Running Head: SECONDARY EFFECTS

MEASURING THE SECONDARY EFFECTS OF 60/40 BUSINESSES IN NEW YORK CITY: A STUDY OF CALLS FOR SERVICE TO THE POLICE

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Introduction and Summary

In order to test the assumption that New York City may regulate so called "60/40" businesses because they are associated with negative secondary effects, an extensive and detailed empirical study of criminal activity and disorder surrounding these businesses in Manhattan was undertaken utilizing raw data provided by the New York City Police Department (NYPD).

The "60/40" adult business configuration came about as a result of the 1995 amendments to the New York City Zoning Resolution ("1995 Amendments") which defined an "adult establishment" as any of several different types of businesses which "regularly featured" "adult" entertainment in a "substantial portion" of the premises. When the "substantial portion" element of the statutory definition was challenged as unconstitutionally "vague," the City of New York authoritatively clarified the term to mean "forty percent or more" of the "customer accessible floor area" used for "adult" entertainment.

The court challenges to the 1995 Amendments were concluded and the statue began to be enforced in mid-1998. Many of the then-existing (and subsequently some new) businesses configured their premises so as to limit the areas devoted to "adult" entertainment to less than forty percent (<40%) of the relevant floor area in order to avoid being classified as an "adult establishment" subject to the new zoning rules. These business became known as "60/40" businesses, meaning that they were conforming to the new zoning by devoting <40% of their floor space to "adult" business. This form of business had never previously existed in New York.

After the New York courts upheld these businesses' contention that they were not "adult establishments" under the 1995 Amendments, the City of New York enacted a new round of

amendments to the Zoning Resolution in 2001 ("2001 Amendments") which, among other things, eliminated the "substantial portion" test for "adult eating or drinking establishments" (one of the types of businesses included in the definition of "adult establishment").

The City of New York justified the 2001 Amendments as necessary to eliminate or minimize "adverse secondary effects" attributable to those businesses which were not "adult establishments" under the 1995 Amendments because of the "60/40" rule (i.e., because they devoted <40% of their floor space to "adult" activities as defined in the 1995 Amendments). The 2001 Amendments also eliminated the "substantial portion" test from the definition of "adult establishment" as applied to theaters and conditioned, but did not eliminate, the test as it applies to bookstores, video stores. We did not study the "secondary effects" of these types of businesses. However, the City did not undertake any study of the second effects attributable to this new form of business, which had not existed in 1994-1995 (when the 1995 Amendments were considered and enacted) and had not been the subject of study in any other jurisdiction.

Three hypothesis concerning secondary effects are tested in this study using calls for service to the New York City Police within local neighborhoods defined by census blocks. If secondary effects are associated with 60/40 eating or drinking establishments in New York City we would expect the following: 1) The presence of "60/40" eating or drinking establishments in New York will be associated with a higher number of crime incidents reported in localized areas surrounding these businesses compared to the number of crime incidents reported in comparable localized areas that do not contain these businesses; 2) Such businesses will rank among the "hotspots" of crime and disorder in the community in which they are located; and 3) Changes in the presence or absence of these businesses in the community will be associated with increases and decreases in crime. When a business ceases operation crime events should subside; when such a business opens crime events should increase.

To test these hypotheses we first conducted a hierarchical regression analyses wherein the blocks with 60/40 businesses are compared to surrounding blocks that do not contain such businesses while statistically controlling for other neighborhood demographic features related to crime. We then undertook a "hotspot" analysis within the neighborhood where the 60/40 business was located. This focused analysis by specific address allows us to determine if the 60/40 businesses have required special attention from the police or if other addresses in the immediate neighborhood are more often the source of police attention. Finally, we undertook a before-after analysis wherein we examined crime one year before and one year after 60/40 business openings and closings. We compared the crime change or lack thereof before and after the openings and closings.

The regression analyses showed that variables traditionally found to be related to crime by other criminologists were related to the number of calls to the police. The variable measuring the proximity of the 60/40 establishments added no significant explanatory power. The "hotspot" analysis showed that that the 60/40 businesses are a very insignificant source crime of crime events within their neighborhood in New York City. The 60/40 business addresses rarely rise to the level of even ten-percent of crime events in the neighborhood. Several of these businesses cannot be ranked because there are zero crime events at their address. The vast majority of the businesses had very few crime incidents, no matter what the crime category, relative to the rest of the neighborhood. The before-after analyses revealed that changes in the presence or absence of these businesses in the community were not associated with increases and decreases in crime.

These findings, at a minimum, cast substantial doubt on the City's theory that 60/40 businesses or the nature of their entertainment is significantly associated with crime events in a neighborhood.

MEASURING THE SECONDARY EFFECTS OF 60/40 BUSINESSES IN NEW YORK CITY: A STUDY OF CALLS FOR SERVICE TO THE POLICE

THE SUPREME COURT AND THE ASSUMPTION OF NEGATIVE SECONDARY EFFECTS OF ADULT BUSINESSES

Since 1976, the United States Supreme Court has decided a series of cases focusing on whether the Free Speech clause of the First Amendment allows cities and states to enact legislation controlling the location of "sexually oriented" businesses (*See e.g.*, *Young v. American Mini Theatres, Inc.*, 427 U.S. 50 (1976); *City of Renton v Playtime Theatres Inc.*, 475 U.S. 41 (1986). [1] "Zoning" regulations, laws or ordinances that prevent a sex-related business from operating within certain defined areas and/or within a certain number of feet of so-called "sensitive" locations (e.g., residential neighborhoods, schools, houses of worship and/or other "adult establishments") have been predicated on the notion that municipalities have a substantial interest in combating so-called "negative secondary effects" on the neighborhoods surrounding exotic dance businesses. These secondary effects are generally said to include alleged increases in crime, decreases in property values, and other indicators of neighborhood deterioration in the area surrounding the adult establishment. Typically, communities have either conducted their own investigations of possible secondary effects or have relied on studies conducted by other cities or localities.

The rationale for the secondary effects doctrine was most completely laid out in Renton v. Playtime Theatres, Inc., in 1986. In Renton, the Supreme Court considered the validity of a Renton municipal ordinance that prohibited any "x-rated" theater from locating within 1,000 feet of any residential zone, family dwelling, church, park or school. The Court's analysis of the ordinance proceeded in three steps. First, the Court found that the Renton ordinance did not ban such theaters

[1] The terms "adult" and "sexually oriented" business are often used interchangeably. However, in this paper, we limit the use of the term "adult" due to the definitional issues under the New York City Zoning Resolution.

altogether, but merely required that they be a certain distance from sensitive locations. The ordinance, the Court said, was properly considered to be a "time, place and manner" regulation. The Court next considered whether the ordinance was "content-neutral" or "content-based." If the regulation were content-based, it would be considered presumptively invalid and subject to the "strict scrutiny" standard of judicial review. The Court held, however, that the ordinance was not aimed at the content of the films shown at such theaters, but rather at the secondary effects of such theaters on the surrounding community, namely at crime rates, property values, and the quality of the city's neighborhoods. Given this finding, the Court stated that the ordinance would be upheld so long as the city of Renton showed that its ordinance was designed to serve a substantial government interest such as a reducing crime rates or maintaining property values.

Most recently (2002), a plurality of the Supreme Court (Justice O'Connor joined by the Chief Justice, Justice Scalia and Justice Thomas) added an important methodological caveat concerning the evidence necessary to validate the assumption that sexually-oriented businesses cause secondary effects. The Court warned in City of Los Angeles v. Alameda Books., et al. that:

> This is not to say that a municipality can get away with shoddy data or reasoning. The municipality's evidence must fairly support its rationale for its ordinance. If plaintiff's fail to cast direct doubt on this rationale, either by demonstrating that the municipality's evidence does not support its rationale or by furnishing evidence that disputes the municipality's factual findings, the municipality meets the Renton standard. If plaintiffs succeed in casting doubt on a municipality's rationale in either manner, the burden shifts back to the municipality to supplement the record with evidence renewing support for a theory that justifies its ordinance.

Given the conclusions of the other Justices in Alameda Books that special zoning of sexually oriented establishments is either "content-based" (Justice Kennedy) or "content-correlative" (Justices Souter, Steven, Breyer and Ginsburg), and the standards of review articulated by them - - in each case imposing a higher burden on municipalities seeking to regulate sexually oriented establishments as such

- - there is no doubt that the entire Court presently agrees with the "no shoddy data or reasoning" standard of Justice O'Connor's plurality opinion.

Methodological Problems With Past Studies – Shoddy Data and/or Reasoning

Past studies claim to have found "crime" in the area surrounding sexually oriented establishments and attributable to their presence in the community, but lack the essential methodological features necessary to validly make such a claim. Paul, Linz and Shafer (2001)[2] found numerous problems among the most frequently cited studies by communities across the United States. For example, the Indianapolis Indiana study (1986) failed to properly match study and control areas on variables; the Phoenix Arizona study (1979) relied on crime data collected for only a one-year period; and the Los Angeles study (1977) authors admitted that the police stepped up surveillance of sexually oriented businesses during the study period. Each of these methodological problems severely limits the utility of these studies.

The New York Studies. Studies of secondary effects of pre-60/40 era "adult" businesses in New York City are even more problematic. Two studies have been conducted in New York City. These studies do not conclude that negative secondary effects exist for these businesses, yet they have often been cited as evidence for such effects.

The 1994 Times Square Business Improvement District (TSBID) study conducted by the consulting firm Insight Associates combined analysis of available data on property values and incidence of crime with a demographic and commercial profile of the area to attempt to show relationships between the concentration of "adult-use" establishments and negative impacts on

[2] Paul, B., Linz, D. & Shafer, B.J. (2001). Government regulation of adult businesses through zoning and anti-nudity ordinances: Debunking the legal myth of negative secondary effects. Communication Law and Policy, 6. 2, 355-391. *("Paul I").* This study was noted as one of the "top three refereed papers" of 2000-01 by the International Communication Association and was expressly called to the attention of the Supreme Court in Alameda Books in an amicus brief filed by the First Amendment Lawyers Association (which, in turn, was pointedly referred to by Justice Souter in two footnotes to his dissenting opinion), and is generally regarded as the catalyst for the "no shoddy data or reasoning" rule articulated by the plurality.

businesses and community life. The Times Square Business Improvement District also collected data for property values for the 1985/86 and 1993/94 years. There was a vast array of businesses that may be considered "adult" in this study (but none of the 60/40 ilk, which did not then exist). These included video and bookstores, motels, massage parlors, sex clubs, topless and bottomless or nude bars (not all of which serve alcohol), and peep shows.

Anecdotal evidence from property owners, businesses, community residents and others regarding public perceptions of the impact of sexually oriented businesses on their neighborhoods suggested there were problems. They complained of the increase of such establishments on Eighth Avenue. Some data from before the then-recent increase in sexually oriented businesses was unobtainable, and the study thus could not show if there had been an increase in actual complaints corresponding to the proliferation of pre-60/40 "adult establishments".

Methodologically speaking, the New York Times Square Business Improvement District Study failed to properly match control and test (adult) areas in order to insure reliable comparisons between the two for either crime rates or property values. In order to insure that accurate and fair comparisons are being considered, a control or comparison area must be selected that is truly "equivalent" to the area(s) containing the sexually oriented business(es). This lack of methodological reliability prevents the reader from drawing reliable conclusions.

Perhaps because of these methodological deficits, the study authors Insight Associates themselves concluded:

> …while it may be that the concentration of adult use establishments has a generally depressive effect on adjacent properties…<u>we do not have sufficient data to prove or disprove this thesis</u>. [Emphasis added.]

This conclusion by Insight Associates was expressly quoted at page 41 of the "Adult Entertainment Study" also conducted in 1994, by the NYC Department of City Planning ("DCP Study," which we discuss below).

In the section entitled: "General Crime Statistics," the conclusions of Insight Associates were:

> One cannot assert that there is a direct correlation between these statistics and the concentration of adult use establishments on 42nd Street between Seventh and Eighth Avenue[s], or along Eighth Avenue between 45th and 48th Streets. But there is very definitely a pointed difference in the number of crime complaints between these study blocks and their controls. [TSBID Study, pg. 32.]

What can be fairly said about the TSBID Study? The authors of this study admit in their own summary of property value and crime activity analyses that they could find no adverse secondary effects for sexually oriented businesses.

An additional study was performed in 1994 was the DCP Study by New York City's Department of City Planning ("DCP"). The DCP reviewed studies and ordinances from other localities and studied the industry as it existed in New York City—among other things, meeting with members of the sexually oriented business industry. The DCP reviewed accounts of secondary effects from sources as diverse as the City Planning Commission, the Office of Midtown Enforcement, the Chelsea Business Survey, the Task Force on the Regulation of Sex Related Businesses, the Times Square Business Improvement District Study, and a number of newspaper reports and correspondence from citizens. DCP examined signage and neighborhood conditions in six study areas containing sexually oriented businesses, also surveying local organizations, businesses, police officers, real estate brokers, and sanitation department officials in each of the six areas. It also comparatively analyzed

criminal complaints and assessed property values in the study areas and in control areas without sexually oriented businesses.

It found that between 1984 and 1993 the number of sexually oriented businesses in New York City increased from 131 to 177. The DCP found that sexually oriented businesses tend to cluster, especially in central areas and along major vehicular routes connecting central business districts with outlying city areas and suburbs. However, crime report statistics in New York City did not show higher crime rates in areas with sexually oriented businesses than in areas without them, but property values in proximity to sex businesses grew at an appreciably slower rate than in areas away from such businesses. The DCP found widespread fear of sexually oriented businesses' secondary effects on the part of the citizenry, and also found that survey respondents indicating that their businesses or neighborhoods had not suffered adverse secondary effects tended to be the ones living in areas with isolated sex businesses. Real estate brokers overwhelmingly reported that sexually oriented businesses would have negative effects on surrounding property values.

The DCP Study authors admit: "Crime report statistics in New York City did not show higher crime rates in areas with sexually oriented businesses than in areas without them…" (Emphasis added.) Regarding crime the study reports:

> The community liaison or beat officer was interviewed for each of the six study areas. When the survey and control block fronts were compared for criminal complaints and allegations, the officers generally did not link higher incidents with adult uses. Three officers believed that criminal allegations are higher on the survey block fronts compared to the control block fronts but, in two of these cases, they attributed the higher incidence of allegations to uses unrelated to the adult use. In a single instance, an officer replied that the adult entertainment establishment located in the study area has some effect on crime, and then "only rarely." Four of the six officers thought the adult uses have no effect on crime. One officer stated that if more adult entertainment establishments were to locate in the study area, crime probably would increase. However, that officer and another responded that more bars, movies or theaters, or video/bookstores of

> any kind would effectively increase crime in the study area. [DCP Study, pg.53.]

The Police Department provided the Department of City Planning with information about criminal complaints drawn from precinct files [DCP Study, pg 55]. Once these data had been analyzed the Study authors concluded:

> In summary, it was not possible to draw definitive conclusions from the analysis of criminal complaints. Land uses other than adult entertainment establishments, e.g., subway station access, appear to have a far stronger relationship to criminal complaints. It was not possible to isolate the impact of adult uses relative to criminal complaints. [DCP Study, pg 57.]

The Department of City Planning Study reached the following conclusion:

> The analysis of trends in assessed valuation relative to adult entertainment was inconclusive. It would appear that if adult entertainment uses have negative impacts, they are overwhelmed by other forces that increased property values, at least as measured by assessed values. Even at the small scale of the survey block front, there is a wide diversity in the assessed value trends ranging from an increase of more than 18 percent to an increase of more than 200 percent over the period of analysis, strongly suggesting the importance of other factors. The influences on assessed value that the city's assessors take into account are numerous and include the sale prices of similar comparable properties adjusted for differences in size, age, and location. While the total assessed values on the survey block fronts may be influenced to some extent by the presence of adult entertainment uses, demonstrating such effects is very difficult. [DCP Study, pg 57.]

Therefore, it is reasonable to conclude that the Department of City Planning Study finds no direct evidence of the adverse secondary effect of decreased property values caused by Adult Uses. The same may be said of crime effects. The City drew the following findings and conclusions:

> The analysis of criminal complaint data and property assessed valuation data was less conclusive than the surveys. Regarding criminal complaints, it appears that land uses other than adult entertainment establishments, e.g. subway station access, have a far

> stronger relationship to criminal complaints. It was not possible to isolate the impacts of adult uses relative to criminal complaints. ***
>
> Comparisons of percentage changes in assessed valuations between 1986 to 1992 [*sic*] for the study areas, survey and control block fronts, community district, and borough, did not reveal any significant relationship. It would appear that the negative impacts of adult entertainment uses on property values that were found in other studies were overwhelmed by forces that increased property values overall, at least as measured by assessed values. ***
>
> In some cases, particularly in study areas with only one adult entertainment establishment, the DCP survey did not yield conclusive evidence of a direct relationship between the adult use and the urban ills affecting the community. *** [DCP Study, pg 65.].

In summary, what can fairly be said about the New York City Department of City Planning is that it found no empirical evidence of adverse secondary effects of Adult Uses.

Recent Empirical Studies in Other Cities Also Show No Adverse Secondary Effects of Adult Cabarets

Recently, we have conducted independent, reliable studies using census data and modern analytical techniques to examine whether sexually oriented business facilities engender negative secondary effects. Unlike many of the previous studies these studies do not suffer from the basic methodological flaws we enumerate in *Paul I*.

The first of these studies is an examination of adult cabarets in the City of Ft. Wayne, Indiana, which serve alcoholic beverages and provide exotic entertainment (Paul and Linz, 2002).[3] This study was noted as one of the "top four refereed papers" of 2002-03 by the International Communication Association and also recently received the "Top Student Paper" award from the United States Department of Justice and thus has been vetted for its methodological soundness. Unlike previous studies, conducted in other municipalities, specific attention was given to developing an empirical approach that fulfilled the requirements set out by the Supreme Court for the proper conduct of a social

[3] Paul, B. & Linz, D. (2002). Testing Assumptions Made by the Supreme Court Concerning the Negative Secondary Effects of Adult Businesses: A Quasi-Experimental Approach to a First Amendment Issue. *(Paul II)*. This paper was presented at the 2002 International Communication Association, Acapulco, Mexico.

scientific inquiry. A 1000 feet circumference surrounding each of eight exotic dance nightclubs in Fort Wayne was established. Comparison areas were selected in the city of Fort Wayne and matched to the club areas on the basis of demographic features associated with crime and commercial property composition. The number of calls to the police from 1997-2000 in the areas surrounding the exotic dance nightclubs was compared to the number of calls found in the matched comparison areas.

The analysis showed little difference, overall, between the total number of calls to the police reported in the areas containing the exotic dance nightclubs and the total number of offenses reported in the comparison areas. We concluded there was little evidence of adverse secondary effects in the form of crime incidents in the City of Fort Wayne.

More recently, we conducted a study that sought to determine if a relationship exists between "adult" erotic dance clubs in Charlotte, North Carolina and negative secondary effects in the form of increased numbers of crimes reported in the areas surrounding the adult businesses (Linz, Land, Williams, Paul & Ezell, 2004).[4] This study was conducted jointly by researchers at the University of California at Santa Barbara and Duke University and is the only peer-reviewed published study of the secondary effects of adult businesses. For each of 20 businesses, a control site (matched on the basis of demographic characteristics related to crime risk) is compared for crime events over the period of three years (1998-2000) using data on crime incidents reported to the police. We find that the presence of an "adult nightclub" does not increase the number of crime incidents reported in localized areas surrounding the club (defined by circular areas with 500 and 1,000 feet radii) as compared to the number of crime incidents reported in comparable localized areas that do not contain such a sexually oriented business. Indeed, the analyses imply the opposite, namely, that the nearby areas surrounding the

[4] Linz, D., Land, K., Williams, J. Paul, B. & Ezell, M. (2004). An Examination of the Assumption that Adult businesses are Associated with Crime in Surrounding Areas: A Secondary Effects Study in Charlotte, North Carolina. Law and Society Review, Volume 38, Number 1, pp 69-104.

sexually oriented business sites have smaller numbers of reported crime incidents than do corresponding areas surrounding the three control sites studied.

We have also examined whether rates of crime are associated with the presence of "adult cabarets" in the 67 counties of Florida once other variables related to crime are controlled.[5] Three types of crime were examined in this study: UCR property crimes, UCR violent crimes, and rape.[6] A measure was also constructed for the numbers of non-sexually oriented adult businesses: bars, gambling establishments, and hotels and motels. These two measures, along with measures of social disorganization and demographic variables, were examined for their relative ability to predict the three rates of crime. One set of regression analyses used measures of sexually oriented businesses, both nude and partially-nude, based on absolute numbers. In subsequent analyses these measures were based on rates per 100K population or on spatial densities. Across all three analyses, measures of nude or semi-nude businesses were consistently unrelated to crime rates when other variables were taken into account. By contrast, measures of non-sexually oriented adult businesses showed strong relationships with property crimes and moderate relationships with violent crimes. These results are consistent with previous research using different methodologies and they support the predictions of routine activity theory. However, they cast doubt upon the validity of the doctrine of the adverse secondary effects of businesses offering nude or semi-nude entertainment.

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[5] Fisher, R., Linz, D., Benton, C., & Paul, B. Examining the Link Between Sexual Entertainment and Crime: The Presence of Adult Businesses and the Prediction of Crime Rates in Florida. Drs. Fisher is a member of the Department of Psychology of the University of Central Florida. One version of this paper was presented to the Communication Law and Policy Division at the 2004 annual meeting of the International Communication Association: New Orleans, LA and another version was presented to the 2004 annual meeting of the Southeastern Psychological Association in Atlanta, GA. Another version of this paper entitled: "Nude entertainment and rates of crime: An analysis by counties" by Randy D. Fisher, Charles Benton, and Jeanne L. Weaver of was presented at the 50th annual meeting of the Southeastern Psychological Association, Atlanta, GA, March 11, 2004. This version of the paper received an "Outstanding Professional Paper Award" from the Southern Psychological Association. Currently, the latest version of this paper is under review at the scientific peer-reviewed journal Law and Human Behavior.

[6] UCR refers to Uniform Crime Reports to the Federal Bureau of Investigation.

Finally, Linz and Mike Yao, of the Department of Communication of the University of California at Santa Barbara, have recently undertaken an investigation of crime rates (and contributing factors to the crime rates) in and around four major Ohio cities--Cleveland, Dayton, Toledo and Columbus. This study showed a lack of correlation between the presence of liquor-serving establishments featuring nude or partially nude dancing and crime. Hierarchical regression analysis in Toledo revealed that the presence or absence of "adult cabarets" in a given neighborhood did nothing to explain the presence of crime in that same neighborhood. Similarly, in Columbus, the addition of alcohol serving "adult cabarets" as a factor in our analysis resulted in approximately zero explanatory power. The work in Dayton revealed a negative correlation between "adult cabarets" and incidents of rape, such that the presence of an alcohol-serving adult entertainment establishment is actually indicative of less rather than more rape events. Finally, in Cleveland, we found that the addition of alcohol serving "adult cabarets" as a factor in his analysis also added "no ability to explain crime incidents. We suggest that the negative correlation between "adult establishments" and violent crime might be explained by the fact that in alcohol serving establishments that do not feature sexually oriented entertainment, people fight with one another particularly men over women. None of that exists in an "adult" entertainment venue. This study has been introduced as testimony in United States District Court for the Northern District of Ohio, Eastern Division in the case: J.L. Spoons, Inc., et al., v. Kenneth Morckel, et al. 314 F Supp. 2nd 746, ND Ohio, April 1, 2004. In this case the court noted:

> Dr. Linz's study shows a lack of correlation between the presence of liquor-serving establishments featuring nude or semi-nude dancing and the types of crime the State seeks to reduce. (See Transcript of March 12 Hearing, at 25-56). In Toledo, Dr. Linz's hierarchical regression analysis revealed that the presence or absence of adult cabarets in a given neighborhood did approximately nothing to explain the presence of crime in that same neighborhood. Transcript of March 12 Hearing at 39, 45-46. Similarly, in Columbus, the addition of "alcohol-serving adult cabarets" as a factor in Dr. Linz's analysis resulted in approximately "zero explanatory power." Transcript of March 12

> Hearing at 46. In Dayton, Dr. Linz's work revealed a negative correlation between adult cabarets and incidents of rape, such that "the presence of [an alcohol-serving adult entertainment] establishment is actually indicative of less rather than more rape events." Transcript of March 12 Hearing at 52. Finally, in Cleveland, Dr. Linz found that the addition of "alcohol-serving adult cabarets" as a factor in his analysis also added "no ability to [explain] crime incidents." Transcript of March 12 Hearing at 54. The Court is uncertain to what extent the Supreme Court would advocate that we simply approve the State's reliance on "propositions ... well established in common experience and ... zoning policies that we have already examined," Alameda Books, 535 U.S. at 453, and ignore the implications of more persuasive, if counterintuitive, evidence like Dr. Linz's study. Clearer guidance in this area would greatly aid the Court in determining whether the club owners have established a strong likelihood of success on a claim that no restriction on nudity could possibly further the State's interest in reducing secondary effects.

The Present Study

The purpose of the present study is to conduct the type of empirical study in New York City designed to avoid the collection of "shoddy data" and the use of (shoddy) "reasoning" as demanded in Alameda Books, in order to determine if a relationship exists between (a) eating and drinking establishments that feature adult entertainment in less than forty percent (40%) of the customer accessible floor area (referred to as "60/40" businesses) and (b) negative secondary effects. Further, this evidence is obtained in accordance with established methodological procedures so as to insure a high level of scientific reliability and admissibility in a Federal court.

Hypotheses to be tested. Three hypotheses concerning secondary effects are tested in this study, using calls for service to the New York City Police within local neighborhoods defined by census blocks. If secondary effects are associated with 60/40 eating or drinking establishments in New York City, we would expect the following: 1) The presence of "60/40" eating or drinking establishments in New York City will be associated with a higher number of crime incidents reported in localized areas surrounding these businesses compared to the number of crime incidents reported in comparable

localized areas that do not contain these businesses; 2) Such businesses will rank among the "hotspots" of crime and disorder in the community in which they located; and 3) Changes in the presence or absence of these businesses in the community will be associated with increases and decreases in crime. When a sexually oriented business ceases operation, crime events should subside; when such a business opens, crime events should increase.

Analysis strategy. To test these hypotheses we first conduct regression analyses wherein the blocks with 60/40 clubs are compared to surrounding blocks that do not contain such businesses, while statistically controlling for demographic features of the blocks that are known to be related to crime. The methodological approach taken here also involves two additional analyses. We undertake a "hotspot" analysis within the neighborhood where the sexually oriented 60/40 business is located. This focused analysis, by specific address, allows us to determine if such businesses have required special attention from the police or if other addresses in the immediate neighborhood are more often the source of police attention than similar locations on comparable blocks. Finally, we undertake a before-after analysis wherein we examined crime one year before and one year after sexually oriented 60/40 business openings and closings. We compare the crime change or lack thereof before and after the openings and closings.

METHOD

Overview

The following procedures were utilized in the present study. We obtained a list of 60/40 eating or drinking establishments from the City of New York. We plotted the 60/40 businesses using geographic mapping software. This geo-mapping software was then used to locate census blocks within which the 60/40 businesses were located ("target" blocks) and surrounding census blocks. We then obtained block-level census demographic information for each of the target and surrounding blocks.

Crime and disorder incidents were then plotted and aggregated by census blocks. Analyses were then performed using these census blocks and crime incident counts within each.

Locating the 60/40 Businesses with Geographic Mapping Software

A list of 60/40 eating or drinking establishments in New York City by address was obtained from the City of New York. The list, entitled: "Adult Establishments, 2000," was prepared for the March 26, 2001 Report to the City Planning Commission. As the report indicates, the number and locations of 60/40 establishments as of any given date may vary slightly from the information presented in the report, and the list was not intended to be used officially or to be relied upon for regulatory or enforcement purposes. The irony of such a disclaimer is patent. However, that being said, this list - - whatever its limitations - - represents New York City's best judgment as to where the 60/40 businesses are located at the time of the study.

The following 60/40 eating or drinking establishments were examined in the present study. The list of businesses was grouped according to three criteria: a) 60/40 businesses open throughout the entire study period of 1998 to June 2002; b) businesses opening, closing, or changing entertainment formats between January 1998 and June 2002; and c) businesses that were listed by the City of New York as 60/40 businesses for which we could not obtain information concerning openings, closings or change in status as 60/40 uses.

60/40 Businesses Open Throughout the Period of 1998 to June 2002

Business Name	Address
Pussycat Lounge	96 Greenwich St.
NY Dolls	59 Murray St.
Baby Doll Lounge	34 White St.
VIP Club	20 W. 20th St.
Tens	35 E. 21st St.
Private Eyes	320 W. 45th St.
Lace	725 7th Ave.
Bare Elegance	216 W. 50th St.
Scores	333 E. 60th St.
Vixen	60-07 Metropolitan Ave.

Wiggles	96-24 Queens Blvd.
Cozy Cabin	92-03 Astoria Blvd.
Goldfingers	92-77 Queens Blvd.
Port O'Call	93-10 Woodhaven Blvd.
Al's Mr. Wedge	673 Hunts Point Ave.

Businesses Opening, Closing, Changing Format Between January 1998 and June 2002

Business Name	Address	Change
Billy's Topless	729 Avenue of the Americas	no longer topless in 01
Club 44	689 8th Ave.	opened in October of 2001
Gallaghers	39-33 Queens Blvd.	closed in mid 2000
Gallaghers 2000	43-19 37th street	opened in end of 2000
Wiggles	96-24 Queens Blvd.	1993
Cozy Cabin	92-03 Astoria Blvd.	pre 98
Goldfingers	92-77 Queens Blvd.	pre 98
Candlewood Inn new address	32-17 College Point Blvd.	opened in 2000
Candlewood Inn old address	41-57 College Point Blvd.	closed in 2000

Businesses that were listed by the City of New York but that could not be contacted (2004) to determine change in status as 60/40 uses.

Business Name	Address	Confirmation Status
Sidebar	45-08 Vernon Blvd.	Could not determine change in status
Foxes	32-37 Greenpoint Ave.	Could not determine change in status
New York Style Eats	45-02 Queens Blvd.	Could not determine change in status
Honey's	49-14 Queens Blvd.	Could not determine change in status
Nickels	69-20 Queens Blvd.	Could not determine change in status
Ilada's II	81-26 Baxter Ave.	Could not determine change in status
Fiddle & Bow	92-07 Roosevelt Ave.	Could not determine change in status
Johnny Jays	112-08 Astoria Blvd.	Could not determine change in status
Café Europa	94-02 Sutphin Blvd.	Could not determine change in status
Devine Club	611 E. 133rd St.	Could not determine change in status
Stacy's	1098 Lafayette Ave.	Could not determine change in status
El Coche	910 Hunts Point Ave.	Could not determine change in status
Vibrations	20-31 129th St.	Could not determine change in status
Juniors	1625 E. 233rd St.	Could not determine change in status

The standard geographic information system computer program known as “Maptitude,” produced by the Caliper Corporation, of Newtown, MA, was then used to locate the Census Block, Census Block Group and Census Tract within which each 60/40 business was located.

Using Census Blocks and Block Groups within Tracts for Analyses

The U.S. Census Bureau keeps track of geographic boundaries for tabulation purposes. In addition to political boundaries such as states, counties, and cities, the Census Bureau also creates census geography so that census data can be tabulated to smaller units. In this study we utilize the Census Bureau's geographic boundaries. Our units of analysis are census blocks housed within a block group, which is in turn, drawn from within census tracts.

Tracts are a small, relatively permanent statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting census data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other non-visible features, and they always nest within counties. Census tracts are designed to be relatively homogenous units with respect to population characteristics, economic status, and living conditions at the time the users established them. They usually contain 1,500 to 8,000 people and are made up of on average about four block groups. There are about 66,000 tracts nationwide.

Census Blocks are the smallest entity for which the Census Bureau collects and tabulates census information. There are about 8.5 million blocks nationwide. Block Groups are a combination of census blocks that are adjacent to one another and are also a subdivision of census tracts. Block groups generally contain between 600 and 3000 people and are made up of on average 40 census blocks. There are about 211,000 block groups nationwide. Census block groups in Manhattan are made of considerably fewer blocks that the national average due to the density of the population.

For the present study, 179 Block Groups, made up of 967 Blocks, were included in the analyses. Block groups were included if any of the following conditions were met: a) one or more Blocks in the Block Group contains a 60/40 business, b) one or more blocks containing a 60/40 business directly

touches one or more Blocks in a block group; c) one or more blocks in the Block Group are within 500 feet of a 60/40 business.

Using Block Level Census Demographic Information

Using Maptitude, we are also able to include general demographic characteristics of each block in the study as officially measured by the 2000 United States Census. These variables include measures of population, sex, age, race, relationships in household, and household type for each block. These demographic characteristics are used to control for social features in the environment that may co-vary with the frequency of calls to the police.

Several variables that have been investigated by others have been found to be important as predictors of crime activity. These include measures of racial composition, family structure, economic composition, and the presence of motivated offenders including males between the ages of 18 and 25. These variables have been examined on the basis of the theory that a local area's population age structure (especially the presence of young male adults), and its race/ethnic composition can affect both the size of the pool of motivated crime offenders and the presence of suitable targets for predatory crimes.[7]

The demographic variable predictors in the present study included: a) the number of males over the age of 18 in the block, b) the number of African-Americans,[8] c) the number of persons classifying

[7] Menthe, T. D., & Meier, R. F. (1994). Crime and Its Social Context: Toward an Integrated Theory of Offenders, Victims, and Situations. Albany, NY: State University of New York Press. The use of these variables as demographic variable predictors is also justified by investigations undertaken by sociologists who have examined community traits to explain crime. Janet L. Lauritsen has summarized this research for the Panel on the Understanding and Control of Violence of the National Research Council, National Academy of Sciences. She relies extensively on an article by Sampson, R. J. (1993) entitled: "The community context of violent crime" which appeared in W. J. Wilson (Eds.), (pp. 274-279). Newbury Park, CA: Sage Publications. Pp. 259-67.

[8] We were unable to employ an income measure in the present study due to the fact that these data are available at the census block group level only. We employ the smaller census block as our unit of analysis. We consider the number of African Americans as a surrogate for such an income or poverty measure. Studies uniformly have found much higher rates of violence in predominantly black communities (Block 1979; Messner and Tardiff 1986; Sampson 1985; Roncek 1981; Smith and Jarjoura 1988). However, this effect largely disappears when researchers include other variables related to race (Block 1979). Sampson warns that: "…although percentage black and heterogeneity are strong and pervasive correlates of violent crime rates," "…there is reason to doubt whether racial composition has unique explanatory power." The Southern

themselves as Hispanic, d) the number of households comprised of at least one non-family member, and e) the number of households comprised of only related family members in the block.[9]

One analysis strategy will entail entering these variables into a statistical analysis to control for the effects of these characteristics on calls to the police and then to test the effect of having a 60/40 business in the neighborhood once these other variables are statistically controlled.

Measuring Crime and Disorder Incidents

The City of New York Police Department provided a CD-ROM disk for each of the years 1998 through 2001, as well as the partial year January 1 through June 2, 2002. These CDs contain a listing of all calls for service across the five boroughs for a particular year. The entire 1999 data set consisted of over 4.5 million individual lines of data, while the 2000 data set included over 5.5 million lines. Each line ideally chronicles an individual incident, whether warranted or unwarranted, for which some sort of police action was taken. We received data from the NYPD for January 1st 1998 through June 2nd 2002.

Poverty Law Center (http://www.splcenter.org/intel/intelreport/article.jsp?) offers the following summary of criminological research on race and income: "The fundamental conclusion of decades of serious criminology is that crime is intimately related to poverty. In fact, when multivariate statistical methods such as regression analysis are used, study after study has shown that race has little, if any, predictive power. This basic fact is so well understood among scholars of criminal justice that the preface to Minnesota's official crime data reports carries this caveat: 'Racial and ethnic data must be treated with caution. ... Existing research on crime has generally shown that racial or ethnic identity is not predictive of criminal behavior with data which has been controlled for social and economic factors.' When more sophisticated methodology is employed, socioeconomic factors including poverty, education, social status and urban residence account far better for criminal behavior than race. Above all, income counts. It is precisely because being black in America is closely correlated with being poor, suffering from high unemployment and having low levels of education that the black community has relatively high crime rates." In addition, a study using 1960, 1970, and 1980 census data on cities, metropolitan areas, and states found that large, dense populations are associated with high homicide rates when the population is relatively poor, largely black, and has a high percentage of single-parent families (Land, McCall, and Cohen 1990). The increasing concentration of poor blacks in high-crime areas coincides with the deindustrialization of inner cities, according to the National Academy of Sciences summary by Sampson. "Namely, the exodus of middle- and upper income black families from the inner city removes an important social buffer that could deflect the full impact of prolonged joblessness and industrial transformation." When upwardly mobile blacks move to higher socioeconomic neighborhoods the crime-race relationship disappears. Further, it is important to note that crime in black neighborhoods is usually a matter of blacks victimizing other blacks.

[9] We employ measures of unrelated members in the household and household comprised of only family members as indices of family disorder. Many recent studies have reported an important relationship between divorce rates, or the percentage of female-headed households, and rates of violent crime independent of the community's poverty level or racial composition (Block 1979; Roncek 1981; Schuerman and Kobrin 1986; Sampson 1985, 1986). In fact, the relationship between race and crime disappears when family disruption is taken into account (Sampson 1985; Messner and Tardiff 1986; Smith and Jarjoura 1988). "Overall," concludes Sampson, "the correlation of family structure with violence is not simply the result of other factors we typically consider, such as poverty, race, and density. Rather, the effect of family disruption appears to be independent and large."

The total number of incidents for each year were as follows: 1998 - 4,472,686 incidents; 1999 - 5,247,002 incidents; 2000 - 4,883,827 incidents; 2001 - 4,481,471 incidents; 2002 – 2,047,534 incidents (only half the year). The total number of incidents originally considered was 21,132,520.

Use of Calls-for-Service (CFS) as a Crime and Disorder Indicator

Criminologists employ a variety of measures of crime. Each measure has unique advantages and disadvantages. All measures have error associated with them and may be biased to one degree or another. Many criminologists have employed an indicator of crime using records of citizen's telephone calls for service to police dispatch centers to measure the relative frequency of crime at the level of the individual address (Sherman et al., 1989), the neighborhood (Bursik et al., 1990; Warner and Pierce, 1993) and the municipality viewed as a whole (Bursik and Grasmick, 1993).

According to its proponents, the calls-for-service (CFS) measure offers a more valid description of aggregate levels of crime than either police records collated in the FBI's Uniform Crime Reports (UCR) or victimization data collected in the National Crime Survey.[10] This is so because at least two factors contribute to measurement bias in UCR data: citizen's decisions about whether to notify the police about criminal activity, and police decisions about whether to take (i.e., record) reports when citizens inform them that crimes have occurred (e.g., Black, 1970).

Further, UCRs have additional problems which prevent them from being the only acceptable means of measuring crime. Several of these problems are enumerated by the Wisconsin Office of Justice Assistance (WOJA) Statistical Analysis Center (May, 2004).[11] According to WOJA, since the

[10] Sources of bias in victimization data include, but are not limited to, citizens' failure to report crimes to interviewers, as well as other problems that are common to survey research; for example, errors associated with interviewer effects and other response biases (e.g., Bailey et al., 1978; Biderman and Lynch, 1991). Advocates of CFS as measures of crime reason that CFS are more valid than victimization crime counts because they are not subject to response or memory problems inherent in surveys.

[11] The Wisconsin Statistical Analysis Center is a program of the Wisconsin Office of Justice Assistance. The Center collects, analyzes, interprets and disseminates criminal justice data in Wisconsin. It operates the State's Uniform Crime Reporting

establishment of the Uniform Crime Reporting (UCR) Program in 1930, the volume, diversity, and complexity of crime has steadily increased while the UCR Program has remained virtually unchanged. This is such a severe problem that WOJA is working with police and other law enforcement agencies across the state to eliminate reliance on this flawed system of crime reporting.

In the traditional UCR system, law enforcement agencies tally the number of occurrences of Part I offenses, as well as arrest data for both Part I and Part II offenses, and submit aggregate counts of the collected data in monthly summary reports to the State. The problem is that there is no requirement to tie arrests and exceptional clearances back to previously submitted incident reports. Therefore, the traditional UCR Program can be described as a "summary reporting" system.

In fact, the UCR does not even try to count all crimes reported to the police. What are referred to as index offenses--also called Part 1 crimes--are counted if these offenses are reported to police (and recorded by police). Index offenses include murder and non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft. Other offenses, referred to as Part II crimes, are counted only if a person has been arrested and charged with a crime. The UCR therefore does not include such offenses as shoplifting, drug sale or use, fraud, prostitution, simple assault, vandalism, receiving stolen property, and all other non-traffic offenses unless someone is arrested. This means that a large number of crimes reported to the police are not measured by UCR.

Because the UCR reporting system is so fraught with problems, the U. S. Department of Justice has formally called for a scrapping of the UCR system in favor of a better data collection system relying on crime incidents. Specifically because the UCR system is seen as outdated and outmoded, the Justice Department is replacing its long-established Uniform Crime Reporting (UCR) system with the more

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Program, and a Juvenile Detention Information System, which collects and analyzes information on secure detention of juveniles in the state.

comprehensive National Incident-Based Reporting System (NIBRS).[12] For a crime to be counted in the system, it simply needs to be reported and investigated. It is not necessary that an incident be cleared or an arrest made, although unfounded reports are deleted from the record. The first step to these investigations and reports is the call for service.

Proponents of CFS further assert that the measure is superior to UCR records because dispatch data reflect callers' descriptions of events before officers arrive on the scene, thus eliminating bias in UCR data introduced by police behavior. Indeed, as long as researchers weed out multiple calls regarding the same incident, CFS is biased only by citizens' willingness to report crimes (Warner and Pierce, 1993).

In the secondary effects debate, calls for service have been routinely used as an index of crime effects. Several of the most frequently cited secondary effects reports by other communities as evidence of secondary effects use incident data based on calls for service. We list these studies below.[13] More

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[12] See,e.g., http://www.ojp.usdoj.gov/bjs/nibrs.htm.

[13] A. The *Phoenix, Arizona, 1994*. Adult business study: impacts in late evening/early morning hours. City of Phoenix Planning department, June 1994: "The sexually oriented business **calls for service** survey on the six selected adult entertainment centers and six control locations were done to determine what type of calls were reported from the site and how frequently they were being reported per time of day. The statistics were based on data obtained from the Planning and research bureau of the Phoenix Police department." [Pg. 6; emphasis added.]

B. *The Malin Group Study, Dallas 1997*. An Analysis of the effects of SOBs on Neighborhoods in Dallas Texas: As of April 1997, Prepared for Ms. Sangeeta Kuruppillai, Assistant City Attorney, City of Dallas, Prepared by Peter Malin, MAI. "We studied **police calls for service** emanating from 10 different SOBs over a four year period…." (Emphasis added.)

C. *Austin, Texas*: "The study collected data for 45 serious criminal offenses, termed part 1 crimes by the Uniform Crime Report, and 21 sexually related criminal offenses. …The data collected **represents calls to the Austin Police Department** from January 1, 1984 through December 31, 1985. Crime rates are expressed as the number of reported incidents per 1000 area residents." (Pg. 16; mphasis added.)

D. *Fulton County, GA*. Captain Ron and Lt. Sue Miller; Fulton County Police: Study of Calls for Service to Adult Entertainment Establishments which Serve Alcoholic Beverages, June, 1995 - May, 1997; Fulton County Police Department; Atlanta, Georgia; June 13, 1997, vetted by the 11th Circuit Court U.S. of Appeals, contains the following description: "The statistical information included in this study was obtained through the Fulton County Police Departments [sic] computerized incident and **calls for service** reporting program. Each call for police assistance, if taken over 911 enhance, is captured by a communication assisted dispatch (CAD) system. This information is available on every address in Unincorporated Fulton County where the police department is dispatched. Each report that is generated from a police call for service is identified with a departmental case number that is unique to that reported incident. (It should be noted that a police report is not generated for every call for service, and that officer initiated calls are not captured on the CAD system)." (Emphasis added.)

broadly, in the criminal justice research literature, calls for service are often used as the pertinent data. We have also located five recent criminological publications *not in the secondary effects area* using CFS data.[14] Clearly, these investigators believe that the CFS measure an important criminal justice crime concept or they would not have employed them.

What CFS measure is extremely useful for the study of secondary effects of sexually oriented businesses. There are several reasons why calls for service are extremely useful for the secondary effects debate. CFS are a far more comprehensive index of both police activity and crime activity and thus a far more comprehensive indicator of secondary effects than are UCRs. For example, the crimes against person index we employ in the present study is composed of assault, cutting/stabbing, fight, kidnapping, robbery alarm, robbery business, robbery person and shooting. None of these individual crime related activities would come to light with the summary based UCR system which is a small subset of CFS. CFS is a much better index of the expenditure of police resources. CFS measure the days, the times during the day and night, as well as the number, of dispatches and calls to which the police are responding in a community.

CFS is a better measure of so called "blight" than UCR based crime accounting. It is impossible to measure blight--a highly critical aspect of the secondary effects debate--with UCRs. Neighborhood problems may not rise to the level of UCR crime but trouble residents nonetheless. These blight incidents often include police responses to public disorder and disturbance, drunken subjects, noise

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E. *Newport News Virginia*: "Of the more than 100 dispatch codes for different types of **police calls for service**, the Police department identified 32 dispatch codes for incidents that would impact an adjoining business or residential area." (Pg. 8; emphasis added.)

[14] These article are:

A. Carter, S.P., et. al., Zoning Out Crime and Improving Community Health in Sarasota, Florida: "Crime Prevention Through Environmental Design". American Journal of Public Health v. 93 no. 9 (September 2003) p. 1442-5.

B. Cohn, E.G., et. al., Even criminals take a holiday: Instrumental and expressive crimes on major and minor holidays. Journal of Criminal Justice v. 31 no. 4 (July/August 2003) p. 351-60.

C. Smith, M.R. Police-led crackdowns and cleanups: an evaluation of a crime control initiative in Richmond, Virginia. Crime & Delinquency v. 47 no. 1 (January 2001) p. 60-83.

D. Rotton, J., et. al., Violence is a curvilinear function of temperature in Dallas: a replication. Journal of Personality and Social Psychology v. 78 no. 6 (June 2000) p. 1074-81.

E. Verma, A. The fractal dimension of policing. Journal of Criminal Justice v. 26 no. 5 (1998) p. 425-35.

disturbances and loud disturbing parties. Other minor offenses such as gambling law violations, harassment, subject pursuits, suspicious activity, suspicious vehicle, threats and trespassing are measured by CFS and are ignored by a UCR-based system. In summary, the use of CFS provides a much more comprehensive and complete picture of the possible adverse secondary effects of sexually oriented businesses in a community (or the absence of such secondary effects, as the case may be) than the use of the far more circumscribed measures such as UCRs.

The most serious source of bias in CFS data is the process by which police discover crimes--many come to their attention via means other than phone calls to dispatch centers. For example, citizens sometimes report crimes directly to officers on patrol and at station houses. Further, officers often observe criminal activity while patrolling their beats (Reiss, 1971). Errors in CFS crime counts also vary according to neighborhood. Dispatch data are more likely to undercount the total number of crimes that come to the attention of the police in neighborhoods where residents believe that officers respond more slowly to their calls, where residents are more fearful of crime (or the police), and where they experience more criminal victimization.

Crime Incident Filters

Several filters were used to make the data set more manageable. The first filter was the precinct in which each incident occurred. New York is policed at a precinct level. There are 77 separate precincts. Each crime incident in the data set included the precinct in which the incident was said to have occurred. We examined the location of the 60/40 businesses we intended to include in the analysis. The City provided us with a list of such businesses. We only included those businesses for which we could confirm specific operation dates occurring during the 54 months for which we had data. This included businesses that opened or closed during the 54 month period, but not those for which we could not confirm opening, closing, or operation throughout the period as a 60/40 use establishment. We

filtered out any incident not occurring in a precinct containing a 60/40 business, or a precinct touching a precinct containing a 60/40 business. This included a total of 21 separate precincts. The precincts included in the study were: 1, 5, 10, 13, 14, 17, 18, 19, 40, 41, 47, 94, 102, 103, 104, 107, 108, 109, 110, 112, and 115. Within these precincts we chose only those incident codes (as assigned by the NYPD) that were relevant for our analysis. Finally, only those incidents for which the final disposition codes indicated that a report was filed regarding the incident and/or an arrest was made were included in the final data set.

Plotting the Calls for Service to the Police by Address

These filtered data were then plotted using the Maptitude GIS software. This process resulted in the crime incident categories displayed in **Table 1.** A total 1,013,062 combined plotted crime incidents were included in the subsequent statistical analyses.[15]

RESULTS

Three types of analyses are employed for the plotted incidents: 1) multiple regression analyses are performed wherein the census blocks with 60/40 businesses are compared to surrounding blocks that do not contain such businesses while statistically controlling for demographic features known to be related to crime; 2) "hotspot' analyses wherein the 60/40 business address is ranked among other addresses in the census blocks in terms of the frequency of calls for service to the police; 3) before-after analyses are undertaken using businesses that had opened closed or changed formats during the study period and

Hierarchical Regression Analyses using Demographic Variables and Proximity to 60/40 club.

The first analysis was designed to answer the question: once we have statistically controlled for social characteristics of the neighborhood (census block) known to be related to crime and community

[15] We believe this is the largest data set ever plotted in a study of this kind.

disorder, what is the effect of the presence of a 60/40 eating or drinking establishment on crime and disorder?

Proximity to 60/40 club. A variable was created to represent the proximity of census blocks within the surrounding block groups to the "target" block containing the 60/40 establishment. Figure 2 provides an example of coding scheme for proximity to 60/40. A "1" was assigned to the block containing the 60/40 business. Blocks adjacent to the target block were assigned a "2." Blocks adjacent to those were assigned a "3," and finally, those adjacent to these blocks were assigned a "4." (As noted above, a total of 179 Block Groups, made up of 967 Blocks, were included in the analyses. Block Groups were included if any of the following conditions were met: a) one or more Blocks in the Block Group contains a 60/40 business, b) one or more blocks containing a 60/40 business directly touches one or more Blocks in a block group; c) one or more blocks in the Block Group are within 500 feet of a 60/40 business.)

Hierarchical regression analyses. Regression models were developed to formally test effect of having a 60/40 eating or drinking establishment in a neighborhood once these factors were taken into consideration. A series of hierarchical regressions were performed. The demographic variable predictors included the number of males over the age of 18 in the block, the number of African Americans, the number of persons classifying themselves as Hispanic, the number of households comprised of at least one non-family member, and the number of households comprised of only related family members in the block.

The variable representing club proximity was entered as a last step in the model.

The models for each crime incident outcome variable are presented in **Tables 2 - 6**. **Table 2** displays the hierarchical regression analyses for crimes against persons using all 60/40 businesses in New York City. As can be seen from **Table 2,** the first variable, number of males in the population 18

years and over was significantly related to calls for service to the police, explaining three-percent of the variability in calls for service across the census blocks. Examination of the coefficients for this stage of the model revealed a positive Beta coefficient. Thus, the larger the number of males over the age of 18 in the census block, the greater the number of calls for service to the police. The next variable group added to the equation was comprised of variables measuring the number of African Americans and Hispanics in the population of the block. This variable group explained approximately an additional 4 percent of the variability in calls to the police across the census blocks. Examination of the coefficients indicated a positive Beta coefficient for Blacks and a negative coefficient for Hispanics. The addition of the social disorganization variables measuring household composition also contributed to explaining the variability in calls for service, increasing the amount of variance in calls for service to approximately 14 percent. Examination of the coefficients indicated that the greater the number of households containing related family members only, the fewer the calls for police service, while the presence of households with non-family members in them in the neighborhood was positively related to calls for service.[16]

[16] Additional explanatory power in the variability in calls for service to the police in New York City would undoubtedly be gained with the inclusion of a variable in the model measuring the presence of alcohol serving and selling establishments. Overall, researchers have marshaled impressive evidence indicating that alcohol outlets influence crimes of rape, assault, homicide, robberies, auto-theft, public intoxication, and drunk driving. See: Scribner, R. A., MacKinnon, D. P., & Dwyer, J. H. (1995). Relative risk of assaultive violence and alcohol availability in Los Angeles County. *American Journal of Public Health*, 85, 335-340; Sherman, L. W., Gartin, E., & Buerger, M. E. (1989). Hot spots of predatory crime: Routine activities and the criminology of place. *Criminology*, 27, 27-56; Roncek, D. W., & Maier, P. A. (1991). Bars, blocks, and crimes revisited: Linking the theory of routine activities to the empiricism of hot spots. *Criminology*, 29, 725-753; Watts, R. K., & Rabow, J. (1983). Alcohol availability and alcohol related problems in 213 California cities. *Alcoholism: Clinical and Experimental Research*, 7, 47-58; Nielsen, A. L., & Martinez, R., Jr. (2003). Reassessing the alcohol-violence linkage: Results from a multiethnic city. *Justice Quarterly*, 3, 445-469; Parker, 1995, 1993; Parker & Rebhum, 1995). Some studies have posited a stronger effect for bars on crime, compared to other social disorganization predictors (Roncek, D. W., & Bell, R. (1981). Bars, blocks, and crime. *Journal of Environmental Systems*, 11, 35-47.; Roncek, D. W., & Maier, P. A. (1991). Bars, blocks, and crimes revisited: Linking the theory of routine activities to the empiricism of hot spots. *Criminology*, 29, 725-753; Roncek, D. W., & Pravatiner, M. A. (1989). Additional evidence that that taverns enhance nearby crime. *Sociology and Social Research*, 73, 185-188; Zahn, M. (1998). *Homicide and public policy*. Ninth Annual Walter C. Reckless Memorial Lecture, Columbus, OH: Criminal Justice Research Center, Ohio State University; Nielsen, A. L., & Martinez, R., Jr. (2003). Reassessing the alcohol-violence linkage: Results from a multiethnic city. *Justice Quarterly*, 3, 445-469.) Alaniz et al. (1998) examined the connection between immigrants and violence across three California communities (Alaniz, M. L., Cartmill, R. S., & Parker, R. N. (1998). Immigrants and violence: The importance of neighborhood context. *Hispanic Journal of Behavioral Sciences*, 20, 155-174; Peterson, R. D., Krivo, L. J., & Harris, M. A. (2000). Disadvantage and neighborhood violent crime: Do local institutions matter? *Journal of Research in Crime and Delinquency*, 37, 32-63.

Most importantly for the purposes of this study, the addition of the variable measuring the proximity of surrounding census blocks to the census block containing the 60/40 establishments added no statistically significant explanatory power to the regression equation.

Where there are meaningless but statistically significant relationships due to the exceptionally large N (sample size) employed in the analyses (at times nearly 1,000 census blocks), we favor "strength" over a technical "significance." In this regard, we follow what has been called the Hays' "testmanship" dictum, which teaches that with sufficiently large N virtually any difference between compared means (or correlations between two variables) becomes statistically significant.[17] Consequently, in the analyses we acknowledge Kerlinger's admonition that the strength of a relationship is of primary importance; the significance of the relationship is ancillary to the question of how much of the variance has been accounted for.[18]

We most often focus on the so called "effect size" as an indication of the importance of one or several variables in "explaining" or accounting for the variability in crime incidents across census blocks in Daytona Beach. As a simple rule of thumb, Cohen (1988) suggests that a "small" effect has a mean

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In addition, Plaintiffs in the case: TEN'S CABARET, INC. Formerly Known as STRINGFELLOW'S OF NEW YORK, LTD., Plaintiff v. CITY OF NEW YORK et al., Defendants. PUSSYCAT LOUNGE, INC., Plaintiff, v. CITY OF NEW YORK et al., Defendants. Index No. 121197/02, Index No. 122740/02. SUPREME COURT OF NEW YORK, NEW YORK COUNTY *1 Misc. 3d 399; 768 N.Y.S.2d 786; 2003 N.Y. Misc. LEXIS 1163* September 9, 2003, have presented data demonstrating that 60/40 businesses do not cause the secondary effects of increased crime. (Ten's Cabaret Exhibit D, 2/2001 Police Report). These data consist of a "hotspot" ranking of businesses by police that are crime and disorder problems for the neighborhood. We have also examined these data and conclude that the 60/40 businesses do not appear as significant sources of crime and disorder by the police' own ranking method. Instead, alcohol serving businesses that are not 60/40 eating or drinking establishments were by far the source of greatest police concern.

The failure to account for these alcohol-serving businesses in the same block as the 60/40 businesses in the present study may also contribute to the technically significant relationships for the addition of the proximity variable reported below.

[17] Hays, W.L. Statistics for the social sciences (2nd ed.) New York; Holt Rinehart and Winston, 1973. Hayes "testmanship" dictum states: "There is surely nothing on earth that is completely independent of anything else. The strength of an association may approach zero, but it should seldom or never be exactly zero. If one applies a large enough sample of the study of any relation, trivial or meaningless as it may be, sooner or later a significant result will almost certainly be achieved. This kind of problem occurs when too much attention is paid to the significance tests and too little to the degree of statistical association the finding represents. This clutters up the literature with findings that are often not worth pursuing and which serve only to obscure the really important predictive relations that occasionally appear."

[18] Kerlinger, F.N. & Pedhazur, E.J. (1973). Multiple regression in behavioral research. New York: Holt, Rinehart, and Winston.

correlation (or Beta) coefficient of 0.10 (i.e. explains 1% of the variance since R^2=1%), a "medium" effect has a coefficient of 0.30 (i.e. explains 9% of the variance), and a "large" effect has a coefficient of 0.50 (i.e. explains 25% of the variance). [19] Any effect size approaching 1 percent is therefore essentially trivial; and any effect size below 1 percent is extremely suspect as an indicator of an important effect even though such trivial amounts of variance explained may be technically statistically significant.

Table 3 presents the hierarchical regression analyses for crimes against property using all 60/40 businesses in New York City. A very similar pattern of results was obtained for property crime incidents as crimes against persons. Overall, while more variability was explained in these crime events (nearly twice as much, or 34 percent) the pattern of coefficients remained the same. The addition of the variable measuring the proximity of surrounding census blocks to the census block containing the 60/40 establishment added only three tenths of one percent to the explanatory power to the regression equation. While technically "statistically significant," the addition is substantively meaningless.

Table 4 presents the hierarchical regression analyses for disturbing the peace using all 60/40 businesses in New York City. A very similar pattern of results was obtained for these incidents as in the case of crimes against property.

Table 5 presents the hierarchical regression analyses for drug-related crimes using all 60/40 businesses in New York City. Overall, the model did a poor job of explaining the drug-related crimes. The addition of the variable measuring the proximity of surrounding census blocks to the census block containing the 60/40 establishment added no explanatory power to the regression equation.

Table 6 presents the regression analyses for sex crimes using all 60/40 businesses in New York City. These results may be interpreted as indicating that while calls for service to the police in a particular neighborhood may be attributable to social factors such as the presence of young male adults, and its race/ethnic composition (variables that are determinants of the size of the pool of motivated

[19] Cohen (1988) *Statistical power analysis for the behavioral sciences*, 2nd edition. Hillsdale, NJ: Erlbaum.)

crime offenders and the presence of suitable targets for predatory crimes), calls to the police are not related to the presence of a 60/40 adult eating drinking establishment in the neighborhood. These findings cast at least substantial doubt on the theory that 60/40 businesses or the nature of their entertainment is significantly associated with crime events in a neighborhood.

Should be noted that there are very few incidents of prostitution--only 41 incidents.

"Hotspot' analyses. A "hotspot' analyses wherein the 60/40 business address is ranked among other addresses in the census blocks in terms of the frequency of calls for service to the police was also undertaken. A "hotspot" analysis was conducted to answer this question: Do 60/40 businesses rank among the "hotspots" of crime and disorder in the community in which they located?

The "hotspot" methodology used in the present study follows that employed in the Garden Grove Study (1991). The Garden Grove Study was an attempt to determine if adult businesses in the City of Garden Grove, CA constituted a public safety hazard. The authors undertake a "hotspot" analysis (see page 23) by establishing the relative rank of sexually oriented business addresses versus other business addresses in the immediate area in terms of crime frequency.

Table 7 displays the results of a "hot spot" analyses within the census block surrounding each 60/40 business open throughout the period of 1998 to June 2002. In the table we provide the number and percentage of crimes attributed to the specific 60/40 business address, and the rank of the 60/40 address relative to other addresses in the neighborhood. This analyses included Al's Mr. Wedge, Baby Doll Lounge, Bare Elegance, Club 44, Cozy Cabin, Goldfingers, Lace, New York Dolls, Private Eyes, Pussycat, Scores, Tens, Vip Club, Vixen, and Wiggles.

Next, the conventions developed in the Garden Grove Study were employed to interpret the hotspot findings. This method involves comparing specific sexually oriented business addresses with the remaining neighborhood in terms of percentage of crime and the relative ranks of addresses. In the

Garden Grove study, for example, crimes from seven sexually oriented businesses located on Garden Grove Boulevard in the city of Garden Grove were examined. The authors then calculated the percentage of crime accounted for by the business address among all crime on Garden Grove Boulevard. They reasoned that, if the sexually oriented business accounted for 10-25 percent of crimes in a neighborhood, it could be concluded that they constituted a "significant" source of crime events. They also computed the relative ranking of the sexually oriented business address among all addresses on Garden Grove Boulevard and found that three to five of the six adult businesses were among the top ten "hotspots." This finding further bolstered their conclusion that these businesses were a significant source of crime

By this method it can readily be seen that the 60/40 businesses in New York City are a very insignificant source of crime events within their neighborhood. As is shown in **Table 7**, the 60/40 business addresses rarely rise to the level of even ten-percent of crime events in the neighborhood. Several cannot be ranked because there are zero crime events at their address. The vast majority of the 60/40 businesses had very few crime incidents, no matter what the crime category, relative to the rest of the neighborhood.

In summary, by this method we conclude that 60/40 businesses do not constitute either a serious or significant public safety or crime hazard. These findings again cast substantial doubt on the City's theory that 60/40 businesses or the nature of their entertainment is significantly associated with crime events in a neighborhood.

Before-after analyses. We undertook a "before-after" analysis of 60/40 businesses in New York City. Before-after analyses are undertaken using businesses that had opened closed or changed formats during the study period. We expected that changes in the presence or absence of these businesses in the community would be associated with increases and decreases in crime. When a business ceases

operation or changes to a non-sexually oriented format, crime events should subside; when a sexually oriented business opens crime events should increase.[20] We examined crime incidents before and after opening for the following 60/40 businesses: Billy's Topless, Club 44, Gallaghers, Gallaghers 2000, Candlewood Inn (new address), Candlewood Inn (old address). The businesses and the changes that occurred are listed in the table immediately below.

Businesses Opening, Closing, or Changing Format Between January 1998 and June 2002

Business Name	Address	Change
Billy's Topless	729 Avenue of the Americas	no longer topless in 01
Club 44	689 8th Ave.	opened in October of 2001
Gallaghers	39-33 Queens Blvd.	closed in mid 2000
Gallaghers 2000	43-19 37th street	opened in end of 2000
Candlewood Inn - new	32-17 College Point	opened in 2000

[20] As the authors of the Garden Grove Study correctly point out, a "hotspot" analysis may be useful, but it tells us nothing about whether the sexually oriented businesses examined in their study caused adverse secondary effects. The authors note (see page 24): "Of course, one can argue that the relationship is non-causal or spurious; that these businesses simply moved into a neighborhood that happened to already have a high crime rate." In order to examine the possibility of causality a quasi-experimental, before-after analysis is employed in the Garden Grove Study. We employ a similarly-designed analysis in this portion of the present study. This method is employed to answer the question: Once a sexually oriented business is opened in a New York City neighborhood does the crime incident rate rise in the post-opening period? If we do not detect an effect in the months following an opening, doubt is cast on the City's theory that sexually oriented 60/40 businesses or the nature of their entertainment is responsible for crime events in the local vicinity.

Description of the method. The hierarchical regression approach employed above is actually a simple variation of the so-called "static group comparison." This design is diagramed as:

S.O Business Area X Crime (impact)
Control Area Crime (control)

The X in this diagram represents the presence of a sexually oriented 60/40 business in the impact area but not in the control area. The hypothetical secondary effect is estimated as the difference of the two crime measures:

Secondary Effect = Crime (Impact) – Crime (Control)

If the impact and control areas are identical in every respect (demographic characteristics, housing characteristics) except the presence of a sexually oriented business, the secondary effect estimate is valid. On the other hand, if the two areas differ in any relevant way the secondary effect estimate is not as informative as it could be. The "static group comparison" design is strengthened considerably when a before-after contrast is added. Using the same notation this design looks as follows:

S.O. Area Crime (Impact, Before) X Crime (Impact, After)
Control Area Crime (Impact Before) . Crime (Impact, After)

The hypothetical secondary effect is now estimated as the before-after difference in the impact area.

Secondary Effect = Crime (Impact, After) – Crime (Impact, Before)

The analogous difference for the control area serves as a benchmark for assessing the validity and significance of the secondary effect. The superiority of the before-after design over the "static group comparison" design lies in the nature of their control comparisons. Over short time periods, say one or two years, impact and control areas are likely to remain stable in relevant ways. If the stability assumption holds, before-after differences are immune to the garden-variety validity threats that plague static impact-control differences. If change scores are standardized, then as percent changes, before-after secondary effect estimates are relatively robust to minor differences between impact and control areas.

address	Blvd.	
Candlewood Inn - old address	41-57 College Point Blvd.	closed in 2000

We compare the crime event change, or lack thereof, before and after openings and closings with control areas selected from the surrounding neighborhoods. If we fail to detect an effect in the year following opening, closing or change of entertainment format for the businesses in this before-after comparison, serious doubt is cast on the theory that these 60/40 businesses or the nature of their entertainment is responsible for crime events in the local vicinity.

Table 8 displays the results of the before-after analyses of crime incidents surrounding the 60/40 businesses Billy's Topless, Club 44, Gallaghers, Gallaghers 2000, Candlewood Inn (new address), Candlewood Inn (old address). The table includes crime counts for the study period for each business. **Figures 3-8** display the results in graph form using the percentage of total incidents for each individual block by year in order to standardize the results.

What is immediately apparent from the graphs is that no matter what the event--opening or closing of the 60/40 business, or transformation from topless (i.e., sexually oriented) to non-topless venue--the crime incidents in the block surrounding the 60/40 businesses tracked the control blocks precisely. **Figure 3** provides an excellent example of this pattern. This Figure shows that the block containing Billy's Topless 60/40 business perfectly mirrored the control blocks crime patterns. Crime increased somewhat until 2000 and then began a decline after that year. The pattern for the block in which Billy's was located was identical to the surrounding blocks despite the fact that Billy's Topless ceased operations as a sexually oriented business. Had Billy's Topless been responsible for adverse secondary crime effects on the block, we would have expected a more precipitous decrease in crime incidents. There was none.

Figure 4 provides another example. Club 44 opened for businesses in 2001. If the negative secondary effects hypothesis is correct we would have expected that the block on which Club 44 was located would experience an uptick in crime events. This did not occur. Instead, crime incidents in the Club 44 block tracked the control blocks, all of which showed a decrease in crime incidents. The remaining figures show the same pattern--no matter what the change in the opening or closing of the 60/40 business-there was no impact on crime incidents relative to the control locations.

Tables 9-14 display the results of the before-after analysis in summary form. Again, these results fail to reveal adverse secondary crime effects for the 60/40 businesses. **Table 9**, for example, shows the results for Billy's Topless and surrounding areas. Recall that in 2001 this business changed format and no longer offered topless entertainment. If the City's *combined* "60/40 clubs are 'adult' businesses" *and* "adult businesses cause crime" theory were correct, this change in the nature of the business should have resulted in a large decrease in crime. However, to the contrary, we found only a modest decrease while the control areas (with no adult businesses) experienced a more pronounced drop (study block change = 388 incidents to 216 incidents, comparison blocks change = 140 incidents to 62 incidents).

Similarly, the results for Club 44 displayed in **Table 10** show no evidence of adverse secondary crime effects. Recall that Club 44 opened in 2001. According to the City's secondary effects hypothesis, this event should have been associated with an increase in crime in the surrounding area. In contrast, we found a substantial decrease in crime for both study and control areas (study block change = 300.00 to 122, comparison blocks change = 160 to 67).

Likewise, Gallaghers (39-33 Queens Blvd.) closed in 2000. This event, if the City's secondary effects theory is correct, should have resulted in an observable decrease in crime well beyond what would be observed for the control blocks. Contrary to this assumption, however, we found a substantial

drop in crime nearly identical to control area (study block change = 53 to 29, comparison blocks change = 26 to 18).

Gallaghers 2000 opened in 2000 at a new address. We should have observed a dramatic increase in crime events. Instead, we observed so few incidents of crime in both test and control areas as to be essentially meaningless. The same pattern was observed for the opening, closing and relocation of the Candlewood Inn. There was simply no support for the secondary effects hypothesis.

These findings cast very substantial doubt on the City's theory that sexually oriented 60/40 businesses or the nature of their entertainment is significantly associated with crime events in a neighborhood.

SUMMARY AND IMPLICATIONS

In order to test the assumption that New York City may regulate so called "60/40" businesses because they are associated with negative secondary effects, an extensive and detailed empirical study of criminal activity and disorder surrounding these businesses in Manhattan was undertaken utilizing raw data provided by the New York City Police Department (NYPD). Three hypothesis concerning secondary effects are tested in this study using calls for service to the New York City Police within local neighborhoods defined by census blocks. If secondary effects are associated with 60/40 eating drinking establishments in New York City we would expect the following: 1) The presence of a "60/40" eating or drinking establishments in New York will be associated with a higher number of crime incidents reported in localized areas surrounding these businesses compared to the number of crime incidents reported in comparable localized areas that do not contain these businesses; 2) Such businesses will rank among the "hotspots" of crime and disorder tin the community in which they located; and 3) Changes in the presence or absence of these businesses in the community will be associated with increases and

decreases in crime. When a business ceases operation crime events should subside, when such a business opens crime events should increase.

To test these hypotheses we first conducted regression analyses wherein the blocks with 60/40 businesses are compared to surrounding blocks that do not contain such businesses while statistically controlling for demographic features of the blocks that are known to be related to crime. We then undertook a "hotspot" analysis within the neighborhood where the 60/40 business is located. This focused analysis by specific address allows us to determine if the 60/40 businesses have required special attention from the police or if other addresses in the immediate neighborhood are more often the source of police attention. Finally, we undertook a before-after analysis wherein we examined crime one year before and one year after 60/40 business openings and closings. We compared the crime change or lack thereof before and after the openings and closings.

The regression analyses showed that variables traditionally found to be attributable to social disorganization such as a local area's population age structure (especially the presence of young adults), and its race/ethnic composition were related to the number of calls to the police. The "hotspot" analysis showed that that the 60/40 businesses are a very insignificant source crime of crime events within their neighborhood in New York City. The 60/40 business addresses rarely rise to the level of even ten-percent of crime events in the neighborhood. Several cannot be ranked because there are zero crime events at their address. The vast majority of the 60/40 businesses had very few crime incidents, no matter what the crime category, relative to the rest of the neighborhood. The before-after analyses revealed that changes in the presence or absence of these businesses in the community were not associated with increases and decreases in crime.

These findings, at a minimum, cast substantial doubt on the City's theory that 60/40 businesses or the nature of their entertainment is significantly associated with crime events in a neighborhood.