the low socio-economic status neighborhood (M = 3.35). This means that subjects thought it to be more likely that they would become victim of a crime in a low socio-economic status neighborhood than in a high socio-economic status neighborhood. The main effect of Disorder was marginal significant, F (1, 77) = 3.5, $p = 0.07$. The Disorder x Neighborhood Status interaction was not significant.

Discussion

The purpose of the present study was to investigate whether a causal relationship exists between perceived disorder and feelings of fear. An experiment was designed to test two hypotheses. First, it was tested whether cues of disorder generate feelings of fear. Critics such as Taylor (1999) have suggested that the correlation between disorder and fear might in fact also be the result of a reversed causal relationship: residents who experience more fear of crime report more disorder than residents who experience less fear. The present study demonstrated the existence of a causal link between disorder and fear.

It was argued that fear of crime is generally realistic (Skogan, 1981), this implies that fear of crime might be adaptive behavior. In other words: cues of disorder in a neighborhood should generate feelings of fear, irrespective of the objective crime levels in the neighborhood. Our findings from the foregoing analysis suggest that, indeed, perceived physical disorder generates feelings of anxiety in people even in a city with low crime levels. Overall, subjects who were exposed to pictures containing signs of physical disorder showed higher levels of anxiety than did subjects who were not exposed to disorder. Our study implies that perceived disorder triggers feelings of fear irrespective of the environment in which disorder is perceived. This is supported by the fact that we conducted the study in a city with low crime rates. People are not influenced by knowledge of high crime-levels on fear, what implies that the effect of presence of

disorder on feelings of fear is a main effect. The broken windows theory might thus be applicable to cities where crime is generally low.

Second, we hypothesized that low socio-economic status neighbourhoods generate more feelings of fear than high socio-economic status neighborhoods. We found evidence that neighborhoods where socio-economic status is low are associated with disorder and crime (Sampson & Raudenbush, 1999) and therefore generate feelings of fear as well. This association is not influenced by the actual presence of disorder, but probably by the knowledge that low socio-economic status mostly goes together with disorder. Our study points out that subjects who were exposed to pictures of low socio-economic status neighborhoods showed more feelings of anxiety than did subjects exposed to pictures of higher socio-economic status neighborhoods. In addition, subjects who were exposed to low socio-economic status neighborhoods indicated a higher perceived risk of victimization compared to those who were exposed to a high socio-economic status neighborhood.

We further predicted that perceived disorder would increase avoidance behavior, a prediction supported by the data. Our inquiry probed this reasoning by exploring the extent to which subjects would be willing to leave their bicycles unattended and whether they would feel safe alone at night in the environment they were exposed to. Thus, the findings also suggest that low socio-economic status neighborhoods associated with disorder leads to fear-related behavior, as suggested by the broken windows theory (Wilson & Kelling, 1982).

By investigating the consequences of visual cues of physical disorder, the present study demonstrates that a low socio-economic neighborhood in itself provides enough stimuli for people to feel generally unsafe in that specific area. This is an interesting finding because it implies that there is no main effect of perceived disorder in low socio-economic status neighborhoods. The priming of disorder only generated an effect on feelings of safety for people exposed to high socio-economic status neighborhoods. In other words, the exposure to low socio-economic status neighborhoods is enough to generate feelings of unsafety in people; the presence of disorder does not contribute to this effect. These findings strongly support the assumption stated above that low socio-economic status neighborhoods are associated with disorder and generate feelings of fear.

Future research is needed to gain deeper insight in the factors which are responsible for the association of low socio-economic status neighborhoods with crime. Physical characteristics of urban public spaces with low socio-economic status should be exhaustively compared to high socio-economic status neighborhoods.

The results of our current study have important implications for future policy concerning safety and crime reduction. Our findings suggest that both disorder and low socio-economic status neighborhoods, independently from each other, generate feelings of anxiety. Hence, in order to increase feelings of safety in residents, city governance should focus on reduction of disorder in general, but also on improving the physical appearance of low socio-economic status neighborhoods. In addition, as stated by the broken windows theory, feelings of anxiety will cause residents to withdraw from public life (Wilson & Kelling, 1982). Therefore, by enhancing social cohesion, for example by stimulating people to interact more with each other, residents might be motivated to form an effective front against disorder and crime. This will signal to potential offenders that crime will not be tolerated in the neighborhood.

In sum, our findings generally provide empirical support for an effect of disorder on feelings of fear, feelings of safety, avoidance behavior and perceived risk of victimization. Further, our findings support the hypothesis that subjects confronted with low socio-economic status neighborhoods experience more feelings of anxiety than subjects who were exposed to high socio-economic status neighborhoods. Most previous research ignores important features of the relationship between disorder and fear, mainly due to the nearly exclusive focus on the correlation between the two. However, the causal link between disorder and fear might be of importance for city governance. Future work investigating issues surrounding disorder and fear should, therefore, continue to examine the relationship between disorder and fear.

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