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Collective Crime as a Source of Social Solidarity: A Tentative Test of a Functional Model for Responses to Mass Violence

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Abstract: *According to a classic notion by Durkheim, crime can lead to a collective indignation that is expressed through collective displays of solidarity. However, it is also possible that collective crimes represent a decline of the social order and a loss of community. Using two cross-sectional data sets collected in Finnish communities that experienced tragic school shootings, this article provides a tentative test of these two competing hypotheses. We ask how the local communities respond to heinous crimes such as school shootings. We also ask if it is possible that concerns about crime can, at times, promote social cohesion. The results indicate that both models may be applicable; however, contextual factors appear to limit the generalizability of either model.*

Keywords: collective crime, emotional response to crime, fear of crime, functionalist model of crime, path analysis, school shootings, social solidarity

INTRODUCTION

Nordic countries have recently witnessed unexpected and extremely shocking violent events. Before Anders Breivik murdered 77 people in Utøya Norway in 2011, numerous people were killed in rampage school shootings in Finland. In November 2007, an 18-year-old man opened fire at the Jokela upper secondary school in Tuusula, killing eight students and staff members before committing suicide. In September 2008, another rampage school shooting occurred in the small town of Kauhajoki, an act portrayed as a copycat of Jokela. There, a 22-year-old

male student of hospitality management killed ten people before turning the gun on himself.

After these incidents, school shootings received extensive media coverage that raised intense public debates. Finnish governmental officials were forced to respond quickly to concerns about numerous issues ranging from school safety to gun laws. Officials also posited their concerns about weakened social ties and a sense of community (Ministry of Justice 2009; 2010). The perpetrators' violent videos and messages on the Internet posted prior to the murders raised national and international concerns about the contemporary social order

(Lindgren 2010). Such responses are understandable since some criminal events are most frightening. Heinous acts such as school shootings remind everyone that terror can strike even small and peaceful communities (Warr 2000).

As crimes stir public sensibilities, people are expected to respond in specific ways. Growing demands to tackle crime may lead to a self-perpetuating process of increasing crime-related concerns. Crimes committed by young offenders are often perceived as a deterioration of social order (Farrall, Jackson and Gray 2009; Ferraro 1995; Garland 2001; Jackson 2006; Lee 2001; Lee and Farrall 2008; Loader, Girling and Sparks 1998; Warr 2000). Public appraisals and news reporting may also influence how individuals assess the quality of local relationships and social trust (Farrall, Jackson and Gray 2009; Smolej 2011). Tragedies reflect unpredictable moral sensibilities, and people often become more suspicious towards certain individuals and social groups who do not appear to conform to commonly shared values (Lewis and Salem 1986). This process may even result in people altering and limiting their everyday routines (Farrall, Jackson and Gray 2009; Ferraro 1995; Garofalo 1981; Liska and Warner 1991; Warr 2000).

Undoubtedly, fear-inducing events such as school shootings have negative individual- and community-level consequences. However, according to the functionalist model of crime, responses to collective crimes may also promote an enhanced sense of belonging to the community (Liska and Warner 1991). This argument is largely based on Durkheim's classical thesis, which predicts that responses to crime result in heightened social solidarity (see also Roshier 1989). Durkheim ([1893] 1997:58, 61-63) asserts that "crime draws people to respond collectively in order to protect commonly shared values... locals stop each other in the street talking about what has happened... a common indignation is expressed... and sentiments are strongly felt because they are not contested." Criminal events, especially heinous criminal events, violate the collective morality, and social solidarity is expressed to reestablish and maintain a sense of unity and social order. Therefore, the collective sentiments of local residents who have been shocked by a collective crime should be observed to determine if these are first outrage that is followed by expressions of solidarity (Garland 1990). Although some researchers have used the functional model of crime to account for responses after tragic crimes (e.g. Hawdon, Ryan and Agnich 2010), empirical tests of this functionalist model remain insufficient (Ferraro 1995; Liska and Warner 1991; Smith 2008; Turkel 1979; Warr 2000).

The aim of this article is to analyze collective reactions after fear-inducing events. Few criminological analyses pay sufficient attention to the localized emotional responses to crime, and this lack of attention may be why studies often fail to identify the functional consequences that crimes can produce (Gray, Jackson and Farrall 2008).

The controversial functionalist model could thus highlight how collective crimes may bond members of community and increase social solidarity. These issues are addressed using two cross-sectional surveys that were collected from the small Finnish towns of Jokela and Kauhajoki six months after the school shootings that occurred in those localities. Although the time between the tragedy and the data collection could fail to adequately capture the immediate post-event indignation that Durkheim discusses, previous research indicates that solidarity after mass tragedies remains elevated for approximately six months after the event (see Collins 2004; Hawdon, Ryan and Agnich 2010). Therefore, while our data are not optimal, they were collected within the time that solidarity would likely have been elevated.

THEORETICAL CONSIDERATIONS: COLLECTIVE CRIMES AND SOLIDARITY

Durkheimian theory is grounded in emotional resonance. People build commitments through emotions that constitute a sense of community after criminal events (Durkheim [1893] 1997; see also Garland 1990; Hutchison and Bleiker 2008). Expressions of moral emotions are present when people construct the meanings of criminal events, which can make them more attentive to local issues (Innes 2004). These individual assessments can combine into expressions of the collective consciousness as moral feelings, such as guilt and condemnation, can motivate people to communicate and connect with each other (Durkheim [1893] 1997; see also Cotterrell 1999; Turner and Stets 2005). "Collective sentiments [emotions and dispositions] to which crime corresponds... are strongly rooted within us" (Durkheim [1893] 1997: 37; see also Kivivuori 2008). This is the core of the functional hypothesis. Responses to crime contain symbolic expressions of collective values and morality. As crime ruptures the perceptions of the social world, the collective provides a way to contain and manage the threat. The expressive nature of social solidarity promotes healthy and cohesive collective consciousness. Social solidarity is, therefore, considered an emergent positive feeling and sense of belonging (Silbey 2002; Turner and Stets 2005).

However, crime-related concerns also vary within local settings. Although crime makes social characteristics more visible, collective violence does not affect all community members equally. Individuals draw diverse conclusions about neighborhood characteristics based on their social status, the strength of their social ties, and the time they have lived within the community (Farrall, Jackson and Gray 2009; Girling, Loader and Sparks 2000; Walklate and Mythen 2008). For example, gender is among the most robust factors associated with the fear of crime, and women typically express more fear of crime than men (Farrall, Jackson and Gray 2009; Ferraro 1995). Similarly, Oh and Kim (2009) find that the crime-

solidarity effect is most pronounced among the elderly as crime-related concerns among the elderly result in increased interactions with neighbors and an enhanced perception of social solidarity.

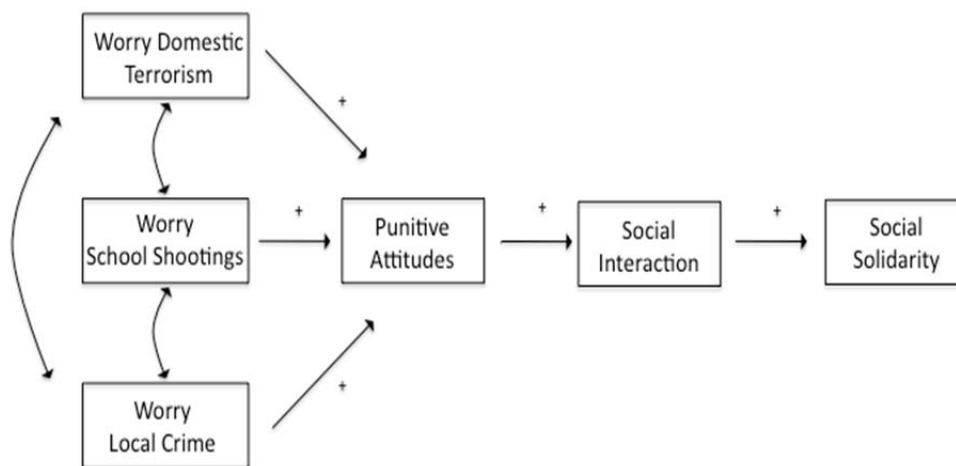
Yet, fear-inducing events may also disrupt social life and increase insecurities. People often view crime as a consequence of community disorganization (Lewis and Salem 1986), and the collective tragedy can become a symbol of community disorganization. As this occurs, the tragedy can enhance personal-risk perceptions (Ferraro 1995). In the aftermath of tragedy, the signs of community deterioration are, at times, perceived as confirmation of social and moral decay (Farrall, Jackson and Gray 2009; Ferraro 1995; Hirtenlehner 2008; Jackson 2004). Instead of acting as a collective catharsis and a source of solidarity, social responses to crime can actually perpetuate group divisions (Hutchison and Bleiker 2008).

Indeed, crimes are perceived through a mixture of individual explanations (Gabriel and Greve 2003), yet collective crimes may be different than routine crimes. Some crimes are definitely more condemned than others (Durkheim [1893] 1997; see also Collins 2004; Cotterrell 1999; Garland 2008), and school shootings are among the most condemned. These crimes have serious effects on young people and are offenses against both the wider community and the local authority. After crimes such as these, it is possible that commonly shared sentiments become expressed to repair the damage the collective suffered. Social solidarity may serve as a symbol that the collective and moral order are stable despite the criminal offence (Durkheim [1893] 1997). Social solidarity is generated and sustained through the social networks and give expression to collective emotions. It enables individuals to connect as members of community.

The solidarity producing effects of natural disasters, high-profile acts of terrorism such as those of 9/11, and, to a lesser extent, school shootings have been discussed (Barton 1969; Collins 2004; Drabek 1986; Fritz 1961; Hawdon, Ryan and Agnitch 2010; Hawdon and Ryan 2011; Turkel 2002). Similarly, the tendency for these high-profile tragedies to lead to policies that heighten fear within the community that potentially fragments the community has also been investigated (Addington 2002; Muschert and Peguero 2010). However, to date, empirical tests of the controversial functional hypothesis are limited (Farrall, Jackson and Gray 2009; Ferraro 1995; Liska and Warren 1991).

THE PRESENT STUDY

The functionalist argument assumes that data can reflect the actual moral convictions of individuals in certain places and times (Cotterrell 1999; Smith 2008). The modified path model of linear equations, as indicated in Figure 1, is adapted from Liska and Warner (1991) to scrutinize the functional model of crime. First, the model focuses on crime-related concerns as an independent and exogenous variable; thus, we are assuming that the two school shootings heightened crime-related concerns, which previous studies suggests happened (see, for example, Nurmi 2012). Accepting this assumption, the model predicts that heightened crime-related concerns result in an increased punitive orientation toward crime. Next, a punitive orientation toward crime is predicted to increase social interaction within the community. Finally, increased social interaction should lead to amplified expressions of social solidarity. In sum, the linear equations represent how collective responses to crime should indirectly increase social solidarity.



Note: Drawn and modified from Liska & Warner (1991, p. 1443).

We acknowledge that our research design does not allow us to make any causal interpretations. First, we lack longitudinal data and therefore cannot verify the temporal ordering of the model's variables. Second, our measures are indirect. Our variables do not tap the likelihood of individually perceived risk and fear of victimization or the actual experienced episodes of fear (Farrall, Jackson and Gray 2009; Jackson 2004). Instead, the focus is on the latent associations of responses to crime and their correlation with social solidarity as expressed by individual attitudes of community members. Yet, neither community has high crime rates, and they were both shocked by these horrific crimes. We therefore assume that respondents associate these crimes with their local community and this association influences their perceptions of their local community, which the survey questions do explicitly measure. Moreover, with the local survey design, environmental influences on the responses to crime are controlled to some extent because respondents share the same physical and social environment (Jackson 2006).

METHODS

Cross-sectional data were collected from the small Finnish towns that were affected by rampage school shootings in 2007 and 2008: Jokela and Kauhajoki, respectively. Jokela is located approximately 50 kilometers from the nation's capital and metropolitan area of Helsinki. It is a small town of approximately 6,000 residents (6,079 in the year 2008). Kauhajoki is in western Finland and approximately 350 kilometers from Helsinki. With a population of approximately 14,000 inhabitants (14,384 in the year 2009), it is a larger community than Jokela both in population and geographically.

The surveys used simple random sampling and were sent to local residents aged 18 to 74. Questionnaires, which included a self-addressed envelope and a cover letter explaining the request to participate and assuring anonymity, were mailed to 700 residents selected from the Central Population Register database. The data were collected in May–June 2008 (Jokela) and March–April 2009 (Kauhajoki). The overall response rate was 48% (330 completed and returned questionnaires) in Jokela and 47% (n=319) in Kauhajoki.

In Jokela, 48.3% of respondents were women and 51.7% were men. The mean age was 51.2 years (SD 13.6), with 15.6% being age 18 to 34, 42.3% age 35 to 54, and 42.1% between ages 55 and 74. Four out of ten of all respondents had lived in their current community for less than five years. This means that 60% of respondents had lived within the community for at least six years. The school shootings were a collective crisis: one-third of respondents (34%) reported that they were close friends or at least knew someone who died in the tragedy.

In Kauhajoki, 55.7% of the respondents were women and 44.7% men. The mean age of the respondents was 48.71 years (SD 15.01). In terms of age groups, 18.7% were aged 18–34, 39% between 35–54 years, and 42.3% were 55 years or older. Less than one-third (27%) reported they had lived at most five years in their recent home. Therefore we can conclude that roughly seven out of ten respondents had lived in the community at least six years. Also, like in Jokela, the school shootings touched the Kauhajoki residents as 18% were friends with, or who at least knew, someone who died in the shootings.

The response rates for both samples were below 50 percent; however, comparisons of the age and gender structure of the data to that of the Tuusula and Kauhajoki communities indicates that the samples represent the areas relatively well (Statistics Finland, 2010). Some of the socio-demographic distributions are slightly biased (54% male in Jokela and 45% male in Kauhajoki). In addition, we should emphasize that the representativeness of the Jokela data can only be evaluated against the larger surrounding municipality of Tuusula. In the data, 71% of the respondents are under the age of 60. In the Tuusula population aged 18–74, on the other hand, the proportion of residents aged 60 or below is 80.0 percent (Statistics Finland, 2012). Similarly, the Kauhajoki data can only be compared to both Finnish- and Swedish-speakers in the region. As a result, the official statistics available are not applicable here as such. Given this, the data are not weighted. Respondents' background characteristics by age and gender are presented in Appendix A.

Measures

The analyses are based on four principal topics: 1) worries about crime, 2) punitive orientation toward crimes, 3) interaction with community members, and 4) social solidarity. The first three concepts are measured with single manifest variables, while the latter is measured as a latent construct. The variables used in the analysis and their frequency distributions are presented in Appendix B. Given that the measures employed in this study are sensitive and that the questionnaires were originally presented in Finnish, back translations were used to ensure consistency of meaning of the concepts.

In this study, the key emotional component to assess respondents' responses is crime-related worries. An intensity measure is applied to evaluate more general mental states, including subjective interpretations about the respondents' environment (Ferraro 1995; Jackson 2006). Respondents were asked how worried they were about a) the recurrence of school shootings and b) being attacked by a stranger in the neighborhood in the evening. These variables were measured using a five-point Likert scale (1= "being extremely worried", 5= "not worried at all"). We also include the item asking the extent to which respondents believed terrorism was a source of insecurity

in contemporary (Finnish) society since rampage shootings, like terrorism, are acts of severe targeted violence (Altheide 2009; Warr 2000). The responses for this item ranged from 1 (a very great extent) to 5 (not at all).

A punitive orientation toward crime is measured by asking respondents “what extent does soft sentencing of criminal offenders pose a threat to collective security.” Responses ranged from 1 “a very great extent” to 5 “not at all.” The item measuring interacting with communities members is “How often do you meet your neighbors?” The item is a four-point Likert scale ranging from 1 (on a daily basis) to 4 (hardly ever). This item taps general parochial social relations that have been shown to influence solidarity after tragedies (see Hawdon and Ryan 2011).

Social solidarity is measured as a latent construct by using the following five-point Likert items: a) “I am a proud member of the community”, b) “I feel I am a part of the community”, c) “I share the same values as my neighbors”, d) “My community is a good place to live”, and e) “People co-operate in my neighborhood.” The measure derives from Bacharach and Zautra’s (1985) sense of community scale. The latent variable of social solidarity is expected to capture individual emotional evaluations about their community and their sense of community (see Hawdon et al. 2010; Turner and Stets 2005). Confirmatory factor analysis (CFA) was used to assess the construct’s reliability. The reliability of social solidarity construct was tested for both a single and two-factor solution. In addition, latent construct invariance was assessed between the two localities and among socio-demographic groups based on gender and age. Due to the restrictions of sample size, age multi-group analyses were based on only two age groups (1= 18–50 years; 2= 51–74 years). A better fitting model was achieved by allowing the error terms between items (b) and (d) to correlate. This is justified since the two items are similar conceptually. Standardized measurement

weights for social solidarity ranged between .50 – .85, thereby supporting acceptable construct reliability.

Analysis

We first analyze zero-order correlations and the linear relationships among the topics of interest. We also present means and standard deviations as an overview of the study concepts. Second, standard multiple linear regression modeling is used to predict social solidarity six months after the school shootings in each of the two localities. Finally, as there is an assumption of the sets of linear equations underlying the functional model of crime, structural equation modeling (SEM) is used. The data are analyzed using AMOS 19 (Arbuckle 2010; Byrne 2010). Detailed modeling procedures are discussed in connection with the analyses.

RESULTS

The bivariate correlations among the measures are presented in Table 1. From Table 1, it is clear that the highest correlations are among the crime-related worry items. Although all three types of crime are distinct, people tend to associate them with each other. In other words, worries about the recurrence of school shootings correlate with the perceptions of street crime and domestic terrorism. Next, general parochial interactions correlate positively with ones perceptions of neighborhood. The more people are involved in interaction with neighbors, the more positive is their appraisal of social solidarity. Interestingly, worry about local crime correlates negatively with social solidarity, although the effect sizes are rather low. Especially in Jokela, school shootings may have a detrimental effect on collective trust. Conversely, worries about domestic terrorism are positively related to social

Table 1. Zero-order Correlations among Topics of Interest

Variable	Mean	SD	1	2	3	4	5	6
Social solidarity	2.45 (2.35)	.76 (.90)	-					
Social interaction	2.48 (2.82)	.94 (.94)	.27** (.36**)	-				
Punitive attitudes	2.16 (1.96)	1.09 (1.00)	.05 (.02)	.14* (-.03)	-			
Worry terrorism	2.47 (2.14)	1.20 (1.14)	.07 (.10)	.11* (-.04)	.33** (.32**)	-		
Worry local crime	3.46 (3.66)	1.12 (1.19)	-.18** (-.20**)	.11 (.11)	.26** (.14**)	.35** (.18**)	-	
Worry school shooting	2.88 (2.26)	1.26 (1.20)	-.15* (-.06)	.08 (-.01)	.25** (.29**)	.38** (.43**)	.41** (.38**)	-

Pearson correlation coefficients: * $p < .05$; ** $p < .01$

Note: Kauhajoki data in parentheses

1 = “Stronger social solidarity, worry about crime etc.” – 5 = “Weaker social solidarity, worry about crime etc.”

solidarity, but the relationship is not statistically significant.

To model the variation in social solidarity six months after the school shooting tragedies, standard multiple regression analyses were conducted. By estimating the models separately, we can evaluate responses to crime

between the two localities. For visual and space reasons, only the final models are shown. Results from the multiple regression analyses are presented in Table 2, with unstandardized and standardized parameter estimates and 95% confidence intervals for the regression coefficients.

Table 2. Regression Analysis for Responses to Collective Crime Predicting Social Solidarity

Variable	Jokela		Kauhajoki	
	B	Beta	B	Beta
Social interaction	1.051*** (0.610; 1.493)	.262	1.678*** (1.174; 2.183)	.356
Punitive attitudes	0.207 (-0.188; 0.602)	.061	0.217 (-0.279; 0.713)	.050
Worry terrorism	-0.601** (-1.031; -0.172)	-.178	-0.849** (-1.289; -0.409)	-.222
Worry local crime	0.455* (0.069; 0.840)	.147	0.334 (-0.132; 0.799)	.098
Worry school shooting	-0.458* (-0.840; -0.075)	-.152	-0.088 (-0.555; 0.380)	-.024
Constant (Y Intercept)	11.491		9.117	
R ²	.118		.187	

* p < .05; ** p < .01; *** p < .001

Base (n=330) for Jokela; (n=319) for Kauhajoki

Note: Numbers in parentheses are 95% C.I. for unstandardized coefficients

1 = "Stronger social solidarity, worry about crime etc." – 5 = "Weaker social solidarity, worry about crime etc."

As expected, interacting with neighbors, or parochial relations, was the strongest predictor of social solidarity. The more people are involved in general parochial relations, the more positive is their attachment to their community. Looking at the crime-related items, they relate to social solidarity differently. First, worry about street violence decreases solidarity; however, worries about domestic terrorism are positively related to solidarity. In Jokela, this relationship is statistically significant. Third, increased worry about the recurrence of school shootings is negatively related to social solidarity. Again, according to the respondents of Jokela, school shootings apparently reflect the decline of community morality and order. Both multiple regression models were statistically significant ($F_{5, 306} = 7.86$; $p < .001$ in Jokela), and ($F_{5, 290} = 12.90$; $p < .001$ in Kauhajoki). The models account for 12 and 19 percent of the variance of social solidarity in Jokela and Kauhajoki, respectively.

Emotional responses to collective crime: Assessment of the linear equation models

The following indices were used to evaluate the hypothesized model: the chi-square test (χ^2), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). Path coefficients were assessed for statistical significance at a 5 % level. Full

information maximum likelihood method (FIML) incorporates a mean structure of the data, which does not differ substantially from a complete data ML estimation. However, missing values are not imputed (Arbuckle 2010). FIML estimates are found to be efficient and unbiased (Enders and Bandalos 2001), and normal theory estimates also perform well with ordered categorical variables, even with moderate kurtosis and skewness. ML estimation is used because it is recommended when the sample size is less than 400 (Byrne 2010; Muthén and Kaplan 1985).

The χ^2 test is used as an absolute model fit test and to assess the discrepancy between the hypothesized and sample matrix (Hu and Bentler 1998). Yet, this measure is sensitive to sample size. With smaller samples, the statistic may lack power, and therefore it does not discriminate between good and poor-fitting models (Kenny and McCoach 2003). Approximate fit indices are developed to quantify the extent to which the hypothesized model accounts for the data. CFI compares the existing model with a 'null model', whereas RMSEA takes into account the error of approximation in the population. Cutoff values close to .95 and above for CFI, and .08 or below for RMSEA are recommended (Byrne 2010; Hu and Bentler 1998).

The hypothesized model fits the data moderately well. However, based on previous results from the zero-order correlations and multiple regression models (see Tables 1

and 2), model modifications were assessed. Using nested model comparisons and traditional chi-square difference testing ($\Delta\chi^2$) two additional parameters were specified and estimated separately. Although post hoc model modifications should be approached with caution (Byrne 2010), they are justified here as criminal events may challenge the interpretations of the community's normative order and local responses reflect less predictable moral reliability (Farrall, Jackson and Gray 2009; Ferraro 1995; Lewis and Salem 1986; Warr 2000). After making these model modifications, a cross-validation strategy including invariance testing was assessed with multi-group, multi-model procedures. The modified model invariance was tested between the two localities and among gender and age, using the median as a cut-point for the latter.

The χ^2 test was statistically significant for both modified models, indicating the models did not have sufficient absolute fit. The relative fit indices, however, indicate the models had a moderate overall fit (Jokela = $\chi^2_{(29)} = 65.40$, $p < .001$; CFI=.95; RMSEA=.062) and (Kauhajoki = $\chi^2_{(29)} = 91.14$, $p < .001$; CFI=.93; RMSEA=.083). The linear equation models were invariant between the two communities based on the traditional χ^2 difference approach; however, the practical Δ CFI approach revealed the invariance exceeded the traditional cutoff (Byrne 2010). Thus, the results drawn from the linear equation modeling are based on unconstrained models and presented separately in Figures 2 and 3.

Figure 2. Emotional Responses to School Shootings in Jokela (Modified Model)

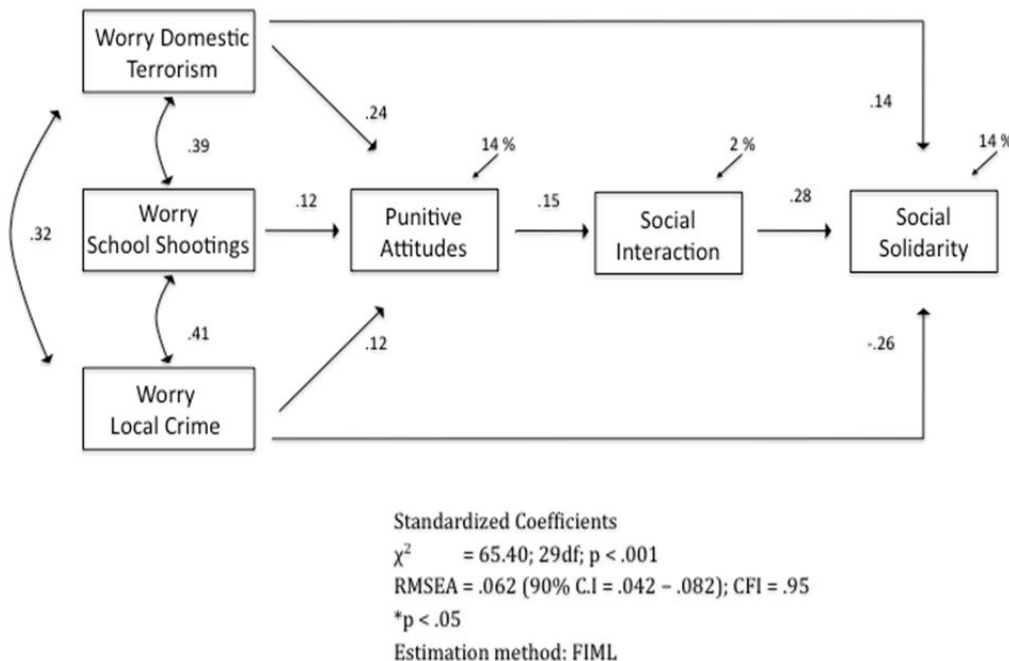
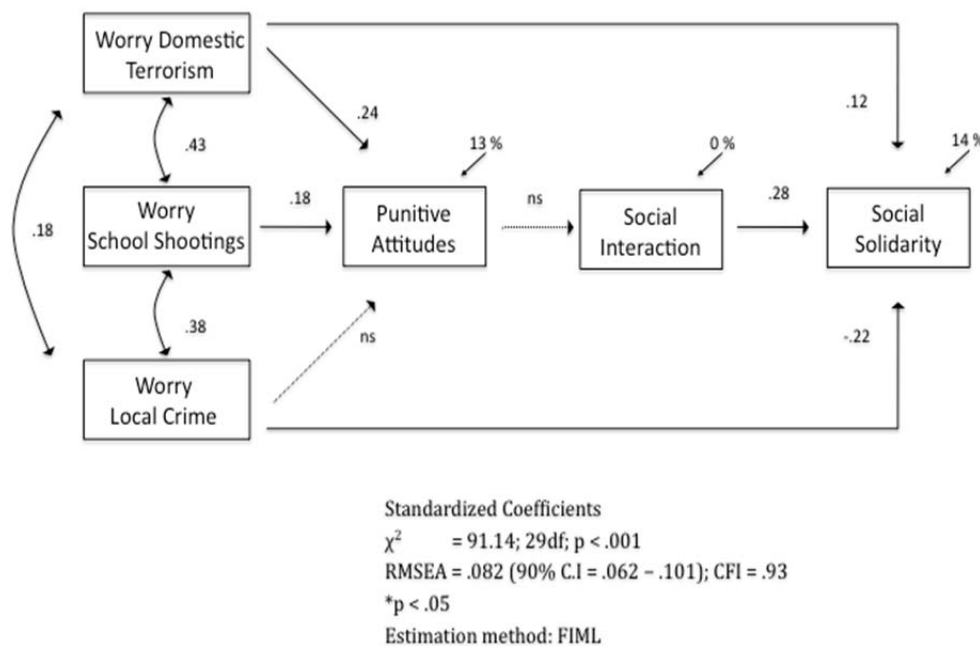


Figure 2 indicates that in Jokela the functional hypothesis appears applicable. That is, the collective response to a tragic event may bring people together. Specifically, concerns about school shootings and other crimes relate positively to a punitive orientation toward crime, which, in turn, positively relates to social interactions among neighbors. Then, increased interactions are positively related to solidarity. Thus, the positive chain of linear equations indicates that crime-related concerns result in increased perceptions of social solidarity. It is noteworthy that the structural weights were not invariant between genders, but age was multi-group equivalent. For some respondents, worries about the recurrence of school shootings are positively correlated with worries about domestic terrorism and worries about

local crime, which may reflect concerns over the decay of community solidarity. On the basis of invariance testing, women are more likely to make both conclusions than are men. Overall, however, the functional model appears to work as predicted in Jokela.

In Kauhajoki, however, the functional model in its precise form does not apply. As seen in Figure 3, not all of the hypothesized paths are statistically significant. While worries about school shootings are positively related to a punitive orientation toward crime, this orientation is not correlated with increased interactions with neighbors. Thus, the predicted linear change is not complete. When it comes to invariance testing among groups, measurement and structural weights were invariant among gender and age.

Figure 3. Emotional Responses to School Shootings in Kauhajoki (Modified Model)

DISCUSSION

This paper analyzes the collective emotional responses to school shootings in Finland. We assert that criminological analyses should focus on emotional responses to crime, which occur in particular times and places. The obvious negative effects of crime may lead us to ignore the functional consequences the responses to these crimes may have (Gray, Jackson and Farrall 2008). According to the functional model of crime, the collective condemnation of crime can bond members of community. Drawn from Durkheim's classic insights, the argument is that collective crime produces a collective response against the infringement of strongly held norms, which latently promotes solidarity (Durkheim ([1893] 1997; see also Liska and Warner 1991). However, empirical testing of the model is rather limited despite the controversy it has created (Ferraro 1995; Liska and Warren 1991).

The school shooting tragedies in Jokela and Kauhajoki deeply disturbed both communities. These collective crimes resonated with community members and likely forced them to reflect about the moral order of their community. Our findings partially support the limited feasibility of the functional hypothesis (see Figures 2 and 3). School shootings appear to represent a type of crime that can provoke collective condemnation and resistance. Nevertheless, the predicted model only appears to apply in Jokela. Therefore, our findings do not support the

uniformity of the model of an all-embracing collective consciousness in the aftermath of a tragedy (Cotterrell 1999). There must be certain contextual and contingent conditions playing a vital role. Let us consider what these factors might be.

First, the way crimes are committed influences people's responses. In Jokela, the perpetrator was a young male student of a small local high-school and most of the victims were also local residents. Thus, the town was deeply shocked and viewed the attacks as an attack on their community as a whole by one of its own members (see Nurmi 2012; Nurmi, Räsänen and Oksanen 2012; Oksanen et al. 2010). In Kauhajoki, however, the perpetrator and most victims were "outsiders" and many did not consider it as affecting the town directly (Nurmi 2012). The collective processing of moral emotions, especially guilt, may enhance empathy and social solidarity (Turner and Stets 2005), and this may have occurred in Jokela. However, in Kauhajoki, the fact that the perpetrator was not originally from the community may result in the blame-assigning and guilt-invoking processes functioning differently. Criminal offenders are often perceived as outsiders and people distance themselves from crime and the outsiders who cause it (Ferraro 1995). This may have occurred in Kauhajoki. This is not to say that collective sentiments were untouched; however, our results do not indicate that the tragedy had a profound effect on community solidarity.

Second, in Jokela, the town's people were united by their shared negative experiences with journalists who approached survivors and victims' families in disturbing ways, but this did not occur after the Kauhajoki tragedy (see Ministry of Justice, Finland 2009). The presence of, and opposition to, some journalists' behaviors and tactics could have been the galvanizing force in Jokela. The more professional and protective approach used when reporting about the Kauhajoki tragedy may have, therefore, removed a critical element for the process.

Third, Jokela is a smaller community than is Kauhajoki, and crimes committed in smaller communities may influence the collective consciences more strongly (Durkheim [1893] 1997; Liska and Warner 1991). Emotional responses are elicited by the memories of events; therefore, even similar tragedies are interpreted in rather different ways (Scherer et al. 2004). Although Kauhajoki could best be described as a rural area like Jokela, it is a larger area and larger town. Our findings confirm earlier work that indicates that the collective weighs less heavily and does not determine individual reactions with the same strength in larger communities as compared to smaller ones.

Most importantly, however, the Jokela tragedy occurred before the Kauhajoki tragedy. Although school shootings had occurred in the United States, Germany, Canada, and elsewhere prior to these tragedies, school shootings were basically seen as an American phenomenon (see Hawdon et al 2012). After Jokela, these tragic events "became Finnish" instead of just American, but the Jokela tragedy was largely considered an isolated event. When the Kauhajoki tragedy struck, residents were likely forced to question their community and its ability to control its members. While a one-time tragedy may bond the community members in collective outrage and, eventually, solidarity, the reoccurrence of such horrific crimes is likely to lead to a questioning of the community's moral order.

These contextual factors may explain why the model applies in Jokela as expected but does not apply as expected in Kauhajoki. Nevertheless, we note most that since the modified model represents the data more accurately, the tragic events were followed by an increase in perceptions of neighborhood deterioration as well as an increase in perceptions of solidarity. Instead of purely producing social solidarity, our findings concur with the previous criminological research that fear-inducing events are associated with the perception of community decline and the deterioration of the social order (Farrall, Jackson and Gray 2009; Ferraro 1995; Jackson 2004; Lewis and Salem 1986).

Youth violence has a tendency to foster concerns about the erosion of authority. The media makes school shootings visible and publicizes them as a threat to a community and social life, thereby affecting personal and social attitudes (Girling, Loader and Sparks 2000; Jackson

2006). When school shootings are perceived as being committed by a "criminal other," as a form of domestic terrorism, and as a threat to the community, the responses to the crime unites people and solidifies the moral boundaries of the community. Conversely, when collective crimes are considered merely as local crime, people are likely to interpret crime as a sign of deterioration of moral values within their neighborhood.

Study Limitations

Responses to crime may vary between time and place, and among social groups. Our study does not refer to the population most extremely affected by the tragedies, but rather we consider general responses to a collective crime. Due to the nature of this complex phenomenon, emotional responses to crime are abstractions from reality (Vanderveen 2008), and results are not an accurate count of unstable and temporal attitudes (Farrall et al. 2009; Jackson 2006). It also remains an open question to what extent social solidarity is an everyday affective phenomenon (Ben-Ze'Ve and Revhon 2004). Such emotions probably peak in commemorative rituals, which may well be performed only by a minority of residents (Durkheim [1893] 1997; Collins 2004). Survey data, on the other hand, is removed from the time and, possibly the place, of the fear-inducing events (Ferraro 1995). Perhaps the delay between the event and the collection of the survey data affects the structural weights, as the effect sizes remain rather low. Although the data were collected when levels of solidarity were still likely elevated, the time lapse would nevertheless probably weaken the effects. Estimating responses to collective crime soon after such tragedies could provide important information, but it is likely that doing so would infringe on the already traumatized local community.

In addition, although linear equation modeling is a powerful and comprehensive data-analytic technique, even well-fitting models are dependent on imposed restrictions. There are alternative models to those presented in Figures 2 and 3. Indeed, even Durkheim ([1893] 1997:25) stated that "it is not easy to say whether it is social solidarity that produces these phenomena (responses) or, on the contrary, whether it is the result of them." It is impossible for us to address the causal ordering of our variables since we lack longitudinal data. We are, therefore, limited to analyzing correlations among attitudinal variables, and the causal model we present is highly dependent on the assumptions of temporal ordering we make. Although our assumptions are theoretically grounded, they are, nevertheless, assumptions.

One could use integrative hierarchical linear models augmented with elements from social disorganization theory to better test the functional theory of crime. There, the neighborhood traits and the perceptions of social cohesion would be expected to explain the variation of fear

of crime (Farrall, Jackson and Gray 2009; Ferraro 1995). However, to do so would require more communities than are available for this analysis. In addition, Hirtenlehner (2008) has presented evidence supporting a generalized insecurity model, and this model may be a better explanation. The generalization thesis is grounded in the sociological “diagnoses” of a risk society and argues that as the risks and insecurities of society lose their conformation, public anxieties become a mixture of personal and social fears, a generalized threat, which then can be assessed within non-hierarchical model.

CONCLUSIONS

Criminological studies may fail to identify the functional consequences of emotional responses to crime. School shootings undoubtedly disrupt the sense of security among the residents of the communities that experience them. Such collective crimes can generate strong emotions, and the violation of the collectively shared moral emotions may create a force that unites the community in an attempt to repair their damaged sense of security. When a collective consciousness is wounded, social solidarity may serve as a protective sign of healing (Durkheim [1893] 1997). However, it also implies that moral norms become reflected more intensely. For some, crime may symbolize failed informal social control within community, and instead of reaffirming the community, it may symbolize the need for that community to change through common responsibilities. Whereas others are perhaps prone to turn to state officials and demand that governmental officials act to preserve individual wellbeing and social order, others are likely to call for more individualistic or community-initiated responses (Cotterrell 1999; Smith 2008).

Collective crimes undoubtedly have an effect on the conditions of social trust, and to preserve that trust may require interventions to provide public space and time to broaden participation in social relations to foster common bonds (Hawdon and Ryan 2011). On the other hand, social interaction does not necessarily create cooperation. Fear-inducing events disrupt social life and serve as a sign of threat to the social order. Responses may follow by severely sanctioning those who fail to conform to the dictates of collective morality, as they are perceived as representational confirmation of community decay. As a consequence, the criminal event may limit what is morally acceptable (Durkheim [1893] 1997; see also Hutchison and Bleiker 2008). The more abstract the common consciousness becomes, the more scope it leaves for individual variations; whereas, the more intense the consciousness becomes, the more it may constrain individual expressions (Durkheim [1893] 1997).

Punitive orientations toward crimes can also be socially problematic. Social constructions that define particular groups as untrustworthy could hinder the

possibility of confronting violence as a larger societal issue. While public sensibilities are shadowed by the dramatic fallacies of heinous crimes, more ordinary forms of violence pass with relatively little notice. Shocking events may feed rash decisions, but systematic discussions and long-term solutions are most needed (Farrall, Jackson and Gray 2009; Silbey 2002). Although crime may create social solidarity and increase the sense of belonging, it also reflects how critical voices and anxieties are channeled. This temporary heightened solidarity may not, however, compensate for the long-term decrease in social trust and confidence in institutions that crime can cause.

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Appendix A. Samples by Age and Gender

Variable	Jokela (n=330)		Kauhajoki (n=319)	
	% n	Mean (SD)	% n	Mean (SD)
Gender				
Women	48.3 (157)		55.3 (172)	
Men	51.7 (168)		44.7 (139)	
Age		50.21 (13.59)		48.71 (15.08)
Age group				
18–34	15.6 (50)		18.7 (58)	
35–54	42.4 (136)		39.0 (121)	
55–74	42.1 (135)		42.3 (131)	
	60.1		73.0	

Appendix B. Descriptive Statistics of the Study Variables

Variable	1					5	Skewness	Kurtosis
Social Solidarity (1= strongly agree – 5= strongly disagree)								
Proud member of community	26.9 (32.1)	31.3 (35.7)	31.3 (22.6)	7.8 (7.5)	2.8 (2.0)	.45 (.68)	-.33 (-.11)	
Sense of belonging to community	19.3 (28.2)	35.1 (31.1)	27.6 (23.6)	14.3 (11.0)	3.7 (6.1)	.39 (.59)	-.53 (-.48)	
Sharing values with neighbors	7.5 (16.8)	32.9 (32.7)	38.6 (28.2)	16.9 (15.9)	4.1 (6.5)	.23 (.34)	-.27 (-.63)	
Community is a good place to live	46.8 (55.0)	37.0 (27.2)	11.9 (12.1)	2.8 (4.2)	1.5 (1.6)	1.29 (1.38)	1.79 (1.47)	
People within community cooperate	7.7 (15.8)	22.3 (20.9)	38.1 (30.2)	23.5 (21.2)	8.4 (11.9)	-.02 (.02)	-.49 (-.92)	
Punitive Attitudes (1= very much agree – 5= not at all)								
Soft sentencing for criminal offenders is a threat to collective security	34.3 (41.2)	31.5 (30.5)	20.7 (20.6)	11.4 (6.1)	2.2 (1.6)	.63 (.82)	-.50 (-.01)	
Worry about Domestic Terrorism (1= very much agree – 5= not at all)								
Terrorism is a source of insecurity in contemporary (Finnish) society	27.9 (38.5)	24.1 (25.8)	25.7 (22.3)	18.0 (9.9)	4.3 (3.5)	.29 (.70)	-.98 (-.44)	
Worry About Local Crime (1= very much worried – 5= not at all)								
Worried about street violence outside home within neighborhood	6.1 (6.9)	14.0 (9.1)	26.2 (24.2)	35.4 (30.5)	18.3 (29.2)	-.45 (-.65)	-.51 (-.38)	
Worry about School Shootings (1= very much worried – 5=not at all)								
Worry about recurrence of school shootings	17.4 (34.9)	20.8 (25.5)	30.3 (24.5)	19.3 (9.1)	12.2 (6.0)	.07 (.65)	-.94 (-.46)	
Social Interaction (1= on a daily basis – 4= not at all)								
Meeting neighbors	15.0 (8.2)	39.1 (29.8)	29.1 (33.1)	16.9 (28.9)	-	.13 (-.24)	-.88 (-.95)	

Source: Finnish local surveys from Jokela (base n=330) and Kauhajoki (base n=319) were collected approximately six months after the school shootings in respective localities.

Note: Numbers in columns represent percentages, Kauhajoki data in parentheses.

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Neighborhood Boundaries and Structural Determinants of Social Disorganization: Examining the Validity of Commonly Used Measures

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Abstract: *Social disorganization theory is a macro-level approach to understanding variation in levels of neighborhood crime and delinquency. Contemporary studies of social disorganization typically rely on administratively defined geographic boundaries (i.e., census blocks, block groups, or tracts) and demographic data aggregated to corresponding areas as proxies for neighborhoods and neighborhood conditions. Despite their frequent use, it is unknown whether official measures of neighborhoods and corresponding measures of neighborhood conditions are valid indicators of these concepts. Using data from a survey of 116 residents of Clark County, Nevada, the current study tests the validity of commonly used measures of neighborhood boundaries and neighborhood structural conditions in the context of social disorganization theory. Results show that administrative proxies of neighborhoods are inconsistent with perceived neighborhood boundaries and that perceived neighborhood structural determinants of social disorganization are also inconsistent with official measures. Findings are discussed in terms of their theoretical implications and direction for future research.*

Keywords: defining neighborhood, neighborhood crime, social disorganization theory

INTRODUCTION

Shaw and McKay's (1942) social disorganization perspective represented a fundamental shift in thinking about crime and delinquency, focusing on "kinds of places" instead of "kinds of people" as an explanation of the etiology of crime and deviance. The original underlying theme of the social disorganization argument emphasized both social and environmental characteristics of inner cities that were linked to increased rates of anti-social behavior. Although the body of literature supporting the social disorganization explanation of criminogenic places has grown over the past several decades, important methodological issues remain underdeveloped (see Bursik 1988; Kornhauser 1978; Kubrin and Weitzer 2003). One such concern is the use of administratively defined proxies of "neighborhoods" and corresponding official measures of neighborhood structural determinants that are believed

to influence crime and delinquency either directly or indirectly by way of various community dynamics.

Contemporary social disorganization research often utilizes data aggregated to administratively defined areas such as census blocks, block groups, or tracts because these data are robust and easily available. Recent changes to the Census Bureau's American Community Survey (ACS)¹ have resulted in more precise and timely indicators of neighborhood disorganization, thereby making these data even more attractive to the scientific community. Despite the growing availability and use of official data, it remains unclear whether administratively defined boundaries used as proxy neighborhoods and corresponding measures of the structural determinants of social disorganization are consistent with perceptual indicators of these concepts. The current study answers two questions related to these concerns.

First, using geographic information systems (GIS), the current study investigates whether geographic boundaries of perceived neighborhoods differ significantly from administratively defined proxies of “neighborhoods.” Comparisons between perceived and official neighborhood boundaries are made at the census block, block group, and tract levels. Answering the question, “Which administratively defined geographic unit best represents a neighborhood, if any?” is important, as it will aid those interested in studying the relationship between neighborhood processes and crime at the macro-level to determine the most appropriate unit of analysis.

Second, the current study examines whether perceived neighborhood structural determinants of social disorganization (e.g., socio-economic status, residential mobility, racial heterogeneity, and family disruption) differ significantly from official measures of these concepts. Answering this question is also important and has relevant theoretical implications. Simply put, it offers new insight into whether commonly used indicators of social disorganization accurately represent the way residents perceive—and therefore likely react in response to—their neighborhoods, which is believed to play an important role in contemporary neighborhood process models used to explain crime and disorder. Collectively, results from this study inform a large and growing scientific audience interested in the ecology-crime link in general and the relationship between social disorganization and crime in particular.

The remainder of this article is arranged in the following manner. The next section provides an overview of the relevant literature. Theoretical developments related to the social disorganization perspective are highlighted and methodological challenges to and extensions of Shaw and McKay’s (1942) original work are discussed. The section concludes with a presentation of the hypotheses that are tested in the current study. Details of the data and methodology used follow, including a description of our analytic strategy. Results are presented in the fourth section; and the final section includes a discussion of our findings, limitations of the current work, and implications for future research. We begin with a review of the contemporary literature, which serves as the impetus for the current investigation.

SOCIAL DISORGANIZATION AND CRIME

Emergence of the Chicago School in the 1920s and 1930s signaled a major paradigm shift in sociological and criminological thinking. Theories that attempted to explain crime and delinquency as a function of the urban environment were offered as alternatives to existing approaches. One of the most notable and enduring criminological theories produced during the Chicago School-era was the theory of social disorganization (Shaw and McKay 1942), which suggests that neighborhood

structural factors disrupt a community’s ability to self-regulate and that this inability to self-regulate leads to crime and delinquency.

Despite growing interest in ecological explanations of neighborhood crime at the macro level, important methodological and measurement questions about the social disorganization perspective have been raised over the years (see Bursik 1988; Kubrin and Weitzer 2003 for a review). For example, shortly after Shaw and McKay’s (1942) ideas were introduced, Robinson (1950) questioned the appropriateness of using ecological correlates to crime as a substitute for individual correlates. Since then, concerns over the dynamic nature of the relationship between social disorganization and crime as well as the appropriate units of analysis used in social disorganization models have been demonstrated in the literature (Arnold and Brungardt 1983; Bursik 1988; Hipp 2007b; Kubrin and Weitzer 2003; Robinson 1950; Short 1985; Stark 1987). In addition, the operational and conceptual definitions of formal control, informal control, and crime have been the focus of others interested in the social disorganization approach (Bursik 1988; Kubrin and Weitzer 2003; Robison 1936; Warner and Pierce 1993). Perhaps the biggest challenge facing ecological explanations of crime and delinquency at the community level, however, is the problem of developing an appropriate operational definition of “neighborhood.”

What is a Neighborhood?

Social scientists have struggled to define “neighborhood” for nearly a century. Some argue that communities are socially constructed (Hunter 1974; Sampson 2004), whereas others argue that neighborhoods are spatially or geographically defined (Grannis 1998, 2010; Park 1915; Suttles 1972). Despite clear scholarly direction on how to operationally define neighborhoods, most social disorganization research relies on administrative boundaries defined by the U.S. Census Bureau as neighborhood proxies. Although houses on both sides of the street between two intersections or between one intersection and a dead end (i.e., face blocks or street blocks) are occasionally used to represent communities (Smith, Frazee, and Davison 2000; Taylor 1997; Taylor, et al. 1995), administratively defined boundaries are used most often to approximate these locations.

Census blocks, block groups, and tracts are the three most common administrative boundaries used as neighborhood proxies in social disorganization research. Representing the basis for all tabular U.S. Census Bureau data, census blocks are defined by both visible features (e.g., streets, roads, streams, and railroad tracks) and nonvisible features (e.g., property lines, school districts, and line-of-site extensions of streets or roads). In urban areas, census blocks are typically small in area; but can be much larger—even encompassing hundreds of square

miles—in suburban, rural, and remote areas of the country (United States Census Bureau 2010).

Clusters of census blocks are used to form block groups, which is the smallest geographic unit for which the U.S. Census Bureau tabulates sample data. Block groups generally contain between 600 and 3,000 people, with an optimal size of 1,500. Block groups never cross a state, county, or census tract boundary; but may cross the boundary of other geographic entities (United States Census Bureau 2010).

Finally, census tracts are small, relatively permanent statistical subdivisions of counties and contain one or more block groups. On average, census tracts contain 4,000 residents; but generally ranging from 1,200 to 8,000. Census tract boundaries usually follow visible features but may follow governmental unit boundaries and other nonvisible features and are designed to be relatively homogeneous units with respect to socio-demographic characteristics and living conditions (United States Census Bureau 2010).

From a practical standpoint, it makes sense to operationally define “neighborhoods” in terms of administrative boundaries because indicators of social disorganization that are used to explain neighborhood effects on crime are contained in census data and can easily be aggregated to blocks, block groups or tracts. Boggess and Hipp recently put it this way: “Though there are perhaps many ways to define ‘neighborhood,’ we rely on a conventional method—tracts—that has been used throughout sociological and criminological research on communities. Like many studies before us, *we are constrained by data availability* <Emphasis added>” (2010:357). Despite the availability of census data, some suggest that the “conventional” method of defining neighborhoods in terms of administrative boundaries is inappropriate for studying the relationship between social disorganization and crime. Sampson, Morenoff and Gannon-Rowley, for example, feel that official geographic approximations of communities offer imperfect operational definitions of neighborhoods for research and policy and argue “the strategy of defining neighborhoods based on Census geography and using tracts or higher geographical aggregation as proxies for neighborhoods is problematic from the standpoint of studying social processes” (2002:470). Nevertheless, investigations into the relationship between neighborhood structural determinants and crime continue to rely on administratively defined geographic boundaries as neighborhood proxies. It is unclear, however, whether these boundaries accurately reflect perceived neighborhood boundaries among community members. Understanding the relationship between perceived neighborhood boundaries and that which is reflected by administrative units is vitally important, given the link between neighborhood structural conditions and the community processes they are believed to influence.

Neighborhood Structure and Crime

Social disorganization theory suggests that neighborhood structural factors disrupt a community’s ability to self-regulate, which in turn leads to crime and delinquency. Initially, Shaw and McKay (1942) argued that economic status, ethnic heterogeneity, and residential mobility were the primary neighborhood structural determinants of community instability. Today, a substantial body of literature shows that concentrated disadvantage, racial heterogeneity, family disruption, residential stability, and urbanization explain meaningful variation in rates of crime and delinquency at the neighborhood level (Boggess and Hipp 2010; Hipp 2007a, 2010a, 2010b; Lowenkamp, Cullen, and Pratt 2003; Maimon and Browning 2010; Miethe, Hughes, and McDowall 1991; Sampson and Groves 1989; Sampson, Raudenbush, and Earls 1997; Sun, Triplett, and Gainey 2004; Veysey and Messner 1999; Warner and Pierce 1993). As noted previously, researchers frequently rely on census data—aggregated to either the tract or block group—when measuring the structural determinants of social disorganization because structural determinant data are collected across the entire United States, at regular intervals, and then made easily available to the public via the Internet.

Despite their availability and accessibility, Hipp (2007b) recently encouraged researchers studying the effects of social disorganization on crime to give greater consideration to the manner in which indicators of social disorder found in census data are geographically aggregated. Studying the relationship between neighborhood effects on perceived crime and disorder at different administratively defined levels, he argued that aggregating census data to proxy neighborhoods represented by tracts or block groups distorts the empirical relationships between neighborhood structure and crime and disorder that are suggested by social disorganization theory. Although Hipp concluded that no single level of aggregation is appropriate for studying social disorganization, his research demonstrates the need to better understand the implications of arbitrarily aggregating structural determinant data to administrative boundaries. Wooldredge (2002) also suggests that models can produce bias results when neighborhoods are operationally defined in terms of different administrative boundaries because different sized “neighborhoods” will likely generate differences in empirical relationships between ecological dynamics and crime.

Geographers have long warned of the problems that arise when point-based measures of spatial phenomena are aggregated to larger areal units. Gehlke and Biehl (1934) were among the first to document this issue when they observed changes in correlation coefficients of male juvenile delinquency rates in 252 Cleveland, Ohio census tracts when data were aggregated to different scales. This

phenomenon has become known as the Modifiable Areal Unit Problem (MAUP) (Openshaw and Taylor 1979) and is formally defined as, “a problem arising from the imposition of artificial units of spatial reporting on continuous geographical phenomenon resulting in the generation of artificial spatial patterns” (Heywood, Cornelius, and Carver 1998:8). For example, by definition an administrative boundary represented as a census block, block group, or tract can contain several households. Each household represents a discrete location and can be associated with demographic information collected from residents during a particular data collection project (e.g., the decennial census or the American Community Survey). When these point-based data are aggregated to blocks, block groups, or tracts so that the effects of some social process on a particular outcome can be estimated, models may produce bias estimates because of the arbitrary scale of the spatial unit.

Despite the MAUP, neighborhood effects research continues to utilize neighborhood structural determinant data collected by the Census Bureau and aggregated to the block, block group, or tract level. When this approach is taken, the operational definition of neighborhood becomes the particular administrative boundary to which data are grouped. It is unclear, however, whether the endogenous community dynamics that are believed to mediate the effects of neighborhood structure on crime develop in response to conditions that conform to any of these census geographies.

Endogenous Community Dynamics

Over nearly the past 25 years, the intervening effects of endogenous community dynamics have been incorporated into social disorganization models (Sampson and Groves 1989). Social control, social ties, social capital, and collective efficacy are among the kinds of endogenous neighborhood factors that have been considered when the social disorganization-crime link is examined (Bursik and Grasmick 1993; Lowenkamp, Cullen, and Pratt 2003; Maimon and Browning 2010; Markowitz, Bellair, Liska, and Liu 2001; Mazerolle, Wickes, and McBroom 2010; Sampson 1988, 2002, 2004, 2006, Sampson and Groves 1989; Sampson, Morenoff, and Earls 1999; Sampson, Raudenbush, and Earls 1997; Veysey and Messner 1999). Unlike structural determinants of crime and delinquency, indicators of endogenous community dynamics are commonly derived from self-reported national or local surveys.

By including the mediating effects of endogenous community dynamics into traditional models of social disorganization, researchers make two important assumptions. First, it is assumed that the mechanisms of informal and/or formal social control are influenced by community members’ awareness of and collective response to the neighborhood conditions in which they

live. Raudenbush and Sampson (1999) refer to this social process as “ecometrics”; and social process models have been used successfully over the past several years to explain various neighborhood effects on crime and disorder (see Sampson, Morenoff, and Gannon-Rowley 2002 for a complete review).

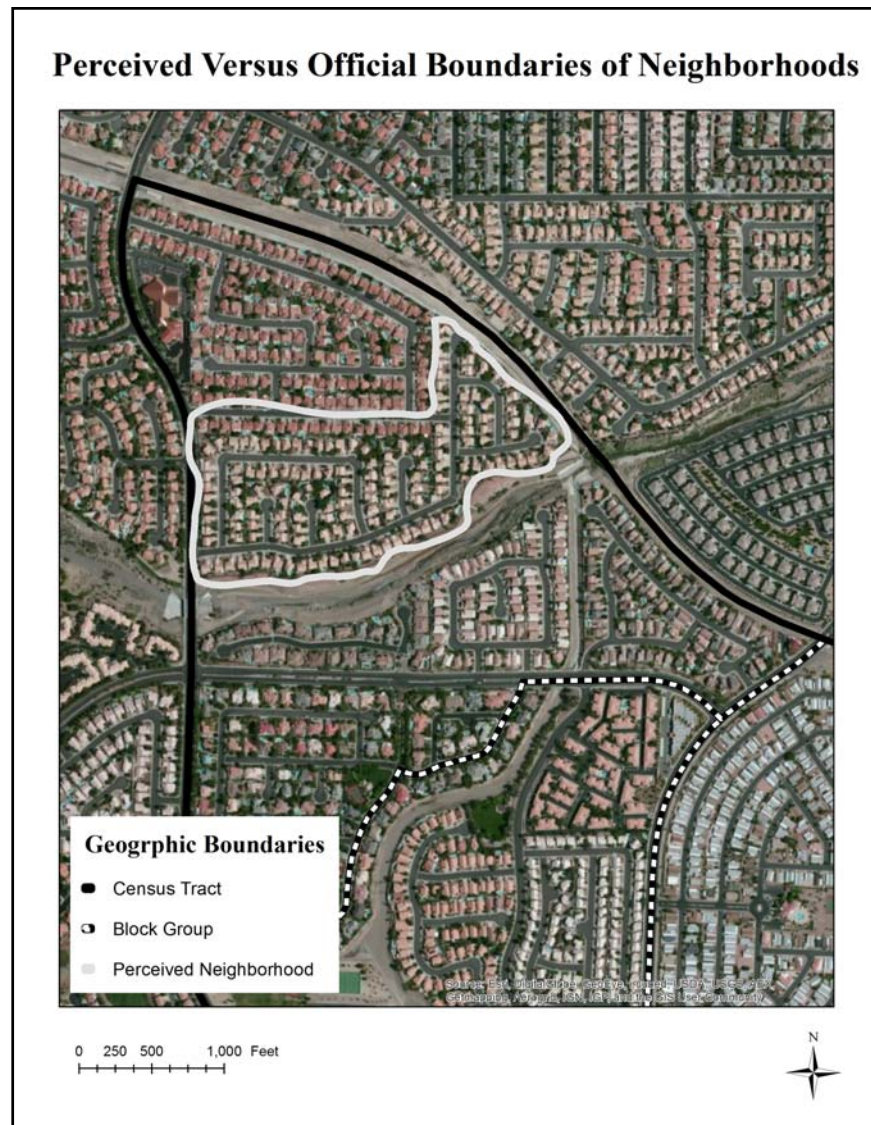
Second, it is assumed that official measures of neighborhood structural conditions aggregated to a particular administrative boundary are valid indicators of perceived neighborhood conditions. Since social processes rely first and foremost on an awareness of and reaction to neighborhood structural conditions in which people live, official indicators of the structural determinants of crime should accurately reflect individuals’ perceptions of them when they are aggregated to a neighborhood proxy if accurate conclusions about “neighborhood effects” on crime are to be reached. In light of Coulton, Cook, and Irwin’s (2004) findings that suggest the reliability of composite measures of neighborhood attributes diminishes significantly as individual-level data is aggregated to larger units of analysis such as census tracts and block groups, it is unclear whether commonly used measures of the neighborhood structure that are believed to affect community dynamics and that in turn affect crime and disorder are valid indicators. This uncertainty serves as the impetus for the current study.

Current Study

While a robust literature exists on how social and perceptual boundaries of neighborhoods are created in general (see for example, Coulton, et al. 2001; Lamont and Molnár 2002), less is known about whether perceived neighborhoods boundaries and corresponding structural determinants of crime are consistent with administratively defined boundaries and official data, respectively. That is, despite their frequent use, it is unclear whether geographic “proxies” of neighborhoods and corresponding measures of neighborhood conditions are valid indicators of these concepts, when they are used to explain crime and delinquency from a social disorganization perspective. It is important to note that we are not suggesting that census block, block group, or tract boundaries and demographic data produced by the Census Bureau are erroneous. Rather, we question whether geographic boundaries and corresponding indicators of neighborhood structural conditions used in studies designed to better understand the relationship between neighborhoods and crime are consistent with residents’ perceptions, since it is these perceptions that give rise to the social processes that are believed to have a ‘neighborhood effect’ on crime and delinquency.

The current study begins to fill existing gaps in the relevant literature by testing two distinct research hypotheses. First, it is hypothesized that perceptions of neighborhood boundaries will differ from their

Figure 1. Illustration of a respondent's perceived neighborhood boundary (light grey) drawn on a map image, compared to the overlaid boundaries of the corresponding census block group (dashed) and tract (black) in which the respondent lives.



administratively defined proxies, regardless of whether they are represented as census blocks, block groups, or tracts. Examining the level of consistency between perceived and official neighborhoods, both in terms of count and overlapping area (in mi^2), allows us to assess the first hypothesis. Second, it is hypothesized that perceptions of neighborhood structural determinants of social disorganization, including indicators of socio-economic status, residential mobility, racial heterogeneity, and family disruption differ from official measures of these concepts. Mean differences between official and perceptual measures of these concepts are tested in order to assess the second hypothesis. Data and methods used in

the current study as well as the analytic strategy employed are described next.

DATA AND METHODS

Data for the current investigation were collected in two phases from a convenience sample of Clark County, Nevada residents aged 18 years or older. Potential respondents were approached at various public locations throughout the county, including shopping plazas, libraries, and community centers. Student volunteers attending the University of Nevada, Las Vegas also participated in the study. Surveys were administered

during the fall and winter of 2010 (n=116). The typical respondent was male, 24 years of age, who had reportedly lived in their current neighborhood for about 4.5 years. According to official statistics, our sample is younger than most Clark County residents (median age in 2010 was 35), is slightly overrepresented by men (54% versus 50%), but representative of residential tenure (i.e., as of 2010, 56% of residents in occupied housing units had lived in their current home for about 5 years). Measures of the relevant variables, including neighborhood boundaries and structural determinants of social disorganization are described in greater detail in the following sections.

Neighborhood Boundaries

During the initial data collection phase, each respondent provided research staff with the address for their current residence. Using ArcGIS 10.0, the address was identified as a point location on an aerial image map at the scale of 1:10,000. The respondent was then instructed how to manipulate the map imagery and GIS interface (i.e., how to zoom in/out, pan, and draw on the map using a mouse, etc.). Next, the respondent was asked to use the computer's mouse to draw a contiguous line on the map image, around the area that they felt best represented the boundary of the neighborhood in which they lived.

Once the respondent drew their perceived neighborhood boundary, the Edit Feature tool in ArcGIS was used to export the resulting polygon as a feature class. Each feature class created and exported was merged into a single shapefile. These data were used to compare to each administrative boundary (i.e., census block, block group, and tract) in which each respondent lived and to test the first research hypothesis. Figure 1 provides an example of a respondent's perceptually defined neighborhood (in light grey), compared to the corresponding census tract (in black) and block group (dashed) in which they lived.

Exogenous Neighborhood Conditions

The second stage of data collection involved measuring perceived neighborhood structural determinants of social disorganization². A self-administered questionnaire was used to gather this information. The four neighborhood structural determinants assessed in the current study include socio-economic status, residential mobility, racial heterogeneity, and family disruption. These variables reflect the exogenous neighborhood structural determinants traditionally used to test social disorganization theory (Sampson and Groves 1989; Sampson, Morenoff, and Earls 1999; Sampson, Raudenbush, and Earls 1997). In addition to the perceptual indicators of social disorganization, the current study

obtained corresponding official data for these indicators—based on where respondents' lived—from the American Community Survey (ASC) 5-year estimate file (2005-09).

In the current study, perceived socio-economic status is a composite measure consisting of 1) the *perceived* percentage of households within a respondent's neighborhood earning more than the county's median household income³; 2) the *perceived* percentage of adults living in a respondent's neighborhood who hold a professional or managerial position at work⁴; 3) the *perceived* percentage of college educated adults living in a respondent's neighborhood; and 4) the *perceived* percentage of homes in a respondent's neighborhood that are owned versus rented. Table 1 provides summary statistics for each perceptual measure, as well as the corresponding measure obtained from the ASC data and aggregated to the block group level.

The second perceived structural determinant measured in the current study is residential mobility. Respondents were asked, "Out of every 100 housing units occupied in your neighborhood, in your opinion, how many are occupied by residents who have lived there for less than 10 years?" On average, respondents believed that two-thirds of all occupied homes in their neighbors were inhabited by residents that had lived there less than 10 years. The corresponding official figure is approximately one-third of what respondents' perceived.

Perceived racial heterogeneity is the third exogenous factor examined in the current study, and was constructed using a variation of Blau's (1977) index of intergroup relations⁵, $(1 - \sum P_i^2)$, where P_i is the proportion of the population in each racial/ethnic group. Six racial/ethnic categories are used to calculate the perceptual and official racial heterogeneity index⁶.

Finally, two perceptual indicators of family disruption are also used in the current study, including 1) the *perceived* percentage of divorced or separated adults living in a respondent's neighborhood; and 2) the *perceived* percentage of households headed by single-parents. Perceptual measures were based on respondents' answers to the questions, "Out of every 100 people age 15 years and over living in your neighborhood, in your opinion, how many are either currently married, divorced, separated, widowed, or never married" and "Out of every 100 families that reside in your neighborhood, in your opinion, how many are headed by a single parent," respectively. On average, respondents' perceived that 16% of adults living in their neighborhoods are divorced or separated. Furthermore, they believed that single-parent households comprise 32% of the homes where they lived. Corresponding data contained in the ASC indicate that these figures are 15% and 28%, respectively.

Table 1. Descriptive Statistics for the Perceived and Official Measures of Neighborhood Structural Determinants of Social Disorganization (n=116).

Structural determinants	Perceived				Official ¹			
	Min.	Max.	Mean	SD	Min.	Max.	Mean	SD
Socio-economic status								
High income	0.00	1.00	0.52	0.29	0.10	0.97	0.55	0.20
Professional/manager	0.00	0.95	0.52	0.23	0.00	0.36	0.11	0.20
College educated	0.00	0.98	0.51	0.24	0.12	0.90	0.61	0.16
Home ownership	0.00	1.00	0.60	0.29	0.00	1.00	0.62	0.24
Residential mobility	0.00	1.00	0.65	0.32	0.00	0.67	0.21	0.18
Racial heterogeneity	0.10	0.83	0.55	0.16	0.00	0.59	0.30	0.15
Family disruption								
Divorced or separated	0.00	0.60	0.25	0.15	0.03	0.40	0.15	0.07
Single parent	0.00	0.80	0.32	0.20	0.00	0.79	0.28	0.15

¹ Official indicators of the neighborhood structural determinants of social disorganization are based on measures at the block group level.

Analytic Strategy

Both research hypotheses presented above required distinct analytic strategies. For example, two separate analyses were performed in order to assess the consistency between perceived and administratively defined neighborhood boundaries. First, a one-sample t-test was conducted to determine whether, on average, more than a single administratively defined “neighborhood” was contained by a respondent’s perceived neighborhood. To accomplish this task, the perceived neighborhood boundary shapefile was overlaid by a 2010 U.S. Census Bureau polygon shapefile for Clark County, Nevada⁷. ArcGIS’s selection tool was then used to identify all blocks, block groups, and tracts that were overlapped by each respondent’s perceived neighborhood boundary. Raw counts for each administrative unit were recorded for each respondent. Table 2 shows that, on average, most respondent’s perceived neighborhood boundary overlap 5 or more blocks. However, on average, the majority of respondents’ perceived neighborhood boundaries overlap only one block group (68%) and one census tract (83%).

Consistency between perceived and administratively defined neighborhood boundaries was also analyzed. Specifically, a paired sample t-test was used to determine whether, on average, the size of each administratively defined neighborhood in which respondents lived differed significantly from the size of the corresponding perceived neighborhood. To conduct this analysis, the total area (in mi²) of the census block, block group, and tract in which

Table 2. Number of Official Neighborhoods Contained within the Perceived Neighborhood in which Respondents Live, by Administrative Unit (n=116).

Unit	Number	Pct.	Cum. Pct.
Blocks			
1	12	10.3	10.3
2	11	9.5	19.8
3	14	12.1	31.9
4	11	9.5	41.4
5 or more	68	58.6	100.0
Block groups			
1	79	68.1	68.1
2	19	16.4	84.5
3	8	6.9	91.4
4	3	2.6	94.0
5 or more	7	6.0	100.0
Tracts			
1	96	82.8	82.8
2	12	10.3	93.1
3	4	3.4	96.6
4	1	0.9	97.4
5 or more	3	2.6	100.0

each respondent lived was calculated using ArcGIS's spatial geometry tool and compared to the calculated size of each respondent's perceived neighborhood boundary.

Table 3 provides summary statistics for the size of perceived and official neighborhoods. Results show that the average size of an official neighborhood, defined as a census block, is about one-fifth the size of a respondent's perceived neighborhood. Conversely, on average, block groups are more than three times the size of perceived neighborhoods. Finally, on average, census tracts in which respondents' lived are nearly six times the size of perceived neighborhoods. Combined, results from the one-sample t-test (counts) and the paired sample t-test (area) are used to evaluate our first research hypothesis.

Table 3. Area of Perceived Neighborhoods in which Respondents Live and Corresponding Official Neighborhoods, by Administrative Unit (n=116).

Neighborhood	Area (mi ²)			
	Min.	Max.	Mean	SD
Perceived	--	10.16	0.29	1.08
Official				
Block	--	0.82	0.06	0.10
Block groups	--	46.59	1.04	4.38
Tracts	0.24	46.59	1.67	4.44

-- Less than .05 square miles.

Finally, a paired sample t-test is used to test our second research question: do perceptions of neighborhood structural determinants of social disorganization differ significantly from official measures of these concepts. Based on test results of our initial research hypothesis, official measures of the neighborhood structural determinants of social disorganization were aggregated to the geographic unit that best represented respondents' neighborhoods. As noted previously, perceptual indicators of the neighborhood structural determinants of social disorganization were based on responses to survey questions, whereas official measures of these indicators were obtained from the American Community Survey (see Table 1). Results of our analysis follow.

RESULTS

One-sample t-tests were conducted in order to determine whether, on average, perceived neighborhoods described by respondents contain more than a single administratively defined "neighborhood." Administrative neighborhoods were operationalized as census blocks,

block groups, and tracts. Therefore, a total of three separate t-tests were conducted.

Perceived Versus Official Neighborhood Boundaries

Results from tests of our first hypothesis are presented in Table 4 and show that none of the geographic areas defined administratively accurately represent a respondent's neighborhood in terms of count. Even census tracts, which are most commonly used as proxies of neighborhoods and represent the largest of the three administratively defined geographic areas examined, are no exception. On average, respondents' perceived neighborhoods contained more than a single tract $t(115) = 2.65, p = .009$. Since both perceived neighborhoods as well as the official proxies of communities vary in size, measuring consistency between the two based solely on counts is insufficient. Therefore, consistency between perceived and administratively defined neighborhoods—defined in terms of shared area—was also examined.

Table 4. One-Sample T-Test Results Determining Whether Perceived Neighborhoods Contain more than a Single Administrative "Neighborhood" (n=116).

Neighborhood	Mean ¹	SD	t	p
Official				
Blocks	17.99	68.95	2.64	.010
Block groups	2.05	3.80	2.98	.003
Tracts	1.45	1.82	2.65	.009

¹ Represents the average number of administrative "neighborhoods" contained within a respondent's perceived neighborhood boundary.

Table 5 presents results from a series of paired sample t-test used to examine whether, on average, a respondent's perceived neighborhood was similar in size to the census block, block group, and tract in which they lived. Findings show that on average census blocks significantly underrepresent the size of perceived neighborhoods $t(115) = -2.32, p = .022$, whereas tracts significantly overrepresent the size of perceived neighborhoods $t(115) = 3.28, p = .001$. Conversely, on average, block groups are statistically similar in size (i.e., neither larger or smaller in area than) to perceived neighborhood boundary $t(115) = 1.80, p = .074$.

Collectively, results from the one sample t-test support our first hypothesis that perceptions of neighborhood boundaries differ from administratively defined geographic boundaries of "neighborhoods" when proxy neighborhoods are represented as census blocks, block groups, or tracts. However, when the overall size of neighborhood

Table 5. Paired-Sample T-Test Results Determining Whether the Size of the Perceived Neighborhood in which Respondents Live Differs from their Corresponding Administrative “Neighborhood” (n=116).

Neighborhood	Mean ¹	SD	t	p
Perceived	0.29	1.08	NA	NA
Official				
Blocks	0.06	0.10	-2.32	.022
Block groups	1.04	4.38	1.80	.074
Tracts	1.67	4.44	3.28	.001

¹ Represents the average area (in mi²) of a respondent's perceived neighborhood and corresponding official neighborhood in which the respondent lived.

boundaries is considered, findings indicate that census block groups serve as the best administrative proxy.

Perceived versus Official Indicators of Structural Determinants

Finally, a series of paired sample t-tests were conducted to determine whether perceptions of neighborhood structural determinants of social disorganization are consistent with corresponding official measures. Since results of the previous analysis suggest that census block groups are the best proxy for communities, comparisons between perceptual and official measures were made using administrative data aggregated to the block group in which respondents lived. Results are presented in Table 6 and show that the majority of exogenous structural determinants used in contemporary social disorganization research are inconsistent with corresponding perceptions of the conditions in which individuals live.

Socio-economic status, for example, is a measure of social disorganization and is typically comprised of multiple indicators such as household income level, percentage of household residents in professional/managerial positions, percentage of household residents who are college educated, and percentage of households that are owned versus rented. Although perceptions of household income and ownership are consistent with official data aggregated to the block group level, on average, respondents overestimated the percentage of residents in their neighborhoods who hold professional/managerial positions at work by 40%, $t(115) = 18.81, p = .000$. Similarly, respondents underestimated

the percentage of residents in their neighborhoods who are college educated by 10%, $t(115) = -4.57, p = .000$.

Significant differences between perceived and official measures of residential mobility and racial heterogeneity were also observed. Specifically, respondents overestimated the percentage of residents who had lived in their neighborhoods for less than 10 years by 43%, $t(115) = 11.17, p = .000$; and overestimated the racial diversity of their neighborhoods by 26%, $t(115) = 13.52, p = .000$.

Family disruption is the final neighborhood structural determinant of social disorganization considered. Results indicate that one of the two perceptual indicators of family disruption is significantly different than what is represented in official data. Specifically, respondents overestimated the percentage of parents living in their neighborhoods who are divorced or separated by 9%, $t(115) = 6.19, p = .000$.

Collectively, results suggest that most of the typical indicators of social disorganization used in contemporary neighborhood effects research are inconsistent with perceptions of neighborhoods held by those living within them. Implications of these findings on future research are offered in the final section.

DISCUSSION

Social disorganization theory is a macro-level approach to understanding variation in rates of crime and delinquency. Originally, the theory focused on explaining crime and delinquency as a function of changes in neighborhood structure. Over the past 25 years, however, models of social disorganization have incorporated endogenous community dynamics that mediate the relationship between neighborhood structure and crime.

Table 6. Paired-Sample T-Test Results Determining Whether Perceived and Official Measures of Neighborhood Structural Determinants of Social Disorganization Differ (n=116).

Structural determinants	Paired differences ¹		t	p
	Mean	SD		
Socio-economic status				
High income	-0.28	0.26	-1.16	.249
Professional/manager	0.40	0.23	18.81	.000
College educated	-0.10	0.22	-4.57	.000
Home ownership	-0.02	0.29	-0.90	.368
Residential mobility	0.43	0.42	11.17	.000
Racial heterogeneity	0.26	0.20	13.52	.000
Family disruption				
Divorced or separated	0.09	0.16	6.19	.000
Single parent	0.04	0.23	1.77	.079

¹

Official indicators of the neighborhood structural determinants of social disorganization were based on measures aggregated to the block group in which respondents lived.

These mediating factors are usually measured at the individual level because it is assumed that the mechanisms of informal and/or formal social control are based in part on residents' awareness of and collective response to the neighborhood conditions in which they live. In other words, contemporary neighborhood effects models of social disorganization acknowledge the important role responses to neighborhood structural conditions play in explaining levels of crime. Paradoxically, these models generally rely on aggregated data that correspond to proxies of neighborhoods. These units of analysis, however, may or may not be valid indicators of the neighborhoods within which people believe they reside or what they believe the conditions of these locations to be.

In response, the current study was conducted in order to assess whether administratively defined neighborhood proxies and structural conditions within these locations that are commonly used in neighborhood effects research are consistent with residents' perceptions. Although there are many ways to define "neighborhood," most sociological/criminological research relies on measures aggregated to geographical boundaries that are represented by census blocks, block groups, or tracts. Neighborhoods are often operationally defined in this manner because socio-demographic information corresponding to administrative boundaries is easily available and consistently collected across space and time.

Findings from the current study show that on average *multiple* census blocks, block groups, and tracts are

consistently associated with a single neighborhood in which a person lives. Furthermore, perceived neighborhood boundaries are consistently disproportionate in size to corresponding official boundaries of proxy neighborhoods. An exception to this finding is the block group. Current results suggest that they represent similar approximations—in terms of size but not count—to perceived neighborhood boundaries. Overall, however, results from the current study indicate that there is a strong disconnect between how people define their neighborhood and how their neighborhood is defined in terms of administrative boundaries. In addition to discrepancies between perceived and official neighborhood boundaries, current findings demonstrate that perceptions of neighborhood structural conditions differ from what is reflected in census data. With few exceptions (i.e., high income, home ownership, and single parent households), individuals consistently over- and underestimate neighborhood structural conditions described in official statistics. In other words, current findings suggest that official data aggregated to the census block group usually fails to provide valid indicators of neighborhood structural determinants of crime.

As with most studies, data used in the present study have certain limitations that restrict some of our substantive conclusions. First, the current study relies on data collected from a convenience sample of county residents. Therefore, findings may not be generalizable to the larger population from which the sample was drawn.

Second, the sample size ($n=116$) was not large enough to permit more robust analysis. In 2010, there were nearly 500 census tracts and nearly 1,200 census block groups within Clark County, Nevada. If the sample was drawn randomly and large enough to include enough respondents from every block, block group, and tract within the county, for example, within group variation of perceived neighborhood condition could have been assessed for each community dynamic represented throughout the county. The current research would have benefitted from an analysis of within group variation; unfortunately, this type of approach was not possible. Although these limitations prevent us from drawing definitive conclusions about the validity of neighborhood boundaries and commonly used indicators of social disorganization, they begin to fill a gap in the contemporary scholarship; and more importantly, they provide guidance for future research.

Despite the convenience, current findings suggest that researchers seeking to model the relationship between social disorganization and crime should resist the urge to use “conventional” units of analysis available in administrative data. Instead, it may be more appropriate to incorporate perceptual measures of neighborhoods and corresponding structural determinants of social disorganization. Criminologists have recognized for decades that individuals’ perceptions play an important role in explaining patterns of both victimization and offending. During the 1970s and 1980s for example, in an attempt to improve our understanding of the deterrent effects of punishment on offending, increased academic attention focused on the *perceived* certainty, celerity, and severity of official responses to crime and delinquency (Chiricos and Waldo 1970; Jensen, Erickson, and Gibbs 1978; Lundman 1986; Paternoster 1987; Saltzman, et al. 1982). The rational choice perspective emerged from this scholarship, arguing that offenders were more likely to engage in criminal activity when the *perceived* benefit of criminal activity outweighed the *perceived* cost (Bachman, Ratnoster, and Ward 1992; Decker, Wright, and Logie 1993; Nagin and Paternoster 1991). Explanations of criminal victimization offered from a routine activities perspective also acknowledge the importance of individuals’ perceptions (Cohen and Felson 1979; Kennedy and Forde 1990; Miethe and Meier 1990; Sampson and Lauritsen 1990). Although other examples can be found throughout the criminological scholarship (e.g., broken windows theory, anomie theory, environmental criminology, labeling theory, etc.), most are associated with attempts to explain individual behavior. Therefore, including perceptual measures of the structural determinants of social disorganization may be viewed as being inconsistent with the general macro-level theoretical approach of this perspective.

A renewed interest in systemic models of social disorganization (see for example, Bellair and Browning 2010), however, suggests that individual behavior plays an

important role in mediating the effects between neighborhood structural conditions and crime and delinquency. A systemic model of crime argues that the process of social control and its effect on crime and delinquency rests on the presence and strength of primary (e.g., social ties among relatives and close friends) and secondary (e.g., social ties among neighborhood acquaintances) social networks. In discussing systemic models of social disorganization, Messner and Zimmerman recently suggested that “...the systemic model of crime ‘unpacks the mechanisms’ of neighborhood effects by highlighting the ways in which relational networks and various forms of social control intervene between structural neighborhood conditions and levels of crime” (2012:160). It can be assumed that the presence and strength of these types of networks may develop in response to both the underlying perceived condition of neighborhoods in which individuals live, which is defined by the area that comprise the boundaries of one’s neighborhoods. Given the level of scholarly interest in systemic models of social disorganization and in light of current findings, additional research is warranted.

In light of current findings, future research could build on the current study in several ways. For example, future studies could replace official data with perceptual data in models of social disorganization in order to determine whether perceptual models outperform traditional approaches. Similarly, scholars could incorporate perceptual measures of neighborhood structure into systemic models that seek to better understand the mechanisms by which social networks are created and maintained in different neighborhoods. Third, perceptual models of social disorganization could be tested with alternative units of analysis. For example, Perkins et al. (1990) recommends using face blocks (i.e., households facing each other on both sides of the street between the adjacent cross streets) when studying neighborhood effects. Similarly, Coulton et al. (2001) have developed an approach for using perceptual maps to identify the common spaces that residents include in neighborhood definitions, which have been successfully applied to calibrate the units of measurement with residents’ perceptions in place-based community initiative research (Coulton, Tsui, and Midelbank 2011). Foster and Hipp (2011) suggest that t-communities (Grannis 1998) are a more effective unit of analysis than administrative boundaries in neighborhood-based research. Finally, Hipp, Faris, and Boessen (2012) have recently introduced “network neighborhoods” as an alternative way for operationalizing neighborhoods. Each of these alternative units of analysis offers promising approaches for future research and should be considered in light of current findings. Finally, there have been calls in the past to link social disorganization theory with other criminological approaches (Bellair and Browning 2010; see also, Veysey and Messner 1999). Given the current findings, future

research could investigate ways to use perceptual measures of neighborhood structure as the linchpin between traditional, macro-level social disorganization models and micro-level individual approaches to understanding victimization. In summary, since emerging in the mid-1980s as a major theoretical perspective for explaining the etiology of crime, social disorganization theory has benefited from continuous scientific scrutiny that focuses specifically on methodological concerns. We conclude that the current study adds to the existing body of scientific knowledge and serves to advance the development of this popular theoretical perspective in a similar manner.

Notes

¹ The ASC now offers 5-year household and demographic estimates based on the 5 most recent years prior to the data release year. Estimates are available for all tracts and block groups.

² Indicators of formal and informal social control believed to mediate the relationship between neighborhood structure and crime were also measured, but analysis of these variables was not included in the current study. The full survey instrument is presented in Appendix A.

³ At the time the survey was administered, the median family income for Clark County, Nevada was \$60,000 per annum.

⁴ Perceptual indicators of neighborhood structural determinants of social disorganization were measured in a similar manner. Respondents were asked, for example, "Out of every 100 people age 16 and over employed and living in your neighborhood, in your opinion, how many hold a professional or managerial position at work?" The actual percentage of people age 16 and over employed and living within the same census block as the respondent was obtained from data provided by the US Census and compared to the perceptual measure of the corresponding indicator.

⁵ While Blau's (1977) index of intergroup relations is calculated using official measures of neighborhood racial composition, the current measure is based on the perceived racial composition of the neighborhood in which a respondent lives.

⁶ White, non-Hispanic, Black, non-Hispanic, Native American, non-Hispanic, Asian/Pacific Islander, non-Hispanic, "Other" non-Hispanics, and Hispanics of any race were the race/ethnic categories used in the current study.

⁷ The Clark County shapefile contains administrative boundaries for all census blocks, block groups, and tracts within the study area.

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APPENDIX A.

University of Nevada, Las Vegas
College of Urban Affairs
Department of Criminal Justice



Perceived Versus Official Measures of 'Neighborhood' and Social Disorganization: Assessing the Validity of Commonly Used Indicators

Section 1: Involvement in your neighborhood.

Q1: *In the past year*, how often have you attended a meeting for a local board, council, or organization that deals with any community problems? Would you say...

☐ Never
 ☐ Once
 ☐ 2-3 times
 ☐ About once a month
 ☐ More than once a month

Q2: *In the past year*, have you served in a voluntary capacity on any local board, council, or organization that deals with community problems?

☐ No
 ☐ Yes

Section 2: Informal activities in your community or neighborhood.

Q3: *In the past year*, have you gotten together informally with or worked with others in your community or neighborhood to try to deal with some community issue or problem?

☐ No
 ☐ Yes

Q4: How important do you consider voting to be? Would you say...

☐ Not very important
 ☐ Somewhat important
 ☐ Very Important

Section 3: People in your neighborhood.

Q5: Mine is a close-knit neighborhood.

☐ Strongly disagree
☐ Disagree
☐ Neither disagree nor agree
☐ Agree
☐ Strongly agree

Q6: People in my neighborhood are willing to help their neighbors

☐ Strongly disagree
☐ Disagree
☐ Neither disagree nor agree
☐ Agree
☐ Strongly agree

Q7: People in my neighborhood do not share the same values.

☐ Strongly disagree
☐ Disagree
☐ Neither disagree nor agree
☐ Agree
☐ Strongly agree

Q8: People in my neighborhood can be trusted.

☐ Strongly disagree
☐ Disagree
☐ Neither disagree nor agree
☐ Agree
☐ Strongly agree

Section 4: Respondent characteristics.

Q9: What is your gender ☐ Male ☐ Female

Q10: What is your age? _____ (in years)

Q11: What is your race & ethnicity?
☐ White, non-Hispanic
☐ Black, non-Hispanic
☐ Native American, non-Hispanic
☐ Asian/Pacific Islander, non-Hispanic
☐ Other, non-Hispanic
☐ Hispanic, any race

Q12: When did you move to your current residence? _____ / _____ (MM/YYYY)

Q13: With 0 representing completely *rural* and 100 representing completely *urban*, on a scale of 0 to 100, how would you rate the neighborhood in which you currently live? _____ (0= completely rural and 100= completely urban).

Please continue to the back side of the questionnaire →

Questionnaire # _____ - _____

Date Completed ____ / ____ / ____

Census# 3200300 Tract _____ Block Group _____ Block _____

Section 5: Please indicate how likely people in your neighborhood would act in each of the following situations listed below.

Q14: If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighborhood would do something about it? Would you say it is...

☐ ₀ Very unlikely ☐ ₁ Unlikely ☐ ₂ Neither unlikely nor likely ☐ ₃ Likely ☐ ₄ Very likely

Q15: If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it?

☐ ₀ Very unlikely ☐ ₁ Unlikely ☐ ₂ Neither unlikely nor likely ☐ ₃ Likely ☐ ₄ Very likely

Q16: If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child?

☐ ₀ Very unlikely ☐ ₁ Unlikely ☐ ₂ Neither unlikely nor likely ☐ ₃ Likely ☐ ₄ Very likely

Q17: If there was a fight in front of your house and someone was being beaten or threatened, how likely is it that your neighbors would break it up?

☐ ₀ Very unlikely ☐ ₁ Unlikely ☐ ₂ Neither unlikely nor likely ☐ ₃ Likely ☐ ₄ Very likely

Q18: Suppose that because of budget cuts the fire station closest to your home was going to be closed down by the city. How likely is it that the neighborhood residents would organize to try to do something to keep the fire station open?

☐ ₀ Very unlikely ☐ ₁ Unlikely ☐ ₂ Neither unlikely nor likely ☐ ₃ Likely ☐ ₄ Very likely

Section 6: Finally, what your opinions are about your neighborhood.

Q19: Out of every 100 people living in your neighborhood, *in your opinion*, how many are.... (Total must add to 100).

White, non-Hispanic _____ Black, non-Hispanic _____ Native American, non-Hispanic _____

Asian/Pacific Islander, non-Hispanic _____ Other, non-Hispanic _____ Hispanic, any race _____

Q20: Out of every 100 people age 15 years and over living in your neighborhood, *in your opinion*, how many are...

currently married _____ divorced _____ separated _____ widowed _____ or never married _____ (Total must add to 100).

Q21: Out of every 100 people age 25 and over living in your neighborhood, *in your opinion*, how many are college educated? _____

Q22: Out of every 100 people age 16 and over employed and living in your neighborhood, *in your opinion*, how many hold a professional or managerial positions at work? _____

Q23: Out of every 100 households in your neighborhood, *in your opinion*, how many have a household income of more than \$60,000 a year? _____

Q24: Out of every 100 families that reside in your neighborhood, *in your opinion*, how many are headed by a single parent? _____

Q25: Out of every 100 housing units occupied in your neighborhood, *in your opinion*, how many house residents who have lived there for less than 10 years? _____

Q26: Out of every 100 housing units occupied in your neighborhood, *in your opinion*, how many are owned (versus rented) by the resident? _____

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We be Drinkin': A Study of Place Management and Premise Notoriety among Risky Bars and Nightclubs

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Abstract: *Risky facilities are places that exhibit substantially more crime and disorder problems than properties of the same type. Explanations for why crime concentrates at certain places highlight the interplay between place management and premise notoriety. Site observations at 87 bars and 17 nightclubs, located along the I-10 and 215 corridors across three counties (San Bernardino, Riverside, and Los Angeles) in California, found significant differences between these two types of drinking establishments. As expected, alcohol control figured prominently in accounting for both internal and external crime issues at bars; whereas a greater range of problems were observed for crowded nightclubs. More importantly, interaction terms including Yelp.com ratings revealed something new about drinking preferences. Crowded bars that are rated higher on Yelp.com have significantly more problems. These findings suggest that Yelp.com ratings and other social media can be used to investigate alcohol-serving facilities.*

Keywords: crime, crowdedness, bars and nightclubs, place management, risky facilities, Yelp.com

INTRODUCTION

In November 2011, an altercation began between two groups inside Charlie Jewell's bar, located in Redlands, CA. Indoor security forced the combatants outside, which is a typical response to this common problem. The quarrel continued, resulting in a patron being fatally wounded by a gunshot. While alcohol-serving facilities are often linked to serious crime and disorder problems, most crime occurs in only a few premises—these high crime locations are known to be *risky facilities* (Eck, Clarke and Guerette 2007; Eck et al. 2009). What is generally found to separate risky facilities from low crime

places is a combination of place management and premise notoriety.

Using site observations of 87 bars and 17 nightclubs, this study tests indicators of poor place management that are predictive of risky facilities. Alcohol serving establishments with excessive crowding, lax alcohol control, and poor design, attract higher levels of crime and disorder than facilities of the same type. This research also introduces a measure of public notoriety, Yelp.com. The results suggest that internet-based social information networks are indicative of crime issues. Due to the relatively large sample of facilities, drawn from 14 cities

located along a 150-mile corridor of Southern California, policy implications can be generalized beyond the region studied. Controlling patron behavior through place management is critical to ensuring safety in alcohol-serving establishments. Collaboration between facility management and local governing agencies is essential to avoiding situations similar to the one that occurred at Charlie Jewell's.

IDENTIFYING TROUBLESOME BARS AND NIGHTCLUBS

Risky Facilities

Alcohol serving facilities and the recreational inebriation they sponsor are important social issues, given the strong link between alcohol consumption and crime and disorder problems (Felson et al. 1997; Homel and Clark 1994; Scott and Dedel 2006; Stockwell 1997). Evidence routinely shows that crime victimization, particularly rates of violence, are more prevalent at drinking facilities than any other type of facility (e.g., Madensen and Eck 2008; Scott and Dedel 2006). A contributing factor is the tendency for city zoning policy to cluster bars, nightclubs, and restaurants into entertainment districts. Although it may be good for business, concentrating drinking establishments within a relatively small geographic area lubricates the flow of drunken patrons between places (Clarke and Eck 2007) and increases the chance of altercations as groups of people congregate (Homel et al. 1997; Scott and Dedel 2006). Even within a notorious entertainment district, crime and disorder is not evenly spread across all properties.

Within any distribution, a small proportion of locations account for the vast majority of crime and disorder incidents (see Clarke and Eck 2007; Eck, Clarke and Guerette 2007). As argued by Felson, these crime problems are best understood by uncovering behavioral routines—work, social, and residential—that shape the convergence of the six essential ingredients of crime events (2002). Crimes occur when a motivated offender (1) and a suitable target (2) intersect at a specific location (3) and there is a *conspicuous absence* of capable guardians (4), intimate handlers (5), and effective place managers (6) (Cohen and Felson 1979; Eck 1995, 2002; Felson 1995, 2002). Since place managers directly control operations at the location where crimes occur, it can be argued that they are the most vital ingredient among the confluence of factors that are linked to crime problems (Fox and Sobol 2000; Madensen and Eck 2008).

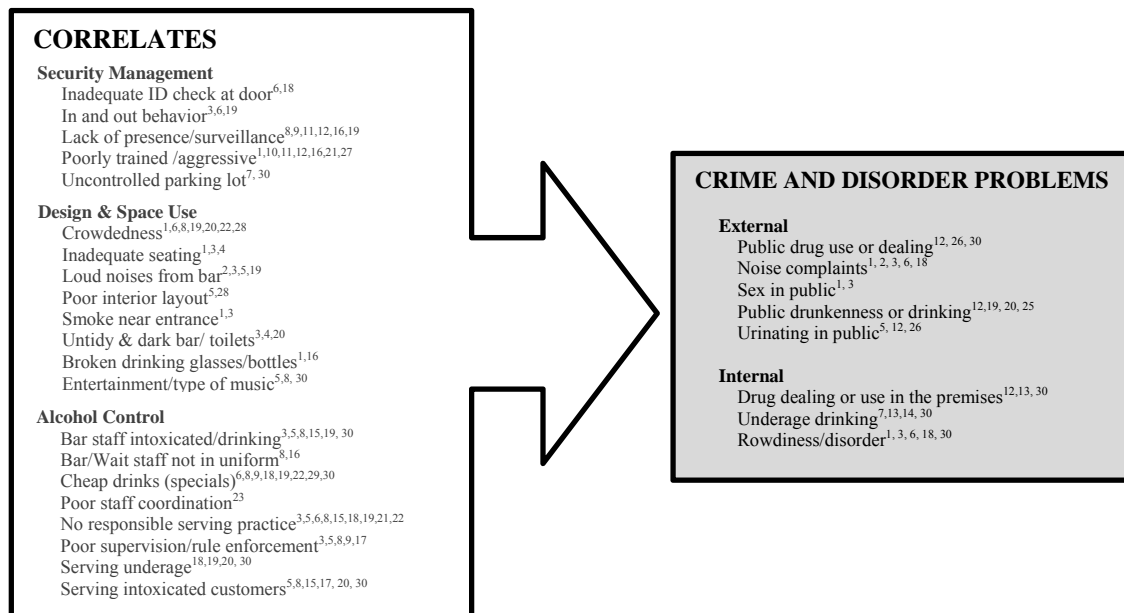
Place managers directly influence a diverse set of visible risk factors, including premise design and layout, patron use patterns, security management, alcohol control, and marketing (see Figure 1). Premises exhibit more severe crime and disorder levels when they are crowded,

noisy, unclean, and few behavioral controls are enforced, i.e., highly permissive environments that allow movement in and out, congregation at the entrance, and little alcohol control (Dedel 2006; Felson et al. 1997; Graham et al. 2006a; Graham et al. 1980; Homel and Clark 1994; Homel et al. 2004). Additionally, aggression and disorder is higher when drinkers tailgate in parking lots and throw empty cans or bottles at people or property (Felson et al. 1997; Fox and Sobol 2000). For the most part, these are all attributes that are under some control of facility managers; thus, management plays a central role in generating the most extreme criminogenic conditions (e.g., Madensen and Eck 2008; Mazerolle, Roehl and Kadleck 1998).

Managing Bars and Nightclubs

Management decisions influence the opportunities for crime and disorder. Properly trained staff—bouncers, alcohol servers, and floor supervisors—are needed to ensure adequate crowd and alcohol control (Homel et al. 1999; San Diego PD 2011; South Wales Police 2008; Vancouver PD 1995). Establishing behavioral expectations begins with setting and enforcing rules: careful screening of patron age and eligibility (e.g. dress codes) upon entrance, monitoring activity in adjacent parking areas, funneling smokers to designated areas, and prohibiting the patrons from bringing in restricted items, i.e., drugs and weapons (Eck et al. 2009; Homel et al. 2004). Promotions, activities, and music also can increase aggression and other undesirable behavior (Eck et al. 2009; Fox and Sobol 2000; Madensen and Eck 2008). For instance, cheap drink promotions contribute to excessive binge drinking; booty shaking and wet t-shirt contests can incite aggressive overtures; and, cult music can encourage violent crowd behavior. Serving practices and policies clearly reflect the crime propensity of a bar or nightclub. A business ethos of promoting excessive alcohol sales without monitoring consumption increases crime and disorder issues, while adding food service in a similar setting reduces trouble (Homel and Clark 1994; Stockwell 1997).

Though marketing is an element of place management (Madensen and Eck 2008), the place management literature only examines risky facilities from the perspective of the owner and employees. What tends to be missing from this discussion is patron expectations and how this contributes to premise notoriety. When choosing where to drink, patrons frequent establishments that they believe offer the type of entertainment they desire. For instance, premises with a reputation for a rave-like party atmosphere will attract one segment of the club-going population, whereas a known “tough bar” will attract individuals looking to get rowdy. Thus, there may be a link between facility reputation and the development of criminogenic behavioral settings.

Figure 1. Factors Associated with Crime and Disorder Problems at Alcohol Serving Establishments**Sources:**¹ Graham et al. 2006a² Miami PD 2011³ Homel and Clark 1994⁴ Homel et al. 2004⁵ Eck et al. 2009⁶ Felson et al. 1997⁷ Halton Regional Police Service 2002⁸ Stockwell 1997⁹ Eck et al. 2009¹⁰ Homel et al. 1999¹¹ Vancouver PD 1995¹² San Diego PD 2011¹³ White Plains PD 1997¹⁴ N. Slope Dept. of Public Safety 1995¹⁵ Arlington PD 1998¹⁶ South Wales Police 2008¹⁷ Scott 2006¹⁸ Dedel 2006¹⁹ Homel et al. 1997²⁰ Graham et al. 2006b²¹ Graham and Homel 1997²² Stockwell 2001²³ Madensen and Eck 2008²⁴ Scott and Dedel 2006²⁵ Scott et al. 2006²⁶ Chatlotte-Mecklenberg PD 1999²⁷ Graham et al. 2005²⁸ MacIntyre and Homel 1997²⁹ Quigley et al. 2003³⁰ Fox and Sobol 2000

Note: This image builds on a table used by Eck and colleagues (2009) to summarize the findings of 9 studies.

Behavioral Settings

Behavioral settings are the smallest unit of social structure connecting dynamic individual activity with the social fabric of a community (Barker 1968). These geographically-anchored places develop temporally-constrained patterns of behavior, with commonly shared norms that shape individual choices. Settings exist irrespective of the individuals whom are present, and they are considered self-generating. Think of a local coffee shop. Ordering a scotch and asking to reserve a billiard table is not consistent with behavioral expectations at 0800; it would not matter which staff worked that day or who came into the shop. This behavior would be unacceptable. However, if the shop doubles as a bar in the late evenings, a second behavioral setting emerges that would support these expectations. This change in behavioral setting often occurs at bars and night clubs. Bars may act as restaurants during the day and party zones late at night. Some nightclubs act as dance studios during the day, offering lessons on how to Salsa, and then become dance clubs later.

Extending routine activities theory, Felson (2006) posits that an important subset of behavioral settings should be of concern to criminology. Offender Conver-

-gence settings are locations where people assemble in anticipation of criminal/delinquent activity (Felson 2006). They attract like-minded individuals looking to hangout and from this pool of potential co-offenders, new crime activity may be generated. On any given day, an individual will select a hangout based on their perceptions about the type of place it is. As argued by Madensen and Eck (2008), the collective decisions of place managers are the most important factor in determining the character of a place. Managers set parameters within which staff are expected to function when interacting with patrons, and these decisions will shape premise notoriety in such a fashion that an offender convergence setting may develop.

Measuring Premise Notoriety

Since the personality of an establishment is generated through the interaction between patrons and business decisions, capturing current trends across a wide area may be challenging. Fortunately, informal internet-based communications have become one of the most vital sources of information among the bar and club-going population. One notable source of reviews for businesses

that may serve as a barometer of notoriety and patron expectations is Yelp.com.

Yelp.com was launched in 2005 as a mechanism to capture consumer experiences with the products and services of local businesses. Individuals can examine ratings and comments made by reviewers in their community that have first-hand knowledge of the business. Reviewers rate businesses on an ordinal scale ranging from 1 star (not satisfied) to 5 stars (highly satisfied) and offer comments to justify the score. When a business is reviewed, the scores and comments are added to a master file. To protect consumers and business owners from fake or malicious postings, Yelp.com has an automatic filter that suppresses comments that appear in their totality (copies) on other review sites. In other words, only original content is accepted. If a review is deemed appropriate, it is retained for consideration. A proprietary algorithm filters through the file and selects positive and negative comments from the most *trusted* reviewers.

To qualify to review facilities, one must set-up a personal account that records details about their rating activity. Over time, some reviewers become more trusted than others, but Yelp.com does not offer many details; there are three factors that appear to be used to rate them. The three factors are: trust ratings increase with the length of participation, extent of activity, and review comments can be rated on usefulness. Therefore, allowing helpful reviewers achieve a higher trust status.

Yelp.com updates the reviews daily and depending on the mix of comments available for a business, the average rating will shift over time. Only the most trusted reviewers' comments are selected each day, with a balance of positive and negative reviews included. Yelp.com argues that the average rating becomes more accurate the longer a business is in the database and as the number of reviews increase.

Yelp.com receives about 53 million monthly visitors and contains about 20 million reviews; approximately 25% and 8% of Yelp.com users write reviews of restaurants (bars) and entertainment (nightclubs) respectively (Yelp.com 2011). Most users seek information for personal or entertainment purposes (Hicks et al. 2012); information posted is usually treated as a formal and legitimate review (Steffes and Burgee 2009). Thus, Yelp.com provides a measure of how drinking places are viewed by their customers and can give insight into their reputations. For example, as of June 27, 2013, Charlie Jewells' bar was reviewed 47 times and had an average Yelp.com rating of 2 stars (out of 5). Patrons commented that:

[Its] a place where young kids go to start fights. Posted by Rene C., Yucaipa, CA 4/9/2012.

It's definitely a meat market and definitely a place where fights are known to occur on the regular. CJ's is the local

hangout for bros and bro-hos. Posted by Stephe S., Los Angeles, CA, 1/6/2011.

If you enjoy expensive drinks, not being able to hear your voice, fights, and lots of bros then this bar is probably for you. If you are a normal human being go somewhere else. Posted by Austen K., Irvine, CA, 7/20/2009.

Tapping into this popular review of patron experiences offers a previously unused mechanism to peer into the character of specific premises.

Present Study

The present study contributes to the field in two distinct ways. Foremost, this study introduces a heretofore untested indicator—public notoriety as measured by Yelp.com ratings. This source of information might be an invaluable tool for law enforcement, city code enforcement, or alcohol licensing boards to identify crime problems. If found to be a significant correlate of crime and disorder, then Yelp.com ratings may offer a tool for prioritizing liquor license inspection schedules. Secondly, this study draws its sample from contiguous cities along a section of Southern California's primary highway system. This strategy offers a unique opportunity to identify robust predictors of risky businesses across a diverse set of bars and nightclubs. Aggregating across such a wide area pushes research beyond a case-study or a district-centric approach; thereby, offering a regional assessment of risky premise indicators. The findings can be used to design more resilient alcohol-oriented premises able to govern recreational behavior, and reduce the potential for igniting conflict, while retaining healthy profit margins and a festive atmosphere.

METHODOLOGY

Data Source

Sampling Frame

Internet resources, such as Google, Yelp.com and business websites, were used to identify all possible bars and nightclubs located along a 150 mile stretch of highway in Southern California; portions of Interstates 10 and 215, and Highways 57 and 62 were included. This area stretches from Pomona (29 miles East of Los Angeles) to 29 Palms (US Marine base in the vicinity of Palm Springs). This study region was determined by convenience (a member of the research team lived in each city) and relevance (this zone encompasses most of the catchment area for the University the researchers attended). Initially the sample included 142 facilities, but many sites were removed because: they did not meet the qualifying definitions (see below), were no longer in

operation, or had multiple names for a single establishment. The final sample includes 87 bars and 17 nightclubs spread across 14 cities within 3 counties—most sites were in San Bernardino and Riverside Counties (only one city was located in Los Angeles County). About 90% of the 104 facilities were located in urban and suburban areas; the remaining sites were located in rural, desert communities. To qualify for consideration the premise must fall within one of the following definitions.

A bar facility is defined as a low capacity (< 500 people) pub style establishment that is open to the public ages 21 and over. These facilities serve alcohol directly through a designated bartender or assigned wait staff. Typically, hours of operation begin around noon until closing approximately 0200 the following morning. Food and entertainment, such as karaoke, billiards, or live band performances are available. Cover charges depend on the type of entertainment offered.

A nightclub facility is defined as a high capacity, open plan establishment with a full service bar and roving wait staff that is open to the public ages 18 and over. Operational hours are restricted, starting around 2000 until 0200 or 0400 depending on local bylaws. Music (e.g., bands, DJs), dancing, and special lighting (e.g., disco ball, strobe lights, spot lights) are some of the core characteristics of a nightclub. Many establishments have bouncers to screen patrons and require a cover charge upon entering.

Data Collection Protocol

Data collection occurred between May 10 and May 19, 2012. Staff collected data during peak hours of

activity: 37.5% of observations occurred between 2200 and 0200 when bars and nightclubs were most active, and 45% of observations occurred between 1800 and 2159 when happy hour drink specials were most common. Operating in pairs, researchers observed an average of 8 locations. In an attempt to capture the ordinary bar and nightclub environment, research staff were encouraged to maintain a low profile by acting as patrons.¹ However, some locations were small and frequented by regulars making researchers highly noticeable. On average, staff observed 3 locations each Friday and Saturday night, spending at least 30 minutes inside each facility and another 15-20 minutes surveying the parking areas and getting into the premise.

Maintaining a low profile during observations was vital to generating valid and reliable data. The instruments used during the structured observations were printed on 8.5 x 11-inch dark colored paper, which allowed folding to reduce noticeability. Many researchers reported annotating observations while alone, often in the restroom stalls. Parking in establishment lots or surrounding streets was avoided in accordance with stipulations made by the University's Institutional Review Board.² Researchers were required to leave the premise if the environment became hostile or if there were any personal safety concerns.

Pilot tests conducted in two bars and one nightclub uncovered several issues with the data collection form: items were reworded, coding revised, and staff retrained. The revised instrument was tested at eight bars and two nightclubs. As indicated in Table 1, the inter-rater reliability improved significantly.

Table 1. Comparison of Pilot Test Results

MEASURES	BARS		NIGHTCLUBS	
	Initial Pilot Test	Follow-up	Initial Pilot Test	Follow-up
Number of Items	62	49	37	47
Number of Sites	2	8	1	2
Number of Researchers	13	2	9	2
Avg. Consistency	63.0%	90.8%	69.7%	96.7%
Inter-rater Reliability*	.656	.896	.843	.943

* Spearman's Rho averaged for all researchers; 1-tailed tests reported.

Measures

Independent Variables

Security Management Index. The security management index takes into account: whether the external security staff are uniformed, visible and active; the nature of identification checks at the door (e.g., pat downs, ID scanners employed, purses searched, etc.); visibility and

behavior of indoor security; control over the parking lot (e.g., staff observed walking around monitoring patrons near cars), and whether there were any in and out privileges. Nightclubs had a higher level of visible security, perhaps, due to more liability issues such as younger patrons and large crowds. This summative index was reverse coded so that higher scores reflect lower levels of security. Table 2 provides descriptive statistics for this

and all other measures, and Appendix A and Appendix B explain the data collection instruments in depth.

Design Index. Five design-related attributes were observed, alley accessibility, location of the restrooms, smoking by the front door, noise, and capacity. All variables are dichotomous where a score of “1” indicates the presence of the issue. Restrooms were rated for isolation or entrapment (restrooms location are in a secluded area or placed around the corner causing a 90 degree angle); and sightlines of bartenders were assessed for impediments (i.e., whether the bartender or the patrons could see the doors of the restroom). If researchers could hear music outside of the establishment, at least from fifty feet away, the facility was scored “1” for noise. Posted occupancy signs must be visible upon entering the establishment. On average, bars and nightclubs scored similarly on this summed index.

Crowdedness. Crowdedness in this study refers to how the researchers felt upon entering the facility. This independent variable categorized whether the researchers

were comfortable (scored ‘0’), faced movement restriction (scored ‘1’), or were forced to squeeze by other patrons and furniture because the place was packed wall-to-wall (scored ‘2’). Bars scored a mean of 1.3 (SD 0.51) and nightclubs about .59 (SD 0.61).

Alcohol Management Index. Six attributes identified how well an establishment controls alcohol: drunken people were served, hard liquor bottles were in reach of patrons, bartender(s) consumed alcoholic beverages while on duty, drinks were served in glass bottles, existence of special drink promotions, and long lines to get served at the bar [this attribute was reverse coded, yes (0), no (1)]. All items were coded with a ‘1’ for the presence of the issue. Higher scores on this summative index are suggestive of greater laxity in alcohol control.

Yelp.com Rating. The average Yelp.com rating was retrieved for each premise within three weeks of site observations (<http://www.yelp.com>). Searching premises by name, researchers captured the average rating that was generated from the most trusted reviews. Missing data was

Table 2. Summary of Index Creation and Descriptive Statistics for Covariates and Dependent Variables

VARIABLES	INDEX CREATION			DESCRIPTIVE STATISTICS				
	No. of Items	Alpha	% Missing	Mean	SD	Min.	Max.	Med.
Bars (N=87)								
<i>Independent Variables</i>								
Security Management Index	6	0.37	0.0	2.93	1.31	0	5	3.0
Design Index	6	0.38	0.0	3.20	1.41	0	6	3.0
Crowdedness	1	---	0.0	1.32	0.51	1	3	1.0
Alcohol Management Index	5	0.37	0.0	5.74	2.00	2	10	5.5
Yelp.com Rating	1	---	25.0	3.17	1.16	0	5	3.0
<i>Dependent Variables</i>								
External Crime & Disorder	8	0.59	0.0	0.93	1.26	0	5	0.0
Internal Crime & Disorder	2	0.37	0.0	1.34	1.04	0	4	1.0
Bar Problems (Σ of External & Internal)	10	0.65	0.0	2.27	1.90	0	8	2.0
Nightclubs (N=17)								
<i>Independent Variables</i>								
Security Management Index	11	0.81	0.0	4.35	2.67	0	10	4.0
Design Index	5	-0.20	1.0	3.19	0.83	2	5	3.0
Crowdedness	8	---	0.0	0.59	0.62	0	2	1.0
Alcohol Management Index	8	0.38	0.0	3.53	1.42	0	5	4.0
Yelp.com Rating	1	---	23.0	3.25	1.08	1.5	5	3.0
<i>Dependent Variables</i>								
External Crime & Disorder	8	0.79	0.0	1.94	2.10	0	6	1.0
Internal Crime & Disorder	2	0.47	0.0	0.29	0.59	0	2	0.0
Nightclub Problems (Σ of External & Internal)	10	0.77	0.0	2.24	2.31	0	7	1.0

a problem for 25% of bars and 23% of nightclubs. The issue of missing data is discussed at length in the limitations section of this article.

Dependent Variable

The dependent variable captured a range of external and internal issues of crime and disorder. External crime and disorder includes problems observed within the perimeter of the facility (designated parking area, open area immediately adjacent to facility, and if applicable, the back alley). Observers looked for evidence of: public sex, public urination, drug use, consuming alcohol in vehicles (tailgating), physical fights, and severe public intoxication (e.g., people observed passing out, falling down, or throwing up). Observations of internal activities included illicit sales or use of drugs, and any type of rowdy or rough behavior. These dichotomous items were summed to generate a score ranging 0-8 for bars and 0-7 for night-

clubs. Of note, this measure gauges the mix or range of deviance presence rather than the amount.

Inter-item Correlations

Inter-item correlation coefficients raise no concerns about multicollinearity; however, a few noteworthy correlations were found (see Table 3). For bars, low to moderately strong associations existed between the design index (problematic design features) and observed crime and disorder problems. Poorly designed bars were observed to have weaker alcohol control and greater external problems. Among nightclubs, strong correlations were found between external crime and disorder problems and crowdedness and security management; greater problems seemed to accompany larger crowds (Rho = .504, $p < .01$) and a more visible security presence, particularly screening the front entrance (Rho = -.432, $p < .01$). Nightclub crowdedness was also highly correlated

Table 3. Inter-item Spearman's Rho Correlation Coefficients for Observed Bars and Nightclubs^{1,2}

BARS (N = 87)	NIGHTCLUBS (N = 17)						
	1	2	3	4	5	6	7 (N=12)
1. External Crime & Disorder Issues		.090	-.432*	.181	.504*	-.041	-.205
2. Internal Crime & Disorder Issues	.427**		.053	.322	.371	.076	.631**
3. Security Management Index	.072	-.054		-.087	-.476*	-.029	.374
4. Design Index	.247*	.378**	-.081		-.003	.229	-.287
5. Crowdedness	.195*	.182*	-.061	.261**		.082	.156
6. Alcohol Management Index	.192*	.250*	-.079	.417**	-.208		-.208
7. Yelp.com Rating (N = 61)	.111	.060	-.013	-.126	.156	-.314**	

¹ One tail significance tests reported; * $p < .05$, and ** $p < .01$.

² Items 3-6 are coded so that increasing score reflect worsening conditions.

with security management; when premises are packed, more visible security are present at the front doors.

Several Yelp.com correlations are of interest. For bars, the strongest inter-item correlation was found between alcohol management and Yelp.com rating (Rho = -.314; $p < .01$); facilities with more lax alcohol management earned higher Yelp.com ratings. Despite the small number of nightclubs observed, Yelp.com ratings were highly correlated with internal crime and disorder issues (Rho = .631, $p < .01$). Though not significant, the moderate relationship between security management and Yelp.com rating is interesting. As premise security weakens, there is a notable improvement in the Yelp.com rating. This suggests patrons desire places with less entrance control. The inverse associations with design and alcohol management hint that extreme crowding and poor alcohol control depress Yelp.com ratings.

RESULTS

Ordinary Least Square regression models for bars and nightclubs are shown in Table 4.³ Three of the four models (one baseline and both final models) were significant despite the small sample sizes. Key differences between bars and nightclubs emerged. Readers should recall that the dependent variable is not the amount of crime and disorder observed, rather, this measure captures the array or mix of crime and disorder present. Higher scores indicate more complex, multifaceted problems. Only the parsimonious model estimates generated by a stepwise regression are discussed below.

Variation in the crime and disorder observed in and around bars was significantly related to poor alcohol control (alcohol management index) and the interaction between Yelp.com rating and crowdedness. Alcohol management is the most important explanatory factor with

a standardized beta coefficient almost double that of the interaction term Yelp.com*crowding. As alcohol control declines, there is a greater range of visible crime and disorder problems. The Yelp.com*crowding interaction term suggests that as both scores increase, ratings are higher and crowding is more extreme, there is a multiplicative increase in the array of crime and disorder issues observed. This model accounts for about 40% of the variance in the dependent variable (adjusted $R^2 = .395$, $F(2, 61) = 20.885$, $p < .001$). Regression diagnostics, a residual plot and the co-linearity tolerance statistic, reveal no major problems with this model.⁴

Two variables proved to be significant predictors of crime and disorder among nightclubs—the design index and crowdedness. Estimates generated by the stepwise regression model suggest that higher levels of crowding are associated with a greater range of crime and disorder problems. This effect is considerably stronger than design flaws. These two variables account for about 65 percent of the variation found in the crime and disorder index (adjusted $R^2 = .650$, $F(2, 11) = 11.199$, $p < .01$). A residual

plot of the crime and disorder index against the studentized residuals indicates that this model was correctly specified. Further, the co-linearity tolerance statistic achieved the required threshold value (value of 1), suggesting that multi-colinearity was not evident.

DISCUSSION

Drawing from the framework of routine activity theory (Cohen and Felson 1979; Eck 1995; Felson 2006), Madensen and colleagues argue that place managers are central to resolving crime problems as they are best positioned to control how places are used and maintained (Madensen and Eck 2008). By establishing behavioral expectations and regulating activity, place managers directly influence how patrons conduct themselves. Evidence suggests that a regulatory approach can be used to change how managers govern specific places, thereby mitigating site-level characteristics that are favorable to crime (e.g., Bichler, Schmerler and Enriquez 2013; Chamard 2006; Hannah, Bichler and Welter 2007).

Table 4. Results of the Ordinary Least Square Regression Models Predicting Crime and Disorder Issues

	BAR PROBLEMS			NIGHTCLUB PROBLEMS		
	β	t	Sig.	β	t	Sig.
<i>Base Model</i>						
Security Management Index	.078	.763	.449	.208	.748	.483
Design Index	.185	1.645	.106	.475	2.247	.066
Crowdedness	.165	1.520	.134	.967	3.287	.017
Alcohol Management Index	.495	4.552	.000	-.210	-.848	.429
Yelp.com Rating	.223	2.192	.033	-.248	-.929	.389
R ² (Adjusted R ²)	.434 (.384)			.763 (.566)		
F (df)	8.589 (61)			3.868 (11)		
<i>Parsimonious Model with Yelp.com Interaction Terms</i>						
Design Index	---	---	---	.425	2.383	.041
Crowdedness	---	---	---	.730	4.089	.003
Alcohol Management Index	.530	5.307	.000	---	---	---
Yelp.com * Crowding	.326	3.261	.002	---	---	---
R ² (Adjusted R ²)	.415 (.395)			.713 (.650)		
F (df)	20.885 (61)			11.199 (11)		

Note: This analysis used stepwise regression to identify the most parsimonious model from all independent variables and all Yelp.com interaction terms. Yelp.com interaction terms were generated by multiple Yelp.com ratings with each of the other explanatory variables. This produced four additional variables. To be retained in the final model, predictors must be significant at the $p < .20$ level. This threshold was selected due to the small sample sizes.

Managing Patron Behavior

Bartenders and security personnel are instrumental place managers and may also act as patron handlers and capable guardians. For instance, in a bar environment where there is little security, the bartender has the role of place manager and will often become a handler to the

regular customers; whereas, in large facilities such as nightclubs, security personnel are essential place managers controlling access to the property, as well as governing behavior within the premise by guarding targets. For this reason, a primary thrust of crime control policy has been on training bar and security staff to effectively diffuse

aggressive behavior (e.g., Graham et al. 2005), holding servers responsible for monitoring alcohol consumption (Felson et al. 1997; Homel 2001; Stockwell 1997), and stipulating protocol to strengthen entrance screening (Anaheim Police Department 2007; Dayton Ohio Police Department 2011; Felson et al. 1997). While confirming the importance of alcohol control, this study draws greater attention to the joint impact of design and crowdedness. Theoretically, this adds additional clarity to what factors contribute to the effectiveness of place management.

Design. As argued by Macintyre and Homel (1997), bad design weakens the effectiveness of management. Architectural guidelines for licensed premises should stipulate criteria for: restroom placement, separating bars and dance floor areas from passageways (through ways and building egress points), increasing visibility/vantage from bar areas (e.g., elevation of the bar, sightlines from bars and entrances), increasing the minimum distances between designated entrances and exits, widening passage ways, and ensuring that capacity is based on usable space. City planning guidelines can also stipulate what constitutes a suitable property for redevelopment into a bar or nightclub.

Crowdedness. Consistent with prior research, the interior layout of facilities is a critical correlate to crime and disorder (e.g., Eck et al. 2009; Macintyre and Homel 1997). Expanding on Macintyre and Homel (1997), even the most rigorous staff training is useless when places are over-packed. The control function exerted by staff deteriorates when threshold capacity is reached and interior design flaws exist. Communication among staff will fail when premises are busy. For instance, alcohol serving policies are ineffective when multiple bars and/or several bartenders are in use. Place management may be strengthened by developing appropriate staff-to-patron ratios to guide employee levels. Arguably, there is an important crime-control role to be played by fire marshals, perhaps ahead of alcohol licensing regulators; the calculations used to identify maximum capacity for facilities should place greater emphasis on usable space.⁵

Premise Notoriety

This study offers the first investigation into the link between internet-based social media and crime problems affecting alcohol-serving establishments; higher Yelp.com ratings were associated with a greater variety of bar crime and disorder problems, particularly when facilities are crowded. This illustrates the potential for using informal communications to single out specific places that enable deviant minded patrons to converge. Social media offers a unique method of identifying properties that are more apt to be serious crime generators. This may be another way of

identifying the 20% of properties associated with 80% of the problems.

Integrating an internet-based indicator into the investigation of inebriation settings will aid efforts to identify emerging situations that are indicative of illicit behavior. These findings suggest that bars with high crime and disorder issues may attract a clientele interested in deviance (Homel et al. 1999). Patrons actively seek environments with permissive management. This provides additional support for Madensen and Eck's call to keep a closer tab on promotions and marketing, themes, and special events (Madensen and Eck 2008).

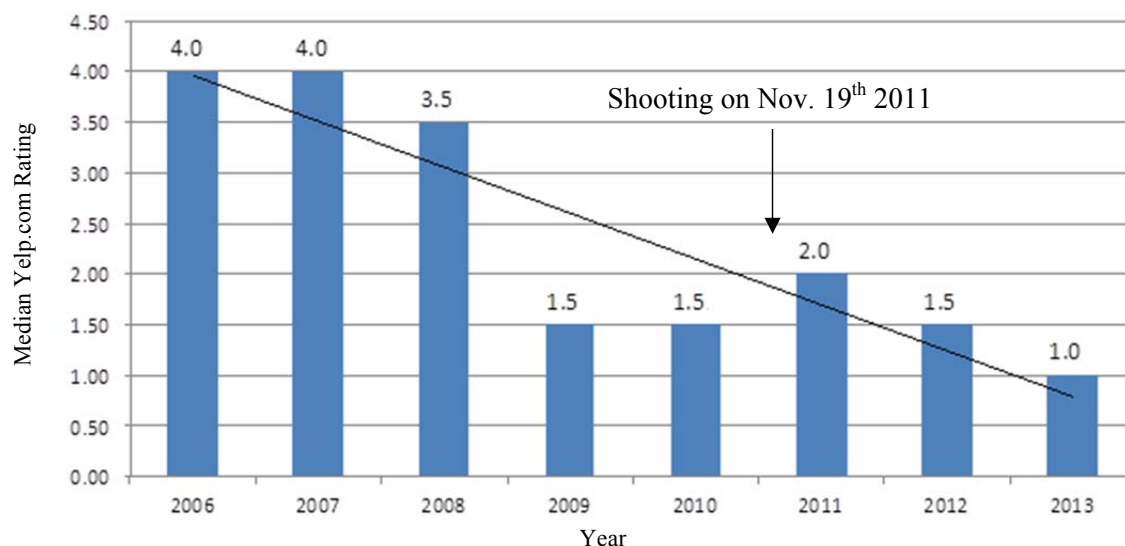
A Barometer of Change

Since the popularity of drinking facilities can change quickly, future research should explore whether monitoring Yelp.com ratings over time could be used to capture emerging trends in the nighttime economy that predate recorded crime data. Yelp.com ratings can provide an indication of a change in business focus/activity that signals an unraveling of place management—a slide from a suppressor or reactor into more criminogenic style of management. Where public use of Yelp.com and similar media are highly enmeshed into the drinking culture, emerging crime issues will be reflected in online postings before they are picked-up by traditional crime and disorder indicators (i.e., calls for service). Thus, Yelp.com may act as a barometer of management style that can be easily and regularly monitored.

Returning to our example, examining Charlie Jewells' reviews uncovers an overall decrease in the median rating (see Figure 2). Reviews from 2006 show a median score of 4. The ratings decline steadily to a median score of 1 in 2013. Clearly, something changed from 2008 to 2009 that generated a measurable shift in ratings. Future research should examine the relationship between changing yelp rating and the emergence of crime problems with a longitudinal research design. It is plausible that varying patterns, such as an improvement in scores compared with a decline in ratings, signal the onset of dissimilar crime issues.

Another useful feature of Yelp.com ratings is that reviewers indicate their city of residence. While 49% of the reviews were offered from people claiming to be from Redlands, CA, residents from 23 other cities posted reviews, some from as far away as San Diego, CA and Las Vegas, NV (see Table 5). The increase of patronage from individuals living at a fair driving distance from the site may also be indicative of emerging problems. By 2011, the site had become an inter-regional magnet for crime and disorder.

Figure 2. Median Yelp.com Ratings by Year for Charlie Jewells' Bar (47 ratings)



Until additional research confirms the importance of Yelp.com ratings, direct policy implications are premature. With this said, a potential policy direction is to work with Yelp.com administrators to develop a feature that will alert the registered owners, liquor licensing board, city code enforcement, and local law enforcement, that the nature of comments and ratings have changed significantly; indicating that something may be amiss. This public notification feature may be used to trigger inquiries. Once

alerted about the change in the reported temperament of a place, crime analysts could investigate and monitor calls-for-service. Properties exhibiting dramatic changes in reviewer rating, tone of comments, or geographic range of the patrons may then be tagged for additional police attention. Given the nature of comments, local authorities have greater information upon which to consult when determining a course of action.

Table 5. City of Residence Reported by Reviewers that Rated Charlie Jewells'

CITY OF RESIDENCE	2006	2007	2008	2009	2010	2011*	2012	2013	TOTAL
<i>Local Patron</i>									
Same City	--	--	--	5	--	6	--	3	14
From an adjacent city	--	--	--	--	--	6	1	1	8
<i>Out of Towner</i>									
From a city in the region	--	--	1	1	--	3	1	1	7
Lives in another county (less than 2 hour drive)	--	1	1	2	1	5	3	--	13
<i>Too Distant</i>									
From Northern CA	--	--	--	--	1	--	1	--	2
From another state	1	--	--	--	--	1	--	1	3
Annual Total	1	1	2	8	2	21	6	6	47

* November 2011 shooting at the premise.

It should be noted that currently, there are two potential issues with relying on informal communications for information about the character of places, missing data and self-promotion. Within this study, missing data was more acute for establishments targeting Latinos. This

could be reflective of a cultural difference in the use of internet-communications. Subsequent investigation of these missing data determined that the premises were posted on Facebook. Showing that the bar and club-going population is well versed in social media. However, since

Yelp.com entries are generated by customers, it is clear that with such a high level of missing data for Latino facilities, this population is not using Yelp.com. Perhaps, the Latino club and bar-going population could be encouraged through University and College settings that their opinions matter and should be included in this public forum.

Self-promotion on social media by bar and nightclub management is inevitable. Fortunately, Yelp.com uses a screening process to remove overly-biased postings that appear to be invalid, and likely the result of self-promotion or slander. Other social media administrators are less active in screening posts. For instance, many visitors to Facebook must complain about obscene or derogatory posts before administrators act to remove offensive comments. Therefore, educating the public about the biases inherent to social media, by encouraging them to participate in more systematic and consumer-based sites, will strengthen information internet-communications.

Encouraging Effective Management

Once risky facilities are identified, a course of action is needed to deal with irresponsible management. One strategy shown to be effective in dealing with irresponsible management is to use civil liability mechanisms and interagency inspection teams. Representation for each agency should include individuals with the ability to enforce their respective codes and regulations (Green 1995). Site inspections typically result in a list of specific items that require amendment. Though not described as such when enacted, this third-party approach using civil regulation may constitute a means-based method of crime control (Eck and Eck 2012; Farrell and Roman 2006).

A means-based approach requires civil authorities to stipulate exactly what managers must do to reduce crime, this means, crime control activity is prescribed. The success of means-based strategies rests on identifying the correct factors that promote crime and disorder problems (Eck and Eck 2012). Moreover, one must properly identify the specific situational and behavioral characteristics requiring redirection for each type of alcohol-serving establishment (Eck 2003). Studies have found that pressuring businesses to adopt uniform pricing and enforce maximum occupancy impedes bar hopping within an entertainment district and reduces excessive public intoxication (Homel et al. 1997). However, despite a large body of research investigating the correlates of bar and nightclub problems, the specific means for reducing crime remains unclear. As suggested by this study's findings, site inspections of nightclubs need to look for overcrowdedness, described as people crammed wall-to-wall, causing discomfort and impeding movement, as well as poor restroom placement and restricted sightlines of bar and security staff. The exact configuration needed to reduce crime and disorder issues is not established.

Repeated time-lapse analyses comparing different floor plans are needed to develop clear and effective design guidelines.

A second strategy is to use an ends-based performance standard (as described by Eck and Eck 2012). For example, the Chula Vista Police Department enacted a performance-based standard for all motels (Bichler, Schmerler and Enriquez 2013). This ordinance required motel operators to apply for a conditional operating permit that was awarded based on maintaining a crime rate below the city average. While advice was offered as to how to reduce crime, owners were responsible for identifying, developing, and implementing crime control strategies. This effectively redirected responsibility for controlling problems to the owners.

The challenges posed by using ends-based policies are to establish reasonable performance expectations and build the appropriate regulatory mechanisms to force compliance. The success of this strategy rests on accurate information about the nature and prevalence of current crime and disorder levels at each premise. Adding a measure of public scrutiny that is independent of official measures of deviance (i.e., calls-for-service and crime reports) would provide a counter-measure to police controlled data. Alternatively, public reviews may be utilized as additional evidence during civil regulatory actions, i.e., nuisance abatement proceedings to escalate sanctions against uncooperative managers.

Common to both strategies is to eliminate the *opportunity* for bad behavior, instead of simply dealing with each incident as an isolated event (Eck and Eck 2012). Management needs to be made responsible for the criminal and disorderly behavior occurring at their facilities. To advance this line of inquiry, evaluative research is needed to determine whether prescribing crime control measures or the requirement of management-initiated solutions is better at fostering responsible place management.

STUDY LIMITATIONS

Several caveats must be acknowledged. First, the dependent variable lumped several different types of crime and disorder problems into a single, summative index. Aggregating data in this way prevents us from determining exactly which crime or disorder problem serves to increase Yelp.com ratings. Do bar patrons prefer facilities wherein the bartenders drink while on duty, or do they prefer locations with active illicit drug markets? To resolve this problem, future research could investigate the association between Yelp.com ratings and different crime and disorder issues.

As discussed previously, a substantial drop in sample size was caused by missing data associated with Yelp.com ratings. In addition to the loss of Latino-oriented facilities, this limitation substantially decreased the nightclub sample

size. With only 11 premises left for the multivariate analysis, there really was not sufficient power to explore all of the covariates (5 explanatory variables and 4 interaction terms). Using a stepwise regression helped to tease out the important predictors, however, future research should consider either adopting a panel design or increasing the sample size.

In addition, this study only used a single Yelp.com rating—the average rating across all posted reviews. This value does not reflect the variation in scores, nor does it show how ratings change over time. As raised earlier, more information about the character of a place can be ascertained by capturing the change in scores. Further, Yelp.com ratings have accompanying text-based comments. Combing through these comments for the example bar, Charlie Jewell's revealed a dramatic shift in the types of patrons, patron expectations and behavior, staff behavior, noise level, and other characteristics of the premise. In addition, details about the reviewer are also available. The richness of these narratives could be harnessed to generate several different measures of premise notoriety. For example, recording the cities of residence and calculating the average distance traveled by reviewers to reach the rated facility could be used to capture place magnetism. Regional hubs, drawing people from great distances, are likely to generate more complex crime and disorder problems. The advantage of harvesting from the comments is that in addition to testing specific hypotheses about what types of notoriety are associated with specific crime and disorder problems, we might discover that bars and nightclubs serve very different functions. Thus, Yelp.com ratings might reflect different characteristics and issues.

Finally, cross-sectional research offers the advantage of capturing information for a large sample. This increases the external generalizability of the findings. However, much can be gained from longitudinal and ethnographic research. Repeated observations would better capture the behavioral dynamics causing crime and disorder issues. For example, using extended participant observations, Fox and Sobol (2000) were able to document how micro-shifts in patron activity interact with changes in bouncer and bartender guardianship to generate crime opportunities. Offenders were observed to capitalize on temporally-constrained opportunities as they emerged. Future research should consider merging both perspectives into a panel design wherein a small subset of facilities are studied repeatedly.

CONCLUSION

Bars and nightclubs are crime-generating environments, susceptible to a wide range of crime and disorder issues (Brantingham and Brantingham 2003). Overall, this study identified two robust indicators of crime

problems in bars and nightclubs: place management and Yelp.com ratings.

These results provide support for arguments suggesting that redesigning problem locations can significantly reduce crime and disorder (Felson et al. 1996). Elements such as dark corners and isolated restrooms can create favorable situations for drug use and sexual assault. Additional design features that need to be addressed in troublesome properties are patron traffic and congestion. Ensuring that there are proper walking areas for patrons will limit the amount of confrontations among individuals that may become volatile with excessive alcohol consumption.

Place managers need to be held accountable for the activity that is occurring within their establishments. These individuals can be bartenders, security, on site managers, and owners of the property. When a place manager chooses to be passive or act as an enabler of crime and disorder, they can be referred to as pollutants within a community (Eck and Eck 2012; Farrell and Roman 2006; Madensen and Eck 2008). Ends-based regulatory policy can encourage owners and managers to control activity on their property with an award system, similar to a health inspector's sign that is hung in the front window (Derbyshire Constabulary 2002) or civil-based penalty akin to the Chula Vista permit-to-operate ordinance (Bichler, Schmerler and Enriquez 2013).

Yelp.com ratings can be used for investigative purposes to monitor facilities that may become problem places in the future. This previously untapped resource is only effective when patrons actively review facilities. The absence of ratings for Hispanic clubs and bars may signal a cultural difference in rating habits. Future studies should incorporate a broader array of social media venues and investigate other features of Yelp.com data.

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Notes

¹ To avoid attention, researchers coordinated their dress according to the type of bar or nightclub visited. Food and no more than one alcoholic beverage could be purchased in order to blend into the clientele; consumption of alcohol was permitted by accompanying persons (non-research staff).

² The IRB committee required researchers to park away from sites in order to decrease the possibility of encountering a drunken driver.

³ Due to the highly skewed nature of the dependent variables used, a logistic regression analysis was conducted. The logistic regression for nightclubs, Nagelkerke R² of .284 suggests that a model with all independent variables (excluding interaction terms) adequately accounts for variation in observed crime and disorder levels. Crowdedness and Yelp rating figured prominently. High crowdedness scores are 6.4 times more likely to be associated with observed crime and disorder. Higher Yelp ratings are associated with a significant decline in the odds of observing crime and disorder problems. Among bars, the Nagelkerke R² of .325 suggests a reasonable model fit. Design and alcohol control substantively increased the odds of observing crime and disorder (Exp 1.8 and 1.2 respectively). Better security management was associated with significantly reduced odds of trouble. However, the crowdedness variable did not work in this mode and led the researchers to question the stability of the logistic regression. Since the purpose was to compare bars and nightclubs the two models used must be stable. Further, reducing the dependent variable to a simple dichotomy lost too much of the variation we sought to explain; the purpose of the study was to account for why some facilities are more risky than others. For these reasons, the OLS regression was preferred.

⁴ A residual plot of the dependent variable against the studentized residuals shows a slight patterning. Lower scores on the dependent variable tend to exhibit lower residuals; whereas, higher scores are slightly more associated with positive residuals.

⁵ For example, in California, capacity is calculated by dividing the square footage of public area by a predetermine value depending on the type of use. When considering areas without fixed seating the area open to public use would be divided by 5 (i.e., dance floors), for seated areas the square footage is divided by a factor of 7, and for areas with tables and chairs the factor is 15 (California Building Standards Commission 2010).

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APPENDIX A. Table of the Data Collection Instrument for Bars

Security Management Index (Non-weighted)	Description	Value
In and outs allowed?	Are patrons allowed to move in and out of the premises without restriction?	Yes/No
Control of parking	Is there parking staff or roving security patrolling the parking area of the establishment?	Yes/No
Uniformed door staff visible & active?	Is the door staff visible and uniformed?	Yes/No
ID check at the door?	Does door staff check ID at the entrance to the establishment?	Yes/No
ID Authenticity Check?	How does staff check ID authenticity?	Scanner/ Manual/Light
Capacity Placard present/visible?	Is the capacity placard visible without anything obstructing it from view?	Yes/No
Indoor security present/visible?	Is the indoor security present or visible inside the nightclub?	Yes/No
Indoor security uniformed?	Is indoor security uniformed and distinguishable?	Yes/No
Scale Range 0-11 (High score = Weak management presence)		
Design Index (Non-weighted)		
Rear alley/service area accessibility to property	Is the rear alley or service area easily accessible; meaning, are people allowed to freely walk through or across the alley way?	Secure/Could Lock/ Obstructed/ Open
Male Toilet Isolated?	Is the male toilet isolated from the main bar area?	Yes/No
Female Toilet Isolated?	Is the female toilet isolated from the main bar area?	Yes/No
Can you hear the music outside?	Is the music audible and easily heard from the outside of the club?	Yes/No
Is there smoking allowed just outside the door?	Is smoking allowed outside any door that leads into the bar establishment?	Yes/No
Adequate Seating?	Is there adequate seating for the amount of people allowed to be in the establishment (Patron Capacity)?	Yes/No
Scale Range 0-6 (High score = problematic design)		
Crowdedness		
How crowded is the facility?	How do you feel inside the bar, comfortable, tight, or wall-to-wall? (Ordinal)	Comfortable/ Tight/ Wall-to-Wall
Scale Range 0-3 (High score = Establishment is crowded)		
Alcohol Management (Non-weighted)		
Wait to order drinks?	Is there a wait to order drinks, in other words, is it easy to get served?	Yes/No
Drunk patron served?	Is there any drunk patrons being served alcohol?	Yes/No
Hard liquor bottles in reach (bar)?	Are there any bottles of alcohol within patron's reach at the bar?	Yes/No
Bar staff seen drinking alcohol?	Are any employees consuming alcohol while working?	Yes/No
Drinks served in beer bottles?	Are the drinks served in beer bottles (Glass)?	Yes/No
Special promotions & Activities?	Are there currently any special promotions or activities offered inside the bar?	Timed Drink Specials/ Provocative Activities
Scale Range 0-7 (High score = Poor alcohol management)		
Yelp Ratings (Dependent Variable)		
Yelp Ratings obtained from website	According to Yelp.com, what is the yelp score for each respective establishments?	0-5
Scale Range 0-5 (High score = High reviewer ratings)		

APPENDIX B. Table of the Data Collection Instrument for Nightclubs

Security Management Index (Non-weighted)	Description	Value
In and outs allowed?	Are patrons allowed to move in and out of the premises without restriction?	Yes/No
Control of parking	Is there parking staff or roving security patrolling the parking area of the establishment?	Yes/No
Uniformed door staff visible & active?	Is the door staff visible and uniformed?	Yes/No
ID check at the door?	Does door staff check ID at the entrance to the establishment?	Yes/No
ID Authenticity Check?	How does staff check ID authenticity?	Scanner/ Manual/Light
Male pat downs at the door?	Does door staff conduct Male pat downs before entry to establishment?	Yes/No
Female pat downs at the door?	Does door staff conduct Female pat downs before entry to establishment?	Yes/No
Indoor security present/visible?	Is indoor security present or visible inside the nightclub?	Yes/No
Indoor security uniformed?	Is indoor security uniformed and distinguishable?	Yes/No
Scale Range 0-11 (High score = Weak management presence)		
Design Index (Non-weighted)		
Rear alley/service area accessibility to property	Is the rear alley or service area easily accessible; meaning, are people allowed to freely walk through or across the alley way?	Secure/Could Lock/ Obstructed/ Open
Male Toilet Isolated?	Is the male toilet isolated from the main club area?	Yes/No
Female Toilet Isolated?	Is the female toilet isolated from the main club area?	Yes/No
Can you hear the music outside?	Is the music audible and easily heard from outside of the club?	Yes/No
Is there smoking allowed just outside the door?	Is smoking allowed outside any door leading into the nightclub establishment?	Yes/No
Scale Range 0-5 (High score = problematic design)		
Crowdedness		
How crowded is the facility?	How do you feel inside the nightclub, comfortable, tight, or wall-to-wall? (Ordinal)	Comfortable/ Tight/ Wall-to-Wall
Scale Range 0-3 (High score = Establishment is crowded)		
Alcohol Management (Non-weighted)		
Drinks served in beer bottles?	Are the drinks served in beer bottles (Glass)?	Yes/No
Bar staff seen drinking alcohol?	Are any employees consuming alcohol while working?	Yes/No
Drunk patron served?	Are bar staff serving alcohol to drunk patrons?	Yes/No
Hard liquor bottles in reach (bar)?	Are there any bottles of alcohol within patron's reach at the bar?	Yes/No
Identifiable bar staff (i.e. uniform)?	Are the bar staff easily identifiable? (Ex. Uniforms)	Yes/No
Provocative staff attire (bar/wait)?	Is bar staff, waiters, or waitresses wearing provocative attire?	Yes/No
Special promotions & services?	Are there currently any special promotions or services?	Timed Drink Specials and/or General Drink Specials
Scale Range 0-8 (High score = Poor alcohol management)		
Yelp Ratings (Dependent Variable)		
Yelp Ratings obtained from website	According to Yelp.com, what is the yelp score for each respective establishments?	0-5
Scale Range 0-5 (High score = High reviewer ratings)		

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Controlling Crime and Disorder in Rental Properties: The Perspective of the Rental Property Manager

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Abstract: *A rental property manager is expected to fulfill a central role in third-party policing programs. Despite the growing implementation of third-party policing programs, little evaluative evidence exists on these programs, let alone the perspective of the third party who is expected to fulfill a regulatory or enforcement function. This research presents the findings of a mail survey administered to rental property managers who were expected to assume a third-party policing role under a newly enacted nuisance rental property ordinance in State College, PA. The survey focused on identifying the rental property management techniques that would impact crime and disorder and also gathered general opinions on the ordinance. The survey was conducted in conjunction with a legal impact study which found that the ordinance was very successful in reducing crime and disorder in nuisance rental properties. The survey found that the majority of rental property managers have a desire and are willing to assist in crime prevention and control, although need direction from the police on how to fulfill this role.*

Keywords: civil remedies for crime control, crime prevention, private justice, third-party policing

INTRODUCTION

It has long been recognized that modern societies rely on systems of private justice (Henry 1994) or non-state mechanisms of social control to prevent, police, or otherwise reduce or punish deviance or law violations by members who are involved in various institutional settings. These settings include workplaces (Henry 1983), shopping malls (Manzo 2005), schools, universities, and housing complexes, and self-help and mutual aid groups. The present paper reports on a study of the third-party policing (Buerger and Mazerolle 1998; Desmond and Valdez 2013; Mazerolle and Buerger 2005) of rental properties in a college town and focuses on the social control mechanisms and perceptions of the rental property manager.

State College Borough is located in central Pennsylvania. State College is often associated with being home to the Pennsylvania State University. Penn State is the largest university in Pennsylvania, and the 11th largest in the United States with approximately 44,000 students

(University Budget Office n.d.). Conversely, State College Borough is only four square miles; however, it is the most populated borough in Pennsylvania with 39,898 residents. State College Borough geographically surrounds Penn State University. Approximately 19,000 Borough residents are Penn State students, most of who live in rental housing (State College Police Department Records Management n.d.). Consistent with the social disorganization literature (Kubrin and Weitzer 2003; Sampson and Groves 1989), there is a high correlation between rentals and crime in State College. Crime maps that overlay rental density and crime density in State College show that the majority of indoor and outdoor crimes occur in and around rentals (State College Police Department Records Management n.d.). Additionally, since at least 1970, there has been a disproportionate and growing number of rental units in State College Borough, and this trend has continued to the present day (2013) with nearly 80% (9,717) of all housing units in State College Borough designated as renter-

occupied (State College Police Department Records Management n.d.).

In response to the data and perceived high correlation between crime and rentals, the growing complaints at the neighborhood level regarding quality of life issues, outward migration, and diminishing resources, the State College Borough Council revised their Nuisance Rental Property Ordinance in November, 2004 (State College Police Department Records Management n.d.). Ordinances such as this normally involve civil penalties and have been used or created throughout the United States when criminal laws have been ineffective at addressing a variety of issues ranging from neighborhood quality of life issues to domestic violence protection orders (Mazerolle and Roehl 1998). The revision to the State College Nuisance Rental Property Ordinance allows for suspension of rental permits for continued criminal activity. The revision of the nuisance rental ordinance is directed at the rental property managers and essentially holds them accountable for crime occurring on the property, with the threat of rental permit suspension, thereby not allowing the property to be rented. This practice is known as “third-party policing,” which is part of the growing trend of using civil remedies for crime prevention and crime control (Mazerolle and Ransley 2005). Briefly defined, third-party policing is, “police insistence of involvement of non-offending third parties (usually place managers) to control criminal and disorderly behavior, creating a *de facto* new element of public duty” (Buerger and Mazerolle 1998:301). As stated earlier, very little research has been conducted on third party policing programs, and even less on the party expected to fulfill the third party policing role. The purpose of this research is to examine the attitudes and practices of rental property managers in a third party policing role.

LITERATURE REVIEW

Third-Party Policing

Third-party policing can be applied very formally as with the State College Nuisance Property Ordinance, which is specifically aimed at property managers, or third-party policing can be more of an ad hoc undertaking where the police coerce business owners, property managers, or other parties who have some real or perceived control (Mazerolle and Ransley 2005). Third-party policing can also be initiated by neighborhood groups such as the Office of Neighborhood Associations in Portland, OR that helped enact a municipal drug-house ordinance allowing the city to impose civil penalties on the property owner in situations where drug dealing had occurred on the property (Davis and Lurigio 1996). Whether third-party policing is an informal or formal endeavor, or initiated by the government or community group, there is one consistent feature, which is referred to as the “legal lever” (Mazerolle and Ransley 2005). The “legal lever” provides any level of

government with the legal basis to coerce the third party to change the routine activities of the tenants (Mazerolle and Ransley 2005). In State College, the legal lever is the Nuisance Rental Property Ordinance. The threat of accumulating negative points, that is part of the Ordinance, and subsequently potentially having rental permit suspension for six to twelve months, would result in substantial monetary loss to the property manager. And so the assumption, from a rational choice model of human nature, is that property managers will work to ensure compliance.

Rental Property Manager Perspective

As stated earlier, the rental property manager is expected to fulfill a central role in third-party policing programs that focus on crime in rental properties. Little evaluative research has been completed on third-party policing programs, and even less has gathered the key perspective of the rental property manager. The following two studies focus on the rental property manager and provide valuable insight to their role and attitudes about the third-party policing programs.

A 1992 study of rental property managers across five cities (Alexandria, VA, Houston, TX, Milwaukee, MN, San Francisco, CA, and Toledo, OH) that have some version of a nuisance property ordinance was conducted to determine the managers’ attitudes and responses to being the target of these programs (Smith and Davis 1998). The sample for this present study consisted of four or five rental property managers from each of the five sites listed above; this resulted in a total of 22 interviewees. The study was conducted using telephone interviews that consisted of several open and closed ended questions related to the opinion of the rental property manager regarding the nuisance property ordinance and the actions they have taken as a result of it. The study found that the rental property managers were in favor of removing drug dealers from their properties. In fact, half of the rental property managers were those who reported the drug dealing to the police in the first place (Smith and Davis 1998). The property managers also reported that they were concerned about the abatement notices they received because they were worded in such a way that it sounded as if the managers were responsible and /or profiting from the drug dealers living in their apartments. The property managers also expressed a concern for retaliatory actions from evicted tenants. Out of the sample of 22, one case involving a physical assault on a rental property manager was reported. Finally, the rental property managers expressed a concern for innocent people, often family members of the drug dealers, having to move out as a result of the eviction notices.

A larger study of Cook County Rental Property Managers in 1993 showed some differences from the above referenced study (Smith and Davis 1998). First, the

rental property managers reported that tenants receiving eviction notices were more likely to resist the eviction than in the previous study. Half of the tenants refused to move out after receiving an eviction notice, and over a third (36%) appealed the eviction in court. With regard to retaliatory actions by evicted tenants, 18% of the tenants threatened the rental property manager and 8% damaged their property. In both studies, the rental property managers reported that they changed their rental management practices as a result of pressure from the local government, and believed that their actions reduced crime at their rental properties. Both of these studies suggest that rental property managers have the ability to prevent and control crime.

STATE COLLEGE NUISANCE RENTAL PROPERTY ORDINANCE

The 2004 revision to the State College Nuisance Rental Property Ordinance created a point system for certain local/ordinance and criminal violations occurring at rentals in State College Borough. The point system is maintained by the State College Borough Department of Health. The points assigned to a rental permit vary based on the severity of the offense. The following local/ordinance violations are one point violations: refuse; sidewalk obstruction; grass and weeds; and dogs. Two point violations are: disorderly conduct; alcohol possession or consumption by a minor; drug possession; simple assault; harassment; open lewdness; and indecent exposure. Three point violations are: furnishing alcohol to a minor; aggravated assault; rape; statutory sexual assault; involuntary deviate sexual intercourse; sexual assault; aggravated indecent assault; and possession with intent to deliver controlled substances. Points accumulate on the date of the offense and are removed one year after being assessed. Points can also be removed if the accused is found not guilty. Additionally, the maximum number of points that can accumulate in a 24 hour period is three. When complaints are made by the property manager or tenants of the premises that result in prosecution against another person at the rental, these violations are excluded and points are not assigned. A Nuisance Rental Property Report, including the rental address, specific violations, and points assessed, is updated weekly and available online, or by telephone, to property managers. Upon accumulation of five points, the rental property manager receives written notice indicating that the rental has five points, that it is creating a nuisance in the neighborhood, and that the property manager shall submit a written correction plan within 30 days of notification to the Borough identifying how the ongoing problems will be addressed, e.g., eviction, meeting with tenants. If the property manager fails to submit a written correction plan and the rental subsequently accumulates 10 points, then a rental permit suspension is more likely. Upon

accumulation of 10 points, the rental permit may be suspended for six months to one year, at the end of the current lease. A rental permit in suspension causes the corresponding rental to be ineligible for rental, resulting in significant pecuniary loss to the property owner.

Prior to discussing the survey responses and perspective of the rental property managers, it is important to note that the survey was completed in conjunction with a legal impact study of the Ordinance. Briefly, the legal impact study employed an interrupted time series design and examined five years of pre-Ordinance nuisance rental crime data against five years of post-Ordinance rental crime data. Also, the study included a non-equivalent dependent variable that examined all crime in State College exclusive of rentals during the same ten year time period. In the five years after the Ordinance was enacted, crime in nuisance rental properties decreased by 55%, while the general crime rate outside of rentals in State College increased by approximately 8%. The Ordinance was found to be successful in reducing crime in nuisance rental properties.

CURRENT STUDY

A survey was mailed to all 769 State College Rental Property Managers who manage the 9,717 permitted rental properties in State College. The first mailing occurred on March 28th 2011, and a second mailing occurred approximately four weeks later on April 22nd, 2011, with the final surveys collected on May, 19th, 2011. Of the surveys actually delivered (n = 743) a total of 254 were returned through the two mailings, resulting in a 34% response rate.

Survey Responses

The survey consisted of 13 questions and a final section allowing the respondent to add additional comments. The first question on the survey inquired about the length of time (in years) that the rental property manager had managed a rental in State College Borough. The range for this response was one year through 43 years, the mean was 14 years, the median was 11 years, and the mode was 10 years.

The second question asked the rental property manager about the financial importance of keeping their rental(s) occupied. The penalty under the Ordinance is rental permit suspension which would result in loss of revenue from rent. The purpose of this question was to determine how important it is to rental property managers to maintain their rental permit and draw revenue from the rental. If the rental property managers rate the financial aspect as important, the general proposition is that they would do more, or at least enough, to keep violations from occurring at their rental unit(s). Not surprisingly, an overwhelming majority (82.1%) of respondents consider

the occupancy and revenue from rent to be “very important.” A much smaller percentage (14.2%), rated this as “somewhat important,” and approximately 3% of respondents rated keeping their rental unit occupied as “not important.” These responses provide some empirical support that the penalty under the Ordinance is focused in an area that is important to most rental property managers. Based on this, one could assume that the threat of rental permit suspension could encourage a rental property manager to assume more responsibility for crime(s) at their rentals.

Question three inquired whether potential tenants were required to complete an application. Over half (62.6%, $n = 159$) of the respondents required an application. Ideally, the number of rental property managers who require an application should be higher. This is a critical point for preventing crime at rental properties as potential problem tenants can be screened out. The participants who responded that they did require an application were then asked to indicate if factors such as a criminal history, negative reference from previous landlord, and/or other factors would disqualify the potential tenant. Of the 159 who required an application, 61% ($n = 97$) would disqualify an applicant for having a criminal history. A much higher percentage (86%, $n = 138$) would disqualify an applicant for a negative reference from a previous landlord. The final category, “other,” allowed space for the rental property manager to specify. A little less than half (45%, $n = 72$) checked this and all who checked it indicated “credit” or “poor credit” as the reason for disqualifying a potential tenant. Again, in order for the rental property manager to fulfill their third-party policing role, tenants with a criminal history, negative reference from a previous landlord, and/or poor credit should likely be eliminated as a potential applicant.

Question four inquired if a co-signer was required on the lease and if that co-signer was contacted if the tenant broke a provision of the lease. One-third ($n = 85$) of the rental property managers required a cosigner and slightly less ($n = 76$) contacted the cosigner in the event of the tenant breaking a provision of the lease. A co-signer can serve in assisting the rental property manager in controlling the behavior of the tenant(s). For example, in State College, many student renters would likely have their parents as a co-signer. The parents could be contacted in the event of behavior that violates the lease. A co-signer may not always have a high level of emotional attachment such as a parental figure; however they are, at a minimum, financially tied to the lease as well and could suffer loss if the tenant fails to abide by the lease. If more rental property managers required co-signers and subsequently made contact with them when tenants were in violation of the lease this practice would provide the rental property manager with another tool to prevent and control violations at the rental property.

Question five inquired about how often the rental property manager visited the rental unit. A little less than one third (29.2%, $n = 76$) reported a weekly visit to the rental, about a quarter (23.2%, $n = 59$) visited monthly, 36.6% ($n = 93$) reported a visit once every few months, 6.3% ($n = 16$) reported a visit once per year, and 3.9% ($n = 10$) reported that they never visited the rental unit. In order to fulfill a crime prevention and control role, the rental property managers need to be making more frequent checks of the rental unit(s). Visiting once a week or month is acceptable, although the number of checks would largely depend on the type of tenants and their behavior. For example, problematic tenants would require the rental property manager to make more frequent checks of the rental.

Question six asked about how often a full inspection of the rental was completed (not including the end of the lease inspection). About 40% ($n = 101$) reported conducting a full inspection at least twice per year, one third ($n = 84$) reported an annual inspection, 14.2% ($n = 36$) reported conducting an inspection less than once per year, and 13% ($n = 33$) reported that they never conducted a full inspection of the rental. Conducting announced inspections of the rental allows for the rental property manager to be aware of criminal activity and/or violations of the lease. Examples could include drug dealing and manufacturing, excessive partying, and unauthorized tenants. It also allows for the rental property manager to make sure that the interior of the rental is being cared for properly.

Questions seven through eleven dealt directly with the Ordinance’s point system and were the only questions on the survey that mention the point system. Question seven asked the rental property manager about their level of familiarity with the State College Nuisance Rental Property Ordinance and provided a Likert scale from 1 (Not at all Familiar) through 5 (Extremely Familiar). The following are the responses for each: 1 (19.3 %, $n = 49$); 2 (15.4%, $n = 39$); 3 (24%, $n = 61$); 4 (23.6%, $n = 60$); and 5 (17.7%, $n = 45$). The fact that one third is not very familiar and a quarter is only moderately familiar with the Ordinance is surprising, especially considering the reported financial significance of maintaining a rental. This raises the question or issue of how much an impact the Ordinance can have if the targeted rental property managers are unaware of the Ordinance and the consequences of violating it.

Question eight asked the rental property manager how often they checked the Nuisance Rental Property Point System. As a reminder, the list of rental properties with points is updated weekly and available online, by phone, or in person. Very few (2.4%, $n = 6$) reported checking the list weekly. Only about 5% ($n = 12$) check it monthly, 8.7% ($n = 22$) reported checking it once every few months, 6.7% ($n = 17$) check it once a year, and a large majority (77.6%, $n = 197$) reported that they never check the

Nuisance Rental Property Point System for points assigned. The low frequency of checks for points is not surprising based on the low level of familiarity as reported in the previous questions, however it is very important that the rental property manager is both familiar with the Ordinance and knows if their rental has points so that action can be taken.

Question nine asked the rental property manager if they informed new tenants of the Ordinance and if they informed them of the specific violations listed in the Ordinance that would result in point assignment. Two-thirds (66.9%, $n = 170$), reported that they do not inform tenants of the Ordinance. Of the 84 (32.4%) rental property managers who do inform tenants about the Ordinance, 53 (63%) notify the tenants about the specific violations that result in point accumulation. The lack of knowledge of the Ordinance by the rental property managers has an impact here as well. The lack of notification to the majority of tenants raises the same issue as the rental property managers not being aware of it, or the consequences.

Question ten asked the rental property manager if their lease prohibited the tenant from committing the offenses listed in the State College Nuisance Rental Property Ordinance. A little over half (51.6%, $n = 131$) of the rental property managers reported that their lease does contain these regulations. One could reasonably assume that most leases would include this provision, although the lack of rental property management knowledge precludes it.

Question eleven asked if the rental property manager contacted the tenant(s) for violations that resulted in point accumulation and if the rental property manager contacted them, the nature (verbal, fine, threat of eviction, other) of the contact that was requested. A little less than half (44.5%, $n = 113$) reported contact with the tenant for violations resulting in point accumulation. Of the 113 rental property managers who contacted the tenant, about three-quarters (74.3%, $n = 84$) gave the tenant a verbal warning, 44 (38.9%) assessed a fine to the tenant, 65 (57.5%) threatened eviction, and 32 (28.3%) reported some other action. The rental property managers who contact tenants for point violations are beginning to fulfill their role under third-party policing with verbal warnings, fines, and the threat of eviction, although there is room for improvement of these rates as these control practices are the main leverage points for the rental property manager in controlling tenant behavior.

Questions twelve and thirteen inquired about the rental property manager's attitude toward their third-party policing role. Both questions asked the rental property manager to state their level of agreement on a five point Likert scale of 1 (Strongly Disagree) through 5 (Strongly Agree). Question/statement twelve inquired about the rental property manager's level of agreement regarding their ability to deter or prevent crime at the rental unit. About one-third (33.5%, $n = 85$) strongly agreed (5) with this statement, 27.2% ($n = 69$) responded 4; 24.8% ($n =$

63) responded 3; 8.3% responded 2; and 6.3% ($n = 16$) strongly disagreed (1) with the belief that their actions can deter or prevent crime at their rental unit. Even though there is a lower than expected level of familiarity with the Ordinance, the majority of rental property managers believe that they do have the ability to deter or prevent crime.

Question thirteen asked the rental property manager to state their level of agreement with it being their responsibility as a rental property manager to take actions against tenants to deter or prevent crime at the rental unit. A little more than a third (39%, $n = 99$) strongly agreed with this statement. A little less than a quarter (22%, $n = 56$) responded with a rating of 4, 17.3% ($n = 44$) responded with a 3, 9.1% ($n = 23$) responded with a 2, and 12.6 % ($n = 32$) responded with a 1 and strongly disagreed with the responsibility of taking actions against the tenant to deter or prevent crime at the rental unit. Similar to the findings for question twelve, the majority of rental property managers feel it is their responsibility to take crime prevention action against tenants. There is a high level of willingness on the part of the rental property manager to engage the tenant, although the low level of understanding of the Ordinance and subsequent actions to take through the lease inhibit the potential of the rental property manager to prevent and deter crime.

Qualitative Comments

The final section of the survey provided the respondents space to provide any comments. Well over half ($n = 159$) of the respondents included comments. These comments fell into four distinct categories or themes. The most common theme ($n=85$) was related to the rental property manager's individual property management practices. These comments generally took the form of descriptions of the specific actions of the rental property manager. The following are some of the comments that typify this category:

Prevention through screening and surveillance

- *"My lease states that any tenant or guest may not be in violation of any laws. If they are, they break the lease. If they break the lease they can be evicted or at a minimum not renewed."* Respondent # 615
- *"I patrol every Friday and Saturday night and my tenants know it."* Respondent # 722
- *"I interview and check four references. I visit their current residence. I read the lease with them before signing. I explain they are "guardians" of my "retirement plan" and thank them. I do drive-byes and stop in often. I ask them to be respectful of neighbors and explain the neighbors are "my eyes" and will notify me first, then the police if there is a problem. This "recipe" has worked well for me. I*

choose good people and maintain a presence.”
Respondent #610

- *“The most important thing that can be done is a careful review of application, with review of references, and prior landlords. This is often difficult with students since this may be their first rental.”*
Respondent #145
- *“All of our tenants come with recommendations from friends or prior tenants who can vouch for the integrity and responsibility of the incoming renters. We have never had any problems with our tenants and have always renewed their annual leases at least once or twice.”* Respondent #280
- *“In addition to a local ‘person-in-charge,’ we have always ‘counted’ on one of the tenants to provide a certain amount of oversight to the other tenants.”*
Respondent #264
- *“We patrol our properties on football weekends and prohibit parties/loud or disruptive behavior. Students learn quickly that we patrol and seldom cause problems. Our lease prohibits parties (any # larger than # of tenants + 1 guest) in general and kegs specifically.”* Respondent #746
- *“We enforce all condo rules and notify parents of infractions. We also require payment of all fines for infractions. We have called law enforcement when finding evidence of drug use in the unit, but have had no other evidence of illegal activity.”* Respondent #83

Prevention through exclusion of specific categories of resident

The second most common theme (n = 39) was that the rental property manager does not rent to undergraduates. In some cases the respondent specifically identified this.

- *“I don’t rent to undergrads.”* Respondent #322
- *“We do not have undergraduate students as tenants.”*
Respondent #509

Other respondents alluded to this practice of not renting to undergraduate students.

- *“All tenants must be a grad student or professional.”*
Respondent #366
- *“Our tenants are long-term, families, retired people and professionals. We do not have a problem with crime.”* Respondent #747

Challenges to the Ordinance

The next most common theme (n = 19) were negative comments about the Ordinance:

- *“The Nuisance Property Point System is close to unconstitutional. The tenant’s actions are not someone else’s responsibility.”* Respondent #514

- *“I am not a policeman. Pay me and I will be happy to enforce the laws.”* Respondent #669
- *“I believe the ordinance is a joke! I should not be responsible in any way for someone else’s actions. If someone is causing a problem cite them. The point system is ridiculous.”* Respondent #714
- *“Property managers are neither police nor parents and since they have the authority of neither the Borough should not penalize them for the misconduct of tenants.”* Respondent #10

Knowledge deficiency among residence managers

The final theme (n = 16) that emerged included comments that indicated that the respondent does not know about the Ordinance, or misunderstands the Ordinance:

- *“We were not aware of the Nuisance Property Point System. Is this new? We would like to learn more about it. Thank you!”* Respondent #153
- *“I have never seen or heard about this Ordinance.”* Respondent #189
- *“If the State College Nuisance Property Ordinance is so important why haven’t I as owner been notified?”* Respondent #716
- *“We don’t know what is in the Nuisance Property Ordinance.”* Respondent #629
- *“I was under the impression that I would receive notification if there was a problem.”* Respondent #582
- *“I do not think we have ever gotten any points on the Nuisance Property Point System. Honestly, I don’t know how to check that. I always assumed that if we got a point or points I would receive a letter or some correspondence.”* Respondent #745

Summary of Qualitative Findings

The qualitative comments provided additional context to the preceding survey questions. The reports of how rental property managers specifically manage their properties through the screening process and extra checks of the property are supported in the literature. The strong stance on not renting to undergraduates was expected from the previous literature, also. Some permits do not allow for undergraduate student housing. The fact that some of the rental property managers felt it was important to note the relationship between undergraduate housing and accumulation of points, under the Ordinance, seems to indicate that they assume most of the issues with points are related to student housing. The derogatory comments about the Ordinance from some rental property managers are not surprising; in fact, more of those comments were expected based on the literature. One issue that relates to

this displeasure could be that the Ordinance does not provide any incentive for compliance, but rather only the threat of punishment for not doing so. It is possible that offering an incentive in conjunction with requiring rental property managers to adopt best practices would likely improve the rental property managers' perception of the Ordinance. The small group (n=16) who made comments regarding not knowing about the Ordinance or misunderstanding how it works is somewhat surprising given the severe penalty of rental permit suspension. The issue of awareness among rental property managers is obviously important from a deterrence perspective. If the rental property manager is unaware of the Ordinance and penalty they are unlikely to alter their management practices in response to the Ordinance and the expected consequences for violations. Also, if the rental property manager is unaware of the Ordinance they will not pass this information on to tenants through a lease or subsequently enforce those provisions of a lease. The issue of non-awareness or low-level of awareness was also present in the survey on question seven where one third of rental property managers reported being not very familiar and a quarter are only moderately familiar. This issue seems to be a larger problem that certainly requires action.

DISCUSSION AND CONCLUSION

The most significant findings of this research are that the majority of rental property managers are willing to assume the third-party policing role, and also that they may not necessarily know how to effectively fulfill the role. It is also clear that efforts need to be made to educate some rental property managers regarding the Ordinance since more than expected reported not being familiar with it, although the rental property managers have, and do, receive information on the Ordinance every year when their permit is renewed. It is promising that the majority of rental property managers feel a responsibility for the crime committed in their rental(s) and believe that they have the ability to exercise some level of control over it. In addition, it is evident that most rental property managers need to be trained on best practices for controlling crime in their rental(s). Practices such as an application and screening process, requiring a lease and co-signer, regular checks and inspections of the rental, informing the tenants of the Nuisance Rental Property Ordinance and including penalties and/or eviction conditions in the lease for committing crimes and acquiring points, and checking to see if the rental has accumulated any points, are all simple steps that the rental property manager could take to control crime and disorder in their rental. These simple steps would create a network of control that would hopefully deter tenants from committing crime, but also serve as a set of tools to control the tenant in the event that crime does occur.

From a broader perspective, there are many communities that are similar to State College in terms of not only being a "college town," but also many communities have high density rental housing with high rates of tenant turnover, and higher rates of crime and disorder in rentals. This type of ordinance may be a viable strategy for these communities. It is important that the focus of these types of strategies recognize that while a reduction of crime and disorder is a long-term goal, the relationship with the rental property manager as the third-party police is the key to the success of the strategy.

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Clutching at Life, Waiting to Die: The Experience of Death Row Incarceration

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Abstract: *This paper seeks to answer whether the official post-sentence process experienced by the condemned awaiting execution creates conditions of cruelty that can invalidate the legality of the death sentence. The study addresses the Supreme Court's refusal to hear a case based on the issue of delay in the application of the death penalty, and examines the standards that have been set by international courts in Africa and the Commonwealth Caribbean in restricting the post sentencing process to a limited time frame in which the state has to carry out the execution, after which the death sentence becomes invalid. The paper also looks at research on the experience and impact of death row incarceration, and presents a case study of the writings of condemned author Caryl Chessman to examine the validity of research findings. The paper concludes that protracted delay in carrying out the death penalty increases the harshness of the punishment to a threshold that renders the sentence cruel and thus unlawful.*

Keywords: capital punishment, death row, death row experience, delay in executions

"Abattoirs are not very nice places. Death Row is no exception."

Caryl Chessman, executed 1960 (1955:118)

INTRODUCTION

In the United States, the average length of time a condemned man or woman can expect to spend awaiting execution is 14 years and 10 months (Snell 2011). The delay between the convict being sentenced to death and being put to death is in theory designed for the condemned to appeal their sentence. In practice, the condemned are subject to years of confinement on 'death row' – isolated in a high security prison, contemplating their impending fate. The dehumanizing experience of confinement prior to execution has been defined by criminologists and condemned alike as a 'living death' (see Johnson 1989; Chessman 1954), but the psychological effects of this confinement are rarely taken into account when weighing the death penalty. The United States Supreme Court has repeatedly refused to take a case based upon the protracted

delay between sentence and execution, denying certiorari in nine cases, but internationally, there is a growing recognition of the psychological torment of a prolonged delay, and countries are gradually holding that execution after an extended period of incarceration constitutes cruel and inhumane punishment.

The purpose of the paper is to inform the reader of the international standards that have evolved with regards to the human experience on death row, and the United States refusal to hear a delay case and thus to consider the issue, despite research in the United States that demonstrates the suffering inherent in prolonged delays in carrying out capital punishment. This paper seeks to answer the question of whether the official post-sentence processes experienced by the condemned awaiting execution create conditions of cruelty that can invalidate the legality of the death sentence.

This paper reviews the international developments towards recognizing the pains of facing execution, and restricting the post-sentencing process to a limited time frame in which the state has to carry out the execution, after which the death sentence becomes invalid. These

rulings – from African courts and the Commonwealth Caribbean – establish a framework for the capital post-sentencing process to ensure that the application of the death penalty does not inflict undue suffering on the condemned. This paper reviews these international legal rulings, and the US Supreme Court's rejection of the question of delay in the post conviction process for death sentenced inmates, with the view of determining if the United States meets these evolving standards of decency. The paper then reviews the research done on the psychological effects of death row incarceration of prisoners in the US and South Africa. Lastly, the experience of waiting to die is illustrated through a reflexive case study analysis of the writings of condemned author Caryl Chessman, who was executed in 1960 after a then-unprecedented twelve-year wait on death row.

REVIEW

The death penalty was suspended in 1972 in the United States when the Supreme Court held that its imposition was arbitrary and racially disparate (see *Furman v Georgia*). States sought to rewrite their statutes, and four years later, the Supreme Court upheld the new capital procedures in the state of Georgia, which included a bifurcated trial, whereby the trial is divided into two stages, one to determine guilt and the other to determine sentence, which ensures that information used to determine the appropriate sentence for the defendant does not bias the jury in establishing whether or not they are guilty. Other procedures introduced in *Gregg* are standards to guide the jury's sentencing process and an automatic appeal to the state Supreme Court (*Gregg v Georgia* 1976). Thirty-five states reinstated the death penalty, although only 32 now retain it, and 1337 executions have been carried out since (Death Penalty Information Center 10th October 2013).

Based on the proportionality review established in *Gregg*, which required that the state Supreme Court, in their automatic review of the sentence, determine firstly whether the sentence is consistent with those handed down in other comparable cases, and whether the sentence is based on constitutionally permissible factors, not arbitrary or prejudice factors (See *Gregg* 1976); hence, the scope of the death penalty has been significantly narrowed in the past decade, with the Supreme Court categorically excluding certain classes of people (juveniles, or the mentally retarded) and classes of crimes (the rape of a child) from capital punishment (see *Roper v Simmons*, *Atkins v Virginia* and *Kennedy v Louisiana*). But capital punishment in the United States continues to be plagued by serious problems.

The arbitrary application of the death penalty is most prominent in the racial disparity of who gets sentenced to death, and there is a large body of research that demonstrates that racial minorities receive unequal treatment compared to their similarly situated white

counterparts (see e.g. Pierce and Radelet 2011; Pierce and Radelet 2005; Baldus et al. 1998). But despite demonstrable evidence of systematic racial bias, the Supreme Court held that there needs to be evidence of purposeful discrimination in the individual's particular case to raise a claim of equal protection violation (*McCleskey v Kemp* 1987).

The issue of innocence is perhaps the most compelling due to the irrevocable nature of the death penalty. Since 1976, 142 people have been exonerated (Death Penalty Information Center 10th October 2013), despite the fact it was only in 2006 that the Supreme Court held that death penalty cases could be re-opened in the light of new evidence (*House v Bell* 2006). Prior to this, the Supreme Court had ruled that new evidence that demonstrated 'actual innocence' was not grounds for habeas corpus relief, because appeals dealt with error of procedure, not error of fact (*Herrera v Collins* 1993).

The plethora of problems in the application of the death penalty led the American Law Institute to declare that the system is 'irretrievably broken', and they have abandoned efforts to create a framework designed to ensure that the death penalty system would be less arbitrary (Liptak 4th January 2010). But delay and the experience awaiting execution is an overlooked aspect of the application of capital punishment in the United States.

METHODS

The research question this paper seeks to address is: Can the official post-sentence process experienced by the condemned awaiting execution create conditions of cruelty that can invalidate the legality of the death sentence? The research method is triangulation of three sources of information: the international and US Supreme Court's rulings on the issue of delay, a review of the academic research conducted on the effect of death row incarceration, and lastly as reflexive case study of the writings of Caryl Chessman.

Chessman is an instrumental case, meaning that it provides an insight into a larger phenomenon (Stake 2005), by illustrating the experience of death row incarceration from the viewpoint of a condemned man, thereby providing a human context with which to better understand the effect of delay and awaiting execution in order to evaluate the question of whether the post-sentence process creates conditions that are cruel.

The data were collected through reflexive readings of Chessman's three autobiographies, *Cell 2455*, *Death Row* (1954), *Trial by Ordeal* (1955) and *Face of Justice* (1957). Chessman's time on death row was several decades ago, and his experience of confinement may differ from today, but the delay he experienced is comparable to current times. At the time of Chessman's incarceration, in the 1940s and 1950s, the condemned could only expect to spend a matter of months on death row before they were

executed (Aarons 1999b). In 1960, a twelve-year delay between sentence and execution was unheard of; in 2012, it is the norm (Snell 2011). As such, despite the passage of time since Chessman's life and execution, his experience in many ways is more analogous to the application of the death penalty in the US today.

The limitation of Chessman books as a data source is that it the analysis is subjective. Coding was conducted based on what seemed relevant to the reader. This is where it is important to be reflexive to promote rigor in the research process (Guillemin and Gillam 2004:275), which requires "critical reflection on how the researcher constructs knowledge from the research process" (Guillemin and Gillam 2004:275). The analysis is also influenced by the findings from previous studies on the topic of the effect of death row incarceration. The case study is important nonetheless to situate the legal developments and research in an experiential context.

LEGAL CHALLENGES

Prior to the Furman decision, the condemned did not expect to spend more than a few months – a couple of years at most – on death row before their sentences were carried out. Extended periods of confinement prior to execution were highly unusual. It was not until the death penalty was reintroduced in 1976 that the appeals process was overhauled, and procedural safeguards were implemented, such as automatic appeals to the state Supreme Court. These post-conviction reviews and appeals have resulted in longer and longer stays on death row (Simmons 2009). More recently, challenges to the lethal injection procedure – the primary method in all 32 retentionist states – have resulted in delays and suspensions of executions, further increasing the time spent on death row (see *Baze v Rees* 2008; Pilkington 28th September 2010).

The period of incarceration between sentence and execution is spent on 'death row', and is necessary in order to afford the condemned a chance to appeal their sentence. As Johnson points out, "a corollary of our modern concern for humanely administered executions is our desire to allow inmates to explore every avenue of appeal before we execute them. This greatly lengthens the prisoner's stay on death row...(during which) the condemned die a slow psychic death" (1998:43). But prolonged delays before the sentence is carried out have resulted in extended periods of imprisonment on death row, prior to execution. Death row inmates face the problem of trying to accept impending death while maintaining the hope that they might still live. Aarons (1999a:53) argues that the "psychological impact associated with death row detention...is probably exacerbated by the elusive hope of eventual release."

Internationally, courts have begun to recognize the pains of death row incarceration. In Zimbabwe, the Commonwealth Caribbean, Uganda and, most recently,

Kenya, limits have been set on the delay between a death sentence being passed and carried out, with an 'inordinate' delay rendering any subsequent execution unconstitutional (see Catholic Commission for Justice and Peace in Zimbabwe v The Attorney General and Others 1993; Pratt and Morgan v the Attorney General of Jamaica 1993; Susan Kigula and 417 Others v Attorney General of Uganda 2009; Godfrey Ngoto Mutiso v Republic of Kenya 2010). Zimbabwe became the first country to formally recognize the psychological effects of prolonged confinement prior to execution, and sought to mitigate this by limiting the time the condemned could spend on death row waiting to die. The case, Catholic Commission for Justice and Peace in Zimbabwe v. The Attorney General and Others (1993), was filed on behalf of four prisoners who had spent between fifty-two and seventy-two months on death row. The Court considered the physical conditions of their confinement and the psychological torment (including acute fear, suicidal thoughts and preoccupation with hanging) experienced by the condemned.

The Court held that, making allowances for time necessary for the appeals process, a delay of seventy-two months was contrary to Section 15(1) of the Constitution, which provides that no person is to be subjected to 'torture or to inhuman or degrading punishment or other such treatment'. The Justices stated that "the sensitivities of fair-minded Zimbabweans would be much disturbed, if not shocked, by the unduly long lapse of time during which these four condemned prisoners have suffered the agony and torment of the inexorably approaching foreordained death while in demeaning conditions of confinement" (Catholic Commission for Justice and Peace in Zimbabwe 1993). However, the country's constitution was rewritten a year later, invalidating the ruling (Hudson 2000).

The Judicial Committee of the Privy Council – the United Kingdom based court of final appeals for most of the Commonwealth Caribbean – followed suit later that year, when they ruled in Pratt and Morgan v Attorney General of Jamaica (1993) that a delay of five years between sentence and execution – the length of time they had ascertained the appeals process should take – was 'inordinate' and constituted inhumane and degrading punishment. The ruling applied to all of the Commonwealth Caribbean over which the Privy Council had jurisdiction. The Law Lords stated that "we regard it as an inhuman act to keep a man facing the agony of execution over a long extended period of time" and further that "there is an instinctive revulsion against the prospect of hanging a man after he has been held under sentence of death for many years" (Pratt and Morgan 1993). The Privy Council subsequently held that in countries where citizens had no access to international appeals, the five-year limit was to be reduced accordingly, to discount the time allowed for such international appeals. In *Henfield v Attorney General of the Bahamas* (1997), the Privy

Council held that the limit on delay was three and a half years, as Bahamians did not have access to the UN Human Rights Committee, which was an appeals process the Privy Council determined should take eighteen months. These decisions are of particular importance to the United States because the decisions are handed down by a British Court, and the US relies on British common law (Flynn 1999).

In 2009, the Ugandan Supreme Court upheld a ruling made two years earlier by the Constitutional Court that struck down the mandatory death penalty and inordinate delay as cruel and inhumane. In *Susan Kigula and 417 Others v Attorney General of Uganda* (2009), the Supreme Court stated that the extended period of incarceration prior to execution amounted to cruel, inhuman or degrading punishment. In complaining about the delay, the Court noted that the convicts were not seeking quick execution, but that the delay should exempt them from execution. The Court determined that “a delay beyond three years after a death sentence has been confirmed by the highest appellate court is an inordinate delay” (Kigula 2009 emphasis added).

Kenya set a limit of three years on death row incarceration in 2010, when the *Godfrey Ngotho Mutiso v Republic* was handed down by the Court of Appeal. A year prior to the decision, the President commuted the sentences of the 4,000 inmates on death row on the grounds that the extended wait had caused “undue mental anguish and suffering” (Amnesty International 5th August 2009).

The United States Supreme Court, however, has refused to hear a case based on the extensive length of death row incarceration, despite the fact that the average length of time the condemned spend on death row in the United States is currently 14 years and 10 months (Snell 2011). In 1995, a Texan inmate, Clarence Lackey applied to the US Supreme Court for certiorari in his case, contending that the seventeen years he had spent on death row rendered his execution unconstitutional, contrary to the Eighth Amendment’s prohibition on cruel and unusual punishment. In denying relief, the US Supreme Court, held that the penal objectives of capital punishment – namely, deterrence and retribution – could still be achieved even after a ‘protracted delay’ (*Lackey v Texas* 1995). Appeals based on a ‘protracted delay’ between sentence and execution have subsequently been named Lackey claims, and can only be pursued after an extended period of incarceration for the purpose of execution (Flynn 1997).

A challenge to the extended period of incarceration on death row in the United States has been raised in foreign courts, on the basis of death row phenomenon. The death row phenomenon is not a clinical concept, but rather, it is a legal one. It was adopted in the case of *Soering v the United Kingdom*, a case brought before the European Court of Human Rights in which a German national, Jens Soering, sought to challenge his extradition to the United States where he faced capital murder charges, on the

grounds that were he sentenced to death, the conditions and length of confinement prior to execution breached the European Convention on Human Rights prohibition on inhuman and degrading treatment. Soering did not challenge the death penalty itself, but rather the risk of being exposed to the ‘death row phenomenon’. The Court defined the phenomenon as “consisting in a combination of circumstances to which the applicant would be exposed if, after having been extradited to Virginia to face a capital murder charge, he were sentenced to death” (Soering 1989, 81).

The death row phenomenon tends to be defined by two components: both the conditions of confinement on death row, and the duration of time spent in these conditions. While the two components no doubt influence one another, they are both required to constitute death row phenomenon (Sadoff 2008; Smith 2008). The attendant legal concept, death-row syndrome, refers to the psychological effects that occur as a result of death-row phenomenon. The basis for ‘death-row syndrome’ has its roots in a study on the psychological impact of detention in ‘supermax’ prison, where the conditions of prolonged, solitary confinement was found to give rise to a host of mental health problems (Grassian 1986; Haney 2003), so it is the conditions of detention that gives rise to the syndrome (Schwartz 2006).

The death-row phenomenon claim has been used on an ex ante basis, in order to fight extradition to the United States, but to date the term has not been used to challenge actual death row incarceration in an American court (Sadoff 2008; Smith 2008). This is not to say there have been no challenges to the conditions of death row or the prolonged detention on death row – as these have been raised in US courts – but none have adopted the specific concept of a ‘death-row phenomenon’. Instead, challenges have tended to address the issue of protracted delay. Similarly, the challenges in the Commonwealth Caribbean and parts of Africa have focused solely on the delay issue, not on the conditions of confinement.

The United States has always blamed the prisoner for the delay in his own execution on the grounds that the delay is a result of the condemned pursuing his appeals, rather than with the state for taking their time (Hudson 2000). However, the Privy Council Law Lords stated in *Pratt and Morgan* that if the appeals system allows for the condemned to take advantage in delaying their execution, the fault is with the system. They argue that:

A state that wishes to retain capital punishment must accept the responsibility of ensuring that execution follows as swiftly as practicable after sentence, allowing a reasonable time for appeal and consideration of reprieve. It is part of the human condition that a condemned man will take every opportunity to save his life through use of the appellate procedure. (Pratt and Morgan 1993)

Aarons (1999a:1) has pointed out that an extended delay could in reality be a reflection of the fact that the case is not cut and dry: “a defendant is more likely to be on death row for an inordinate period when the case is on the margins of death eligibility and errors occur during the state’s processing of the case”, which makes the appeals process – as a safeguard against wrongful execution – all the more important.

In 1959, Caryl Chessman challenged his execution on the grounds of the extended delay he had experienced, after he had spent eleven years on death row. The Californian Supreme Court eventually rejected his claim in February 1960 – just three months before he was finally put to death – stating that “we can(not) offer life...as a prize for one who can stall the processes for a given number of years, especially when in the end it appears the prisoner never really had any good points” (Chessman v Dickson 1960:607-608).

RESEARCH

While much has been written about – and by – the condemned, there is a surprising dearth of scholarly research on the effects of death row incarceration. Two years after Caryl Chessman’s execution, Blustone and McGahee (1962) published a study on the psychological coping mechanisms that the condemned employed to deal with their sentence. The researchers conducted psychiatric interviews and psychological examinations over a period of time with 18 men and one woman who were awaiting death in Sing Sing Prison, in New York State. They found that none of the condemned exhibited signs of overwhelming depression or anxiety, which they thought would be the natural reaction to such extreme stress. Therefore, they were interested to learn what mechanisms the condemned used to avoid severe depression and anxiety, and whether these mechanisms changed during the course of their pre-execution incarceration. They found that the most prevalent psychological defense mechanisms utilized to stave off the extreme stress of their situation were “denial, projection and obsessive rumination” (Blustone and McGahee 1962:395). The condemned would deny their predicament by minimizing it, only living in the present, isolating the feelings surrounding possible execution, or through delusions that they would not be executed. Another defense mechanism was projection, where they would blame something or someone outside of themselves for their predicament, such as believing they were framed by the police. Others would become obsessed with their appeals, religion or intellectual pursuits, whereby they were able to avoid depression or anxiety by thinking obsessively about something else (Blustone and McGahee 1962). In this study, the reaction and adaption of the condemned to death row incarceration were treated as psychological defense mechanisms.

In 1978, criminologist Robert Johnson (1989) interviewed 35 of the 37 men under sentence of death in Alabama. He termed life on death row as a ‘living death’, which is “intended to convey the zombie-like, mechanical existence of an isolated physical organism...when men are systematically denied their humanity” (Johnson 1989:17). He found that the experience of death row incarceration was characterized by feelings of powerlessness, fear, and emotional emptiness. The prospect of execution, in particular, was a source of extreme concern - Johnson reports that: “Inmates speculate about the mechanics of electrocution and its likely impact on the body, which they visualize in vivid detail” (1989:85). Denial, too, became an important defense mechanism, especially after initially being sentenced to death. Similar to the findings of Blustone and McGahee (1962), Johnson found that the condemned often displayed “nonchalance and a proclaimed immunity from anxiety, depression, or fear” (1989:7). They were further able to deny these feelings through preoccupations with their appeal process, a religion or some other intellectual pursuit. Ultimately, he found that “death row confinement...is experienced as a...totality of human suffering” (Johnson 1989:99).

Continuing his study into the process of executions, Johnson (1989) also looked at how the condemned and guards alike approach executions, which he termed ‘death work’. Johnson studied the psychological effects of the death work, and discovered that it was a highly bureaucratic process, and execution were carried out in a mechanical and impersonal manner, in order to allow all those but the condemned to maintain an emotional distance. This is a dehumanizing process for the inmate that invokes feelings of powerlessness, loneliness and vulnerability.

Outside of the US, there was a study by Lloyd Vogelmann (1989) of life on South Africa’s death row at Pretoria Central Prison. South Africa abolished the death penalty in 1995, in *State v Makwanyane and Mchum* - the first case to be heard by the newly established, post-apartheid Constitutional Court. Prior to a moratorium on executions in 1989, South Africa had one of the highest execution rates in the world, hanging 2,173 people between 1967 and 1989 (cited in Makwanyane and Mchum). Vogelmann (1989) conducted interviews with eight men who had been incarcerated on death row for more than a year, before they had had their sentences overturned – some of whom had been only hours from execution. He states that death row incarceration was characterized by fear, anxiety and helplessness. The men expressed a fear of death, stating that “there is intense anxiety about the unknown, the physical pain, as well as leaving their family” (Vogelmann 1989:193).

Denial was an important defense mechanism – Vogelmann reported that there was a popular myth that existed among the condemned, that on the day of

execution, rather than being hanged, the condemned man – or men – were dropped alive into the ‘blood pit’ below the gallows, where they then lived and worked below the floor boards of the prison. This belief “provides the prisoner with hope, which is a necessary prerequisite for psychological survival” (Vogelman 1989:190). The censorship of newspapers also enforced this posture of hope:

Missing newspaper articles are often incorrectly interpreted by death row prisoners as an attempt to hide information about their particular case. For most, this both a hopeful and persecutory fantasy since their cases receive little media attention. (Vogelman 1989:186)

Like Johnson (1998), Vogelmann found that the condemned’s anguish was exacerbated by the prison wardens, who were not interested in the inmates’ complaints or emotions, as they wished to remain detached.

CASE STUDY

Caryl Chessman’s twelve-year battle to stay alive ended in San Quentin’s gas chamber on 2nd May, 1960. He was convicted and executed for two cases of kidnap for the purpose of robbery, which, under the Little Lindberg law – repealed six years before his execution – carried the death penalty. At the time, Chessman had spent longer on death row than any condemned man before him. He faced death eight times, before the State of California finally succeeded in asphyxiating him on his ninth execution date (Bisbort 2006). Chessman detailed his experience under sentence of death, as he fought for his life, in three autobiographies that were published as he waited to die: *Cell 2455, Death Row* (1954), *Trial by Ordeal* (1955) and *Face of Justice* (1957).

One of the most prominent features of Chessman’s three books is his preoccupation with execution, which is evident from the descriptions of a gas chamber execution throughout the trilogy. In several places, Chessman wrote detailed accounts of what he envisioned an execution to be like, including the mechanisms of the gas chamber, the smell of the gas, the sensation of losing consciousness:

You die alone – but watched. It’s a ritualistic death, ugly and meaningless. They walk you into the green, eight-sided chamber and strap you down in one of its two straight-backed metal chairs. Then they leave, sealing the door behind them. The lethal gas is generated and swirls upward, hungrily seeking your lungs. You inhale the colorless, deadly fumes (1955:3, italics in original).

The executioner is signaled by the Warden. With scientific precision, valves are opened. Closed. Sodium cyanide eggs are dropped into the immersion pan – filled with sulphuric acid – beneath your metal chair. Instantly

the poisonous hydrocyanic acid gas begins to form. Up rise the deadly fumes. The cell is filled with the odor of bitter almond and peach blossoms. It’s a sickening-sweet smell. Only seconds of consciousness remain (1955:197). “They would walk me into the gas chamber, strap me down, seal the door shut. They would generate the gas. I would go to sleep for keeps. Then – oblivion” (1954:341).

Vogelman (1989) relates that the South African condemned who he interviewed were likewise preoccupied with hanging – he states that they would discuss the process in detail, and one prisoner even reported ‘practicing’ what it would be like not being able to breathe. Johnson (1989) too relates that Alabama’s condemned were obsessed with the thought of dying by electrocution, in particular the workings of the electric chair, how they would bear up in the death chamber, and whether they would experience pain. This preoccupation is a result of a fear of death and of the unknown (Vogelman, 1989).

To deal with this, Chessman exhibits different coping mechanisms throughout his books. He denies that he fears death, or is indifferent towards death, and he dissociates himself from his death sentences by preoccupying himself with his legal appeals and his writing. Coping mechanisms are necessary in order to protect the condemned from the crippling stress and anxiety they would otherwise experience as they waited to be put to death (Blustone and McGahee 1962).

Chessman goes to great lengths to deny that he felt fear about death – a common psychological defense mechanism identified by Johnson (1989). At the beginning of his third book, he states:

There is still a gas chamber in my future. I don’t like THAT worth a damn. Not that I am gripped by a paralyzing death fear, for I have seen, heard, tasted and smelled too much of Death; I have been too perilously close to Death too long, too often, to be troubled by the prospect of imminent physical extinction (1957:xii).

After his sixth stay of execution, he relates:

On the surface I was calm enough. Too calm, perhaps. Yet it wasn’t cavalier calmness. I had been equally prepared to live – or die. I had been punished too long, I had been snatched from the gas chamber one time too many, to react emotionally. Death had simply lost all personal meaning for me (1955:275).

This indifference can be attributed to the psychological impact of having to prepare himself to die, only to be reprieved, and sometimes only hours before he was due to be executed. That must have been a truly harrowing experience, and left him at least consciously expressing an indifference to death. Given the psychological toll that facing six execution dates must

have had on him, dissociation would seem the natural reaction to protect himself from what must be intolerable stress.

Chessman employs dissociation – he detaches himself from his situation by viewing his case as an outsider – a lawyer, or an author. He refers to his own case as the ‘Chessman case’. He says: “The Chessman case...it was either a lawyer’s dream or a lawyer’s nightmare, depending on the lawyer” (1957:52, ... in original), and later, “This time there wasn’t going to be another stalemate in the Chessman case, even if it meant getting checkmated” (1957:101). He also talks extensively about the legal mechanics of the case, and when he talks about his case, he talks as if he is the lawyer on the case, concerned with the legal maneuvers and technicalities, rather than the very fatal consequences these could have for him:

His Honor then dropped a blockbuster on us. If we hadn’t anticipated the way the hearing would go, it would have been fatal. Our petition squarely alleged that the shorthand notes of the deceased reporter were ‘undecipherable to a large degree’ and that Fraser was ‘incompetent to transcribe’ those notes. This was the fundamental issue in the case (1957:134).

On writing his third book, he states that “I began by letting Caryl Chessman, the condemned man, speak. Of course, it was not he who would write the book. The writing itself would be done by Caryl Chessman, the author” (1957:202). This portrayed the detachment he had – he compartmentalized different parts of his life, so he was able to be an author, rather than a condemned man. He is able to deny his feelings by becoming preoccupied in the legal nuisance of his appeals, or in the process of writing and publishing. Both Johnson (1989) and Blustone and McGahee (1962) found that their participants also focused furiously on other pursuits, such as their appeals or religion, in order to stave off the feelings of intense anxiety or fear over their death sentence.

Lastly, Chessman appears to try and distance himself from his situation by using the second and third person to describe his own life. In Cell 2455, Death Row, when he was describing his childhood, he exclusively uses the third person. In many parts where he is describing an execution, or his thoughts and reactions to his various executions dates and subsequent stays, he uses ‘you’ – for example, at his trial, he talks in the first person:

I spent that night chain smoking, pacing the cramped floor of my jail cell, reviewing the evidence from every conceivable angle and forming in my mind what I would – or could – say on the morrow when I confronted those twelve grim-faced talismen and talked for my life (1954:293).

But when he got sentenced to death, he moves from talking in the first person to the second person:

The jury has found you guilty on seventeen of the eighteen charges. On two it has fixed the punishment at death. You know then that the long, tough battle for survival, rather than just ending, is just beginning. You know you are headed for Death Row and you will be lucky – damned lucky – to come off the Row alive (1954:294).

Earlier in the book, when discussing his legal battle to live, Chessman talks about it in the third person, stating that he is “stubbornly refusing to acquiesce to California’s demand that he forfeit his life, the only possession he has left.” (1954:123-124). This use of different voices is an attempt to distance himself from the more painful parts of his life, and the grim reality of his situation. It supported a posture of denial, which was a prominent finding in previous research.

Blustone and McGahee (1962), Johnson (1989) and Vogelmann (1989) all found that denial was a coping mechanism that the condemned used frequently to deal with their situation. Denial is essential part of survival on death row, to prevent the condemned from falling into depression or extreme anxiety about their predicament. Blustone and McGahee (1962) identify four main forms of denial utilized by their 19 death row inmates, which included delusion or only living in the present, while Vogelmann (1989) found that a belief in myths was a popular form of denial – especially the myth that one was not actually hanged at the execution – while Johnson (1989) found that turning to religion was means of denying the finality of death.

However, Hamm (2001:71) has argued that the use of the second or third person by Chessman is “an obvious attempt to implicate the audience in his plight” in order to generalize the experience.

But at some points, Chessman seems ready to give up, as his stay on death row takes its toll on him: “the depressing atmosphere of Death Row, the baffling legal maze, the feeling of being trapped – these made it easy to say to hell with it...Just take a deep breath and your worries were over, the anxiety and the torment were gone” (1955:76). Vogelmann (1989) also reports some condemned men in South Africa had similar suicidal ideations when the emotional pain became too much, and the coping mechanisms failed to allay the fear and helplessness they experienced.

A defining characteristic of death row incarceration is the uncertainty of eventual execution. The condemned are furnished with the time and a complex appeals system with which to fight for their life after being sentenced to death. Johnson (1989) points out that it is this uncertainty that means the condemned cannot choose to either maintain hope or just give up; they are instead stuck in limbo,

waiting, for forces outside their control to decide whether they live or die. Chessman described the wretched powerlessness he felt as the legal system toyed with his life, constantly raising and dashing his hopes: “after six years of this, death itself couldn’t be too bad. It was the waiting that was rough, the pressure and the tension.” (1955:68). He goes on to state that “the waiting and uncertainty are a fierce, punishing experience” (1955: 201) and a “devilish form of torture” (1955:190). The appeals process fosters a torturous hope for the condemned, allowing them the belief that they may let still live.

The appeals and stays of executions did give Chessman false hope. Following his second reprieve from the gas chamber, Chessman discusses his hope to live – for a life and future beyond death row. “I wanted only to do something with my life so long as I retained pulse and breath and thought. Months before I had recognized that if my existence were to have any meaning, it was I who would have to create that meaning in the days left to me” (1955:17). Later in the book, he discusses his ties to the outside world, reiterating that he hopes for a future:

I’ve learned to love and to know the meaning of friendship and I’m not ashamed of it. I have ten approved correspondents on my mailing and visiting list, the maximum number allowed. I’ve kept up with the world beyond this tiny, violent one around me. Someday I hope to be a part of that larger world again (1955:121).

His writing, too had given him a reason to want to live:

I’ve found a challenge in my writing that has given my life meaning, purpose, direction. I’ve added a new dimension to my existence. I’ve learned to value love and friendship. I’m still fighting, but now it is for what I believe in” (1955:184).

Vogelman (1989) notes that hope was essential to psychological survival on death row, and several of the men in his study went so far as to make plans for the future – he relates how two men under sentence of death would make plans to set up a business together in the outside world.

But when the appeals do not succeed and the condemned do not receive the outcome they had wanted, Chessman states that “it is the most terrible thing of all to watch hope die, only to be reborn and then, again and again, to be strangled slowly and mercilessly” (1957:201). Worse than the hope and despair of the appeals is the experience of a reprieve from execution, which exacerbates the uncertainty over whether they will be put to death or not. Chessman experienced a total of eight stays of execution, more than once receiving a reprieve at the eleventh hour. He was forced to prepare himself for

death nine times, and eight times he received a stay. Chessman records the elation of being spared, only to face another execution date. Chessman relates the experience as being in limbo, not part of the world of the living, but not quite dead. As his fourth execution date loomed, he writes: “the imminence of a state-imposed death had walled me off from the living. And was a walking dead man in the eyes of those looking at us” (1955:54), and when he receives an 11th hour stay: “time lurched, stopped, started. Suddenly, unbelievably, I belonged to the world of the living again” (1955:55). But his execution was rescheduled, and he had prepared himself to die yet again:

For the second time in less than three months, I found myself with only twenty-seven hours of life left...Again I tore up my bed, folded the sheets and blanket, got the cell ready to leave it. Again, I listened as the newscaster virtually had me in the gas chamber already. You have a choice: you can get scared or mad (1955:69).

For the fifth time, he had an execution date, and for the fifth time, he received a stay:

I had another stay! It was hard to believe. I was surprised to find my voice even, my hands steady...How did it feel to have been literally snatched again from the gas chamber? How did it feel to look around and see life and know that I still would be part of it tomorrow and the next day and the day after that? It felt good, and I said so unashamedly (1955:72).

He went through similar emotions when he received his sixth stay of execution: “I wouldn’t be put to death in sixty-odd hours. I’d go on living on Death Row, as I had for six years, six months and eight days. Judge Denman had jerked me back from the grave. I was grateful beyond words” (1955:274).

The experience of being exposed to imminent execution, only to receive a stay is a kin to mock execution, which is considered a form of torture under international law (Pilkington 20th September 2011). While there is no research on the effects of mock execution, the research on torture survivors demonstrates that they experience post-traumatic stress disorder, depression and anxiety (Basoglu et al. 2001; Campbell 2007), although research has also demonstrated that they also suffer from emotional numbing, nightmares, social withdrawal and problems of impulse control (Basoglu et al. 1994). In Pratt and Morgan, the Law Lords reacted to the three stays that the appellants had experienced – once, not receiving news of the stay until 45 minutes before they were due to be hanged – stating that: “the statement of these bare facts is sufficient to bring home to the mind of

any person of normal sensitivity and compassion the agony of mind that these men must have suffered as they alternated between hope and despair in the 14 years that they have been in prison facing the gallows” (1993).

Chessman’s hope did end up proving futile. Three years after the publication of his final autobiography, he was put to death. After eight stays of execution, Chessman’s ninth date with the gas chamber was scheduled for 10am on 2nd May 1960. Chessman’s ninth stay of execution came through at 10.05am (Bisbort 2006).

CONCLUSION

The purpose of this paper was to address whether the official post-sentence process experienced by the condemned awaiting execution creates conditions of cruelty that can invalidate the legality of the death sentence. This question has been addressed through a triangulation of three interrelated presentations of legal rulings, academic research and the experiential, through a reflexive case study of the writings of a condemned man. The research and Chessman’s writings demonstrate that the experience of living under a death sentence causes the condemned intense suffering, and several jurisdictions have sought to remedy this by setting limits on the delay between sentence and execution.

Waiting to die inevitably causes suffering, but a delay between sentence and execution is necessary for the appeals process. Internationally, courts have deemed that it only becomes cruel when the delay is no longer attributable to a legitimate purpose, because the appeals process is not being carried out in a timely manner. This is not to say that appeals should be expedited, as that could result in a less thorough judicial review, and render the safeguard of the appeals process meaningless. Rather, if a state wishes to maintain capital punishment, it must have a fully functioning and efficient capital appeals process that is capable of carrying out thorough judicial reviews of all of those that the state sentences to death in a timely fashion. If the system cannot do that, then the fault is with the system, and it is not just to subject men and women to years on death row because the system does not work. Furthermore, a system that allows for multiple execution dates, followed by temporary reprieves suggests a legal process that is unable to determine who should live and who should die, making it, in the words of the American Law Institute, irretrievably broken.

The standard that the Privy Council set in their decision in *Pratt and Morgan* meant that the Law Lords worked out how long both the domestic and international appeals process should take in Commonwealth Caribbean countries, and set the limit of five years based upon this, reducing the time limit in jurisdictions which had fewer appellate options (see *Henfield v Attorney General of the Commonwealth of the Bahamas* 1997). This way, the appeal process for condemned is protected, and it is the

responsibility of the state to ensure that the appeal process is carried out in a reasonable time. If the state fails to do this, then the sentence becomes unlawful.

The sentence of death requires merely that the life of the condemned be extinguished, not that they are confined in a living tomb for an extended period of time, awaiting the executioner. Guilty or innocent, good or bad, nothing justifies the caging of human beings for the sole purpose of killing them. Internationally, there is a growing realization of the dehumanizing and inhumane experience of waiting for execution, and it is time the United States recognized that capital punishment involves more than the mere extinguishing of life. Living on death row is dehumanizing, and Chessman perhaps best summed it up when he said that: “Its inhabitants didn’t live; they clutched at life, waiting to die” (1955:62).

Caryl Chessman died over 53 years ago. His books are now out of print. It is important not to lose the value of what he wrote, or the contribution his insights make. His case may involve an outdated method of execution, for a crime no longer punishable by death, but his prolonged wait to die is still a very real part of the modern execution process. The impact of the post-conviction process, which includes a lengthy delay awaiting execution, and which is characterized by uncertainty over the eventual outcome of the sentence, increases the harshness of the punishment to a threshold that renders the sentence cruel and thus unlawful.

This study seeks to contribute to an under-studied phenomenon. The delay between being sentenced to death and being put to death is an ignored cost of capital punishment. Internationally, courts are beginning to recognize the “agony of suspense” of an extended delay on death row (*Pratt and Morgan v The Attorney General of Jamaica* 1993), but it is something the US Supreme Court has not addressed, despite the fact that there are now 3,158 men and women on death row in the United States (Snell 2011), a place they are likely to stay for well over a decade. The punishment of death cannot be evaluated – in terms of retribution, constitutionality, or merely as a moral issue – without taking into account the experience of waiting to die.

Notes

¹ *Lackey v Texas* 514 U.S. 1045 (1995); *McKenzie v Day* 115 S. Ct. 1840 (1995); *Ellege v Florida* 525 U.S. 944 (1998); *Knight v Florida* 528 U.S. 990 (1999); *Moore v Nebraska* 120 S. Ct. 459 (1999), *Forest v Florida* 123 S. Ct. 470 (2002); *Johnson v Bredesen* 130 S. Ct. 541 (2009); *Thompson v McNeil* 129 S. Ct. 1299 (2009); *Valle v Florida* 654 U.S. 132 (2011).

² The Caribbean Court of Justice (CCJ) in Trinidad is seeking to replace the Privy Council as the final court of appeals for the Commonwealth Caribbean. So far, Belize Barbados and Guyana have acceded to the CCJ.

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