COMMONWEALTH OF MASSACHUSETTS

NORFOLK, ss.

SUPERIOR COURT DEPARTMENT OF THE TRIAL COURT C.A. No. 2012-00963

OURWAY REALTY, LLC, d/b/a PLAINRIDGE RACECOURSE,

Plaintiff,

٧.

THOMAS KEEN,

Defendant.

MEMORANDUM OF LAW IN SUPPORT OF SPECIAL MOTION TO DISMISS PURSUANT TO G.L. c. 231 § 59H

INTRODUCTION

Defendant Thomas Keen ("Keen") respectfully submits this memorandum of law in support of his special motion to dismiss under G.L. c. 231 § 59H, the "Anti-SLAPP" statute. Plaintiff Ourway Realty, LLC ("Ourway") has sued Keen for defamation based solely on petitioning activity that the statute was intended to protect. The lawsuit should be dismissed and attorneys' fees awarded.

Keen is a resident of Plainville, Massachusetts and an opponent of Ourway's proposal to open a "slot parlor" at its racetrack in Plainville. On behalf of a group of concerned residents called "No Plainville Racino," Keen established a website voicing opposition to the proposal, urging the town government to reject or more adequately review the proposal, and rallying the community against it. Among other arguments, Keen has asserted that gambling operations are associated with increased crime in the neighborhoods where they are located.

In retaliation for that activity, Ourway has sued him for defamation. The only allegedly defamatory statement referenced in the complaint, a joking "comment" posted by a third party on No Plainville Racino's Facebook page, was *removed* prior to the commencement of litigation. Nevertheless, Ourway seeks damages and an injunction to prevent Keen from continuing to discuss information about crime in relation to casinos and gambling in his advocacy against the racino—an order that would amount to an unconstitutional prior restraint on speech, in violation of the First Amendment.

This action, in other words, is a classic example of the kind of "strategic litigation against public participation" that the "Anti-SLAPP" statute, G.L. c. 231 § 59H, was intended to prevent. *Duracraft Corp. v. Holmes Products Corp.*, 427 Mass. 156, 161 (1998) (noting that SLAPP cases are efforts "to use litigation to intimidate opponents' exercise of rights of petitioning and speech.") The complaint is based solely on assertions that Keen exercised his right of petition under the U.S. Constitution, and Ourway cannot shoulder its burden to prove that the petitioning activity at issue lacked any basis in fact or law, or that it has suffered actual damages from the activity. Accordingly, this case should be dismissed, and Ourway should be ordered to pay Keen his costs and reasonable attorneys' fees for being forced to defend against this lawsuit.

<u>FACTS</u>

The following facts are drawn from the complaint and from the supporting affidavit of defendant Thomas Keen.¹

¹ Under the Anti-SLAPP Act, the Court's consideration of Keen's special motion to dismiss is not limited to the allegations in the complaint. Instead, "the court shall consider the pleadings and supporting or opposing affidavits." G.L. c. 231 § 59H.

Keen is a resident of Plainville, Massachusetts. (Affidavit of Thomas Keen ("Keen Aff."), \P 2). He is a Vice President at Fidelity Investments, holds an MBA from the Harvard Business School, and graduated with honors from Bucknell University. (Id.).

In December 2011, Keen became involved in local opposition to the \$1 billion casino proposed by New England Patriots owner Robert Kraft and Las Vegas developer Steve Wynn in the town of Foxborough, which neighbors Plainville. (Keen Aff., ¶ 3). Through a community group called "No Foxboro Casino" founded by Keen's sister-in-law, Stephanie Crimmins, Keen helped organize a rally, assisted in raising money, formulated arguments, maintained a website called nofoxborocasino.com, managed email marketing, and organized community opposition to the proposal. (Id.). In May 2012, Foxborough's residents elected a slate of selectmen opposed to the casino, and Kraft and Wynn have now indefinitely suspended their casino plans. (Id.).

Keen's opposition to casino development stems in large part from his background in business analysis. Like many opponents of legalized casino gambling in the Commonwealth, Keen is skeptical that the purported benefits of resort-style casinos—revenue sharing, tax receipts and jobs—will outweigh their economic and social cost, including the likelihood of business failure, the potential for increased crime, and the prospect of increased addiction to gambling. Keen is also concerned that a casino in his neighborhood will depress the value of area homes, including his own. (Keen Aff., \P 4).

In late 2011, Keen learned that the Plainridge Racecourse, a harness-racing facility a halfmile from Keen's home, was seeking to install slot machines at its facility. (<u>Id.</u>, ¶ 5). Keen is informed and believes that the Plainridge Racecourse is owned by plaintiff Ourway Realty, LLC "Ourway." (Keen Aff., ¶ 6; Complaint, ¶¶ 1,3). On or about March 21, 2012, Ourway handdelivered a letter to the Board of Selectmen of the Town of Plainville, asking it to engage in

negotiations toward a "Host Community Agreement" under the Commonwealth's new gaming law. (Keen Aff., \P 6). Thereafter, the Board of Selectmen began considering whether to enter into such an agreement, and how best to negotiate it with the racetrack. (Id.).

On or about March 24, 2012, Keen and other town residents established a website at noplainvilleracino.com. (Keen Aff., ¶ 7). A printout of the website is attached hereto as Exhibit 1. The website explains that No Plainville Racino is "a group of residents of Plainville and surrounding towns who are concerned about expanded gambling at Plainridge Racecourse." (Ex. 1). The website supplies the email addresses of town selectmen and urges residents to "[e]mail your Selectmen and tell them a racino is not in Plainville's best interest." (Id.). It also provides reasons to oppose the proposal, including that (1) the racino does not appear to have a viable business model; (2) the racino would generate jobs of poor quality; (3) Plainville, a town of 8,000 people, lacks the resources to effectively negotiate with the racecourse; (4) slot machines are addictive; (5) the slot parlor will cause traffic congestion; and (6) crime may increase in the wake of adding slot machines to the track. (Id.).

On March 25, 2012, No Plainville Racino founded a "page" on Facebook, the social networking website. (Keen Aff., \P 8). The Facebook page contains numerous links to articles and other materials of interest to people concerned about the potential Plainville racino. Any user of Facebook can post comments on the Facebook page. A printout of portions of the Facebook page is attached hereto as Exhibit 2.

In late March, 2012, members of No Plainville Racino submitted a Town Meeting petition calling on voters to require the Board of Selectmen to conduct an independent costbenefit analysis of the slot machine proposal. (Keen Aff., ¶ 9). The petition asked that this costbenefit analysis be "made public prior to any town-wide referendum on any Host Community

Agreement." (Exhibit 3). The petition was ultimately unsuccessful. (Keen Aff., \P 9). Since the Town Meeting proposal, however, the Town of Plainville has continued discussions with the racetrack concerning the process of negotiating a Host Community Agreement and related matters, and No Plainville Racino has continued to object to proposal and organize opposition in the community. No Plainville Racino members, including Keen, have also attended recent Board of Selectmen meetings to ask questions of both the Board of Selectmen and Ourway. Recently, members of No Plainville Racino, including Keen, met with town officials to offer input into a potential request for proposals for a consultant to advise the Town on this subject. (Id.).

On March 28, 2012, at approximately 10:00 a.m., Keen's house was burglarized for the second time in six months. (Keen Aff., ¶ 10). As a security precaution, Keen had installed a "webcam" in his home office that took pictures 24 hours a day. The webcam captured an image of the burglar, which Keen then provided to the Plainville Police Department. (Id.). The Plainville Police Department posted the picture to its own Facebook page, along with this message: "Fwd: B&E suspect. About 10am Pville rt.152. If u know this person, please msg us." (Id.). A copy of relevant portions of the police department's Facebook page is attached hereto as Exhibit 4.

Also on March 28, at 12:54 p.m., an administrator of the No Plainville Racino Facebook page "shared" the photo of the burglary suspect that was posted on the Plainville Police Department's Facebook page. (Keen Aff., ¶ 11). As Keen's affidavit explains, a Facebook user who sees a photograph or other item posted on the Facebook page of another person or entity may post the item to the page associated with the Facebook account under which she is logged in by clicking on a "share" button next to the item in question. The item will then be posted to the person or group's Facebook page, along with any caption provided by the original poster, an

indication that the item is "shared," and an indication of its source. (Id.). A true and accurate copy of the post is attached hereto as Exhibit 5. Keen was not the person who "shared" the picture. (Id.).

At 1:01 p.m. on March 28, a Facebook user posting under the pseudonym "Buck Farack" posted the following comment underneath the picture on the No Plainville Racino Facebook page: "I wonder if they checked over at the racetrack, lol." (Keen Aff., ¶ 12). The term "lol," which is Internet parlance for "laugh out loud," signifies that the writer intends her comments as a joke.² Keen was not the person who posted this comment. (Id.).

On or about April 23, 2012, Keen received a demand letter from Ourway concerning the website and Facebook page. (Keen Aff., ¶ 13, Exhibit 6). Ourway complained first of the content of noplainvilleracino.com, in particular its assertedly "unsubstantiated" arguments "that approval of expanded gaming at my client's facility will increase the crime rate in the area." Ourway then addressed the Facebook page, stating that "posting a picture of a suspect in a crime in the area that is totally unrelated to my client's facility or business on your platform of opposition is objectionable, unprofessional and actionable." The letter demanded that Keen remove "the aforementioned damaging images and comments from your site," that Keen "cease and desist in posting or allowing to post [sic] on the Site references to crime associated with the operation of [Ourway's] operations or intended operations," and that he "offer an apology on [the] website, facebook page and in the Sun Chronicle newspaper to my client for falsely inferring that my client's business was the reason for the person committing this crime." (Exhibit

² The Oxford English Dictionary defines "LOL" as follows: "Originally and chiefly in the language of electronic communications: 'ha ha!'; used to draw attention to a joke or humorous statement, or to express amusement." *See <u>http://www.huffingtonpost.com/2011/03/24/lol-omg-oxford-english-dictionary n 840229.html.</u>*

6; Complaint, ¶ 9). The letter further threatened: "You have left us with no other choice but to pursue all available legal and equitable remedies against you." (Id.).

On April 25, 2012, the comment, "I wonder if they checked over at the racetrack, lol," was removed from the No Plainville Racino Facebook page by the person who posted it. (Keen Aff., ¶ 13). On the same day, an attorney for the American Civil Liberties Union of Massachusetts ("ACLUM") sent a response to Ourway on Keen's behalf, informing it that the post had been removed "in the interests of not having to fight about a statement that was plainly intended by the poster as a joke." (Ex. 7). However, ACLUM's letter explained that Keen would not agree to stop discussing "possible links between increased crime and gaming," a topic that has been raised "throughout the debates when the Massachusetts legislature was considering allowing casinos in Massachusetts." (Id.). The letter noted that the discussion of the topic of crime on the website and Facebook page "is general and certainly does not accuse your client of committing any crimes," and also alerted Ourway to the protections of the anti-SLAPP statute. The letter closed by observing that No Plainville Racino's effort "to enlist participation in governmental affairs is precisely the kind of 'petitioning' protected by our state law and the constitution." (Id.).

On June 6, 2012, Ourway filed this action, seeking damages and "injunctive relief to remove the offensive material from the Site and to prohibit any further publication of • information similar in nature." (Complaint at 3). Ourway's complaint fails to mention that the purportedly offending "comment"—"I wonder if they checked over at the racetrack, lol," – has been removed from the No Plainville Racino Facebook page. Instead, the complaint incorrectly suggests that Keen "refus[ed] to comply" with Ourway's demand letter. (Complaint, ¶ 10).

ARGUMENT

The Legislature enacted the anti-SLAPP statute "to provide a quick remedy for those citizens targeted by frivolous lawsuits based on their government petitioning activities." *Fustolo v. Hollander*, 455 Mass. 861, 864-865 (2009) (internal quotations omitted); *Kobrin v. Gastfriend*, 443 Mass. 327, 336 (2005) ("The Legislature intended the statute to encourage 'full participation by persons and organizations and robust discussion of issues before legislative, judicial, and administrative bodies."). This case is a classic SLAPP suit: it is "directed at [an] individual citizen[] of modest means for speaking publicly against [a] development project," a proposed slot parlor in Plainville. *Office One, Inc. v. Lopez*, 437 Mass. 113, 121-122 (2002). While the typical intent of a SLAPP suit is to "chill" the exercise of the right of petition, Ourway's suit is, if anything, more straightforward: it demands an unconstitutional prior restraint to prohibit further speech regarding casinos and crime.³ (Complaint, p. 3).

To prevail on this special motion to dismiss, Keen must first make "a threshold showing through pleadings and affidavits" that this case is based solely on a "party's exercise of its right of petition." *Fustolo v. Hollander*, 455 Mass. 861, 865 (2009) (internal quotations omitted). Once Keen makes this showing, the burden shifts to Ourway to demonstrate, by a preponderance of the evidence, that "the special movant's petitioning activities 'lacked any reasonable factual support or any arguable basis in law," *and* that Ourway suffered "actual damages" from the

³ A "prior restraint" on speech, meaning an official restriction on speech in advance of publication, is "the most serious and the least tolerable infringement on First Amendment rights. *Nebraska Press Ass'n v. Stuart*, 427 U.S. 539, 559 (1976). Thus, not surprisingly, "[n]o prior decisions support the claim that the interest of an individual in being free from public criticism of his business practices in pamphlets or leaflets warrants use of the injunctive power of a court." *Org. for a Better Austin v. Keefe*, 402 U.S. 415, 419 (1971) (vacating court order that prohibited community group from pamphleteering). Moreover, separate and apart from the First Amendment and Art. 16, injunctive relief is unavailable in libel cases as a matter of Massachusetts common law. *Finish Temperance Soc'y Sovittaja v. Riavaaja Publ'g Co.*, 219 Mass. 28, 29 (1914).

petitioning. *Id., citing Baker v. Parsons*, 434 Mass. 543, 553-553 (2001). Keen can easily make his threshold showing. Ourway, on the other hand, cannot meet its burden. Unless the Court dismisses this case under the Anti-SLAPP statute, "robust discussion of issues before legislative, judicial, and administrative bodies" will be seriously threatened. *Kobrin v. Gastfriend*, 443 Mass. 327, 336 (2005).

I. OURWAY'S SUIT IS BASED SOLELY ON THE EXERCISE OF THE RIGHT OF PETITION.

In its letter to Keen, Ourway demanded that a joking Facebook comment about the burglary at Keen's home be removed from Facebook, and it was. (Exs. 6, 7). However, Ourway also insisted that Keen stop posting "references to crime associated with . . . Plaintiff's operations *or intended operations*," such as the proposed slot parlor, and Keen refused to do so. (Complaint, ¶ 9; Ex. 7). Ourway now seeks that relief from this Court. (Complaint at 3). Ourway's lawsuit must be seen for what it is: an attack on Keen's advocacy against Ourway's proposed gambling operations, including Keen's assertion that gambling operations positively correlate with crime. That advocacy, along with everything else alleged against him in the Complaint, falls squarely under the protection of the Anti-SLAPP statute.

A. Keen's Advocacy Is Protected By The Anti-SLAPP Statute.

Ourway's complaint is based entirely upon statements made on the "No Plainville Racino" website and Facebook page, which Keen is alleged to control. (Complaint, ¶¶ 4-5, 14, 16-17). Massachusetts' anti-SLAPP statute defines the "right to petition" to include:

(1) any written or oral statement made before or submitted to a legislative, executive, or judicial body, or any other governmental proceeding;

(2) any written or oral statement made in connection with an issue under consideration or review by a legislative, executive, or judicial body, or any other governmental proceeding;

(3) any statement reasonably likely to encourage consideration or review of an issue by a legislative, executive, or judicial body or any other governmental proceeding;

(4) any statement reasonably likely to enlist public participation in an effort to effect such consideration; or

(5) any other statement falling within constitutional protection of the right to petition government.

G.L. c. 231 sec. 59H. As demonstrated below, the website and Facebook page satisfy at least four of the Anti-SLAPP statute's five definitions of the right to petition.

First, the website and Facebook page contain "written . . . statement[s] made in connection with an issue under consideration or review by a legislative . . . body." G.L. c. 231 § 59H. That "issue" is whether the Plainville Board of Selectmen should engage in negotiations with Ourway toward a Host Community Agreement under the Massachusetts gaming statute, G.L. c. 23K sec. 15(8), and more broadly, whether a slot parlor would be good for Plainville. (Ex. 1; Keen Aff., ¶ 7).

Second, the website and Facebook page are "reasonably likely to enlist public participation" in the consideration of this issue. G.L. c. 231 sec. 59H. By statute, the racino cannot receive a gaming license without "a signed agreement between the host community." G.L. c. 23K sec. 15. An express purpose Keen's advocacy has been to encourage residents to contact selectpersons and "tell them a racino is not in Plainville's best interest." *See Office One, Inc.*, 437 Mass. at 117 (holding that leaflet urging residents, *inter alia*, to "make contact the FDIC and elected officials" concerning matter before FDIC was petitioning activity).

Third, the website and Facebook page are "reasonably likely to encourage consideration or review of an issue by a legislative . . . body." G.L. c. 231 sec. 59H(3). Specifically, independent of the website's call for Plainville residents to contact their selectpersons, the content of the website and Facebook page can reasonably be expected to reach town officials directly—through visits by town officials to those web pages or by contact between town officials and members of No Plainville Racino. For example, on Monday, July 9, the administrator of the Facebook page asked viewers of the site for comments that members of No Plainville Racino could "include when we speak to Plainville Town Administrator Joe Fernandes next week." (Ex. 2). The No Plainville Racino website and Facebook page can also be expected to have a direct influence on public officials because they supply substantial information and argument about *why* a racino would harm Plainville's interests. For example, the website states that "Plainville does not have the resources to adequately negotiate a complex Host Community Agreement." (Ex. 1). It also suggests that crime could increase if slot machines are brought to Plainville:

Crime, including embezzlement, robbery, DUIs, aggravated assaults and domestic violence rates, increases 8-10% right after casino is built and continues to increase after that. Ledyard, CT (home to Foxwoods), has seen a 30-fold increase in calls to 911 since casinos were introduced. CT State Police have seen a dramatic increase in DUI arrests, followed by a leveling off of DUI arrests. The leveling off was followed by an increase in drunken driving DEATHS. The state police determined that DUI occurrences had continued to rise but they did not have enough police resources to CATCH them.

(<u>Id</u>.).

Fourth, Keen's written advocacy falls within the catch-all definition of "any other statement[s] falling within constitutional protection of the right to petition government." G.L. c. 231 sec. 59H. There can be no doubt that the operation of a website and Facebook page intended to organize members of a community around an issue of concern constitutes an exercise of the right of petition protected by the U.S. Constitution.⁴ In *MacDonald v. Paton*, 57 Mass. App. Ct.

⁴ Indeed, the Court may take judicial notice that the "social networking" sites Facebook and Twitter are fast becoming "the new town square," where concerned members of communities go

290 (2003), defendant Elsa Paton published a statement on her website describing a member of the board of selectmen of the town of Athol as a "nazi." In support of her special motion to dismiss the selectman's defamation action, Paton submitted an affidavit stating that her website constituted:

a forum for speech by citizens about issues of public and political concern in Athol. Although I wrote some of the content, much of the content was contributed by others who provided submissions to me by e-mail. In that sense, the Web site served as a technological version of a meeting of citizens on the Town Green, a space where concerned individuals could come together to share information, express political opinions, and rally on town issues of concern to the community.

MacDonald, 57 Mass. App. Ct. at 295. Based on this affidavit, the Appeals Court ruled that

Paton "met her threshold burden of establishing that the plaintiff's claims were based on Paton's

petitioning activities." MacDonald v. Paton, 57 Mass. App. Ct. 290, 295 (2003). Here, the

posted picture and "comment" at issue are no less examples of the exercise of the right of

petition.⁵

to share information, express opinions, and rally on issues of concern. *See, e.g.*, Tom Ehrich, "Facebook, the New Town Square," washingtonpost.com, Feb. 7, 2012 (visited July 12, 2012) (suggesting that Facebook reflects that "despite the coarsening of political discourse, people still care about their society and are willing to speak out. We haven't left the public square to the shouters and ideologues."); Clay Shirky, "The Political Power of Social Media," *Foreign Affairs*, January/February 2011 ("As the communications landscape gets denser, more complex, and more participatory, the networked population is gaining greater access to information, more opportunities to engage in public speech, and an enhanced ability to undertake collective action.").

⁵ Ourway's contention that Keen could be held liable for the posting of the "comment" by a third party on Facebook is incorrect as a matter of law. Section 230 of the federal Communications Decency Act ("CDA") provides that "[n]o provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider," 47 U.S.C. § 230(c)(1), and that "[n]o cause of action may be brought and no liability may be imposed under any State or local law that is inconsistent with this section," *id.* § 230(c)(3). Under the CDA, subject to exceptions not applicable here, Keen is immunized from this state law libel suit if he: "(1) is a 'provider or user of an interactive computer service'; (2) the claim is based on 'information provided by another information content provider'; and (3) the claim would treat [Keen] 'as the publisher or speaker' of that information. *Universal Commc'n*

In short, the No Plainville Racino website and Facebook page constitute classic petitioning activity because they are intended "directly or indirectly to influence [or] inform . . . governmental consideration of the issue" before the town of Plainville. *Global NAPS, Inc. v. Verizon New England, Inc.*, 63 Mass. App. Ct. 600, 607 (2005). Ourway's lawsuit against Keen is based entirely on his alleged statements and activities in connection with the website and Facebook page, and is therefore is exactly the kind of suit to which the Anti-SLAPP law was intended to apply.⁶

B. Ourway's Complaint Expressly Targets Keen's Right To Petition.

Not only does Keen's advocacy in fact fall under the "right to petition," Ourway's complaint essentially acknowledges that it is directed at that right. For example, Ourway's complaint alleges that Keen's "actions and words were intended to prejudice Plaintiff . . . with its attempts to obtain a so-called Category 2 License from the Commonwealth for expanded gaming."⁷ (Complaint ¶ 16). Similarly, Ourway's demand letter asserts that Keen posted the picture of the alleged burglar "intentionally to cheaply *promote your cause*, sensationalize the

Sys., Inc. v. Lycos, Inc., 478 F.3d 413, 418 (1st Cir. 2007). Facebook is an "interactive computer service" within the meaning of the statute. *Fraley v. Facebook, Inc.*, 830 F. Supp. 2d 785, 801 (N.D. Cal. 2011) (finding that "Facebook meets the definition of an interactive computer service under the CDA,"); *Doe v. MySpace, Inc.*, 528 F.3d 413, 422 (5th Cir. 2008) (treating "MySpace" social network as "interactive computer service").

⁶ See Duracraft Corp. v. Holmes Products Corp., 427 Mass. 156, 161 (1998) ("The typical mischief that the legislation intended to remedy was lawsuits directed at individual citizens of modest means for speaking publicly against development projects."), see Office One, Inc., 437 Mass. at 122–123 (efforts by unit owners of a condominium opposing plaintiff's purchase of unit to spur others to contact elected officials fell within the definition of petitioning activity protected by the statute); Garabedian v. Westland, 59 Mass. App. Ct. 427, 432 (2003) (noting that "leaflet[ing] the neighborhood to encourage opposition at public meetings," and "organiz[ing] residents to attend public meetings" constituted protected petitioning).
⁷ Curiously, the Complaint falsely alleges that Keen posted the picture on the website

noplainvilleracino.com, despite the fact that it actually appears on the Facebook page only. Indeed, plaintiff's own demand letter asserted that the picture was posted on Facebook. (Ex. 6). crime to your benefit at my client's expense, create a chuckle amongst your group by your bravado, and intentionally infer a connection between the crime and my client via a coincidental geographic location." (Ex. 6 at 1-2) (emphasis supplied). In other words, Ourway *itself* maintains that all of the conduct it targets was intended to further the anti-racino "cause" and to prejudice its ability to obtain a gambling license. ⁸ (Complaint, ¶ 16). As such, Ourway's allegations alone are enough for this Court to find that the statements constitute the exercise of the right of petition. G.L. c. 231 § 59H.

The Court should find that this lawsuit is based on Keen's exercise of his right to petition for purposes of the anti-SLAPP law, notwithstanding the fact that Keen did not *himself* post either the offending picture or the comment to Facebook. (Keen Aff., ¶¶ 11-12). Keen is a member of the No Plainville Racino group, and he established and maintains the website targeted in the Complaint. (Id. at ¶ 7; Complaint ¶ 4). In essence, Keen has been sued because Ourway determined that he had engaged in the protected petitioning activity of establishing the website, and the relief it seeks is to censor the site he maintains. (Ex. 6; Complaint ¶ 4 and p. 3); *MacDonald*, 57 Mass. App. Ct. at 295. Under these circumstances, Keen has made his threshold showing under the Anti-SLAPP law.

⁸ There is, of course, a more reasonable interpretation of the "sharing" of the picture: that it was simply an appeal to members of the community to help identify the person who burglarized Keen's home. Such a request is no less protected petitioning activity than statements directly about the proposed racino, however, because it is a statement "reasonably likely to enlist public participation in an effort to effect . . . consideration" of an issue before an "executive" body, namely the Plainville Police Department. *See Keegan v. Pellerin*, 76 Mass. App. Ct. 186, 190 (2009) (holding that statements reporting a crime were protected by the anti-SLAPP statute). Keen, not being the person who "shared" the posting, does not know what the motive behind the "sharing" of the photograph was, but "motive" is irrelevant at this stage. *Office One, Inc. v. Lopez*, 437 Mass. 113, 122 (2002) ("[T]he motive behind the petitioning activity is irrelevant at this initial stage.").

II. OURWAY CANNOT SUSTAIN ITS BURDEN OF PROOF.

Plaintiff Ourway has no hope of establishing by a preponderance of the evidence either that the exercise of the right to petition "was devoid of any reasonable factual support or any arguable basis in law," or that the petitioning activities "caused actual injury" to Ourway. G.L. c. 231 § 59H. Accordingly, the motion should be granted.

Ourway certainly cannot demonstrate that Keen's statements on noplainvilleracino.com regarding the potential for increased crime from expanded gambling lack "any reasonable factual support." G.L. c. 231 § 59H. Although Ourway seems to take offense at the suggestion of a connection between casinos and crime, that connection has long been a topic of serious debate in Massachusetts and other states. For example, a comprehensive 2006 study concluded that the introduction of a casino to a neighborhood can increase in crime. See E. Grinols and D. Mustard, "Casinos, Crime, and Community Costs," Review of Economics and Statistics, Feb. 2006, pp. 28-45 (Exhibit 8). The potential for increased crime was a significant part of the opposition to the casino bill before the Massachusetts legislature, led by former Attorney General Scott Harshbarger. See "State Senate Approves Casino Bill," Boston Globe, Oct. 14 2011 (Exhibit 9) (noting that opponents of the bill "warned of spiking crime, increased addiction, and potential corruption. . . . "). Those concerns led to special law enforcement-related measures in the act, including the establishment of an "investigations and enforcement bureau" of the new Gaming Commission, G.L. c. 23K § 6, and a State Police "gaming enforcement unit" responsible for investigating "criminal violations of chapter 23K or any other general or special law pertaining to gaming." G.L. c. 22C § 70. To be sure, Ourway can point to some evidence supporting its own view. See Douglas M. Walker, "Do Casinos Really Cause Crime?" Econ

Journal Watch.5(1):4-20. January 2008 (Exhibit 10). But what Ourway *cannot* do is silence the people who disagree.

Nor does it matter that information about the burglary of Keen's home was posted on the web. For one thing, Ourway cannot dispute that a burglary occurred, nor that the Plainville Police Department is currently investigating it based in part on the photograph provided by Keen. (Keen Aff., \P 10). Those facts are all that the "sharing" of the photograph reasonably conveys, and that act of petitioning therefore does not lack "any reasonable basis" in fact. G.L. c. 231 § 59H. Ourway's assertion that the "sharing" of the photograph on the anti-racino Facebook page necessarily implies that "criminals are clearly associated with the Plaintiff's present operations," is manifestly unreasonable, and Ourway cannot carry its burden under the Anti-SLAPP law by unreasonably interpreting the petitioning activity at issue. (Complaint, \P 8); *cf. King v. Globe Newspaper Co.*, 400 Mass. 705, 711-12 (1987) (rejecting "strained" interpretation of cartoon, and holding that "[s]tatements alleged to be libelous must be interpreted reasonably.").

Moreover, even if Ourway could hold somehow hold Keen liable for the comment, "I wonder if they've checked over at the racetrack,"⁹ that person disclaimed any serious intent by adding the term "lol." Statements written "not for serious effect" are simply not libelous. *Myers v. Boston Magazine Co.*, 380 Mass. 336, 344-45 (1980). "For a plaintiff who is the victim of ridicule, the forgetting may not be easy. But the law will not find a statement of fact where none has been uttered." *Id.; see also* note 2.

Finally, Ourway has no hope of demonstrating that it has suffered "actual injury" as a result of the petitioning activity. A mere allegation of harm to reputation does not suffice to overcome the Anti-SLAPP statute – rather, Ourway must establish such injury "by a

⁹ Keen is not liable for this statement as a matter of law. See note 5, *supra*.

preponderance of the evidence." G.L. c. 231 § 59H. It is extremely unlikely that Ourway could demonstrate "actual injury" from the Facebook post of the webcam photo with the accompanying police department request for information, or from the subsequent joking comment, which was removed before Ourway filed suit.

CONCLUSION

For the foregoing reasons, defendant Thomas Keen respectfully requests that his Special Motion to Dismiss be granted. Keen further requests that this Court award him all of his costs and reasonable attorneys' fees incurred in this action, as is required under G.L. c. 231 § 59H.

Respectfully Submitted,

THOMAS KEEN

By His Attorneys,

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Certificate of Service

I, Jeffrey J. Pyle, hereby certify that the above document was served on counsel for plaintiff on July 20, 2012, by first-class mail and e-mail.

1/1 gle



Say NO to slots in Plainville

Stav informed with our eNewsletter: Email: Subscribe

Reasons we believe a raciNO is not in the best interest of Plainville and its surrounding communities:

- · Plainridge is a money loser: According to The Boston Globe, Plainridge was initially profitable but has become a money loser over the past five years, and needs the extra revenue that slot machines would generate to keep the facility afloat. Plainridge's investors, namely a Las Vegas slot machine tycoon who owns 31% of the track, have pumped at least \$32 million into the track over the past decade and that may soon hit \$35 million. Since then, each year has brought additional losses, with Plainridge's backers subsidizing the moneylosing operation as interest steadily dropped in live horse racing. How can we expect Plainridge to be successful with a highly complex slot operation if they cannot even make money with their current business venture? What has Plainridge's management been doing since the track opened - "We have been here for 14 years watching paint dry. This is getting exciting. This is light speed." - says Gary Piontkowski, Plainridge Racecourse's President.
- Host Community Agreement: Plainville does not have the resources 2) Support our cause to adequately negotiate a complex Host Community Agreement. The agreement is critical to ensure Plainville is compensated for all the current and future mitigation and to extract maximum value for Plainville for the deal. Plainville Town Administrator Joseph Fernandes says "To be candid, we need assistance with this process. I and others could muddle through it, but why do so? There are companies that have done this in other locales. I am not going to reinvent the wheel." We are concerned that the town will not be adequately compensated as the Host Community and leave significant value on the table, so we have submitted a petition for a town meeting vote "To see if the town will vote to require the board of selectmen to obtain an independent cost-benefit analysis about the impact of a slot machine parlor on the residents of Plainville. This analysis would be obtained prior to and-or concurrent with negotiations for a host community agreement for a Class 2 gaming license in Plainville, and made public prior to any town -wide referendum on any host community agreement."
- Job quality: These are low paying jobs with the median annual wage for a slot worker is only \$25,100¹ - and a racino requires very few employees to operate. This salary is just above the poverty level and is significantly below the income per capita is \$36,434, which includes all adults and children. The median household income is \$76,188. These are not the type of jobs Plainville needs to boost our local economy.
- · Economic benefits: Government sponsored gambling is a failed public policy. Foxwoods, Mohegan Sun, Twin River and Newport Grand have had their own problems over the past few years, including the need for Twin River to file for bankruptcy protection. The RI Governor and state legislature included this in their FY2011 and FY2010 Supplemental Budget as Enacted: The budget "Foregoes revenues of \$3.7 million for Twin River and \$1.0 million for Newport Grand to ensure the Twin River facility successfully emerges from bankruptcy." The government is bailing out the gambling establishments who were supposed to provide the miraculous revenue for the state and region. Mohegan Sun is \$1.6 billion in debt and their stock is rated at a junkbond status. Steve Wynn, a casino owner once said, "Get it straight...there is no reason on earth for any of you to expect for more than one second that just because there are people here [at casinos],

How you can help

1) Email your Selectmen and tell them a racino is not in Plainville's best interest

Andrea Soucy andisoucy@comcast.net

We are a group of residents of Plainville and surrounding towns who are concerned about expanded gambling at Plainridge Racecourse. We oppose the addition of slot machines and the inevitable economic, social, and political impact on our communities and way of life.

> Rob Rose lsxplrer@comcast.net

Robert Fennessy rfennessy@fennessylawoffices.com

Also, contact the Town Administrator: Joseph Fernandes ifernandes@plainville.ma.us



Please note we have not filed our 501(c)(3) paperwork so donations are not tax deductible.

3) Stay informed and Friend us on Facebook



In The News

Plainville track owners lobby for slots The Boston Globe - 4/26/2012

Gambling debate gets heated in Plainville The Sun Chronicle - 4/26/2012

Plainridge slots stir traffic concerns The Sun Chronicle - 4/26/2012

Massachusetts adds slot machines as Australians debate "pokie" problem Latitude News - 4/17/2012

Group wants take on racino costs The Sun Chronicle - 4/7/2012

Watch Les Bernal's Stop Predatory Gambling presentation at a recent No Plainville Racino open house:

they're going to run into your store, or restaurant, or bar." Donald Trump, in an interview with the Miami Herald, said "People will spend a tremendous amount of money in casinos, money that they would normally spend on buying a refrigerator or a new car. Local businesses will suffer because they lose customer dollars to the casinos."

- **Competition**: There is currently slot gambling just 18 miles from Plainridge at Twin River which has <u>4,700 slot machines</u>. In addition, Steve Wynn is proposing a billion dollar casino approximately 5 miles north of Plainridge across from Patriots Place. If that's not enough competition, there is another proposal for a casino 22 miles away in Taunton with <u>3,000 slot machines</u>. Why would a local resident want to visit the local <u>1,250 slot machine</u> "slot barn" when they could play in the luxury of a billion dollar Wynn "Destination Resort" or another "First Class Destination Resort" in Taunton? With so many local venues competing for the same gambling dollars, revenue projections could be overly optimistic.
- Crime: Crime, including embezzlement, robbery, DUIs, aggravated assaults and domestic violence rates, increases 8-10% right after casino is built and continues to increase after that. Ledyard, CT (home to Foxwoods), has seen a 30-fold increase in calls to 911 since casinos were introduced. CT State Police have seen a dramatic increase in DUI arrests, followed by a leveling off of DUI arrests. The leveling off was followed by an increase in drunken driving DEATHS. The state police determined that DUI occurrences had continued to rise but they did not have enough police resources to CATCH them.
- Addiction: Slot machines are highly addictive, more than any other form of gambling.
- Harness racing synergies: "This idea that we can revive harness racing by adding slot machines is really a lie--there's no evidence that that would work."²
- **Traffic**: The intersection of Route 1 closest to Plainridge is one of the most dangerous intersections in the state. In addition, Plainridge is proposing the addition of 4 new traffic lights which will further contribute to the traffic and congestion in the local area.
- Future demographics: The aging demographics of the typical slot player means longer term the number of gamblers will decrease in the near future. According to a recent <u>University of Massachusetts study</u>, 40% of the Massachusetts visitors to Foxwoods or Mohegan Sun were 50 years or older. This will further pressure racino revenues as their target demographic decreases in numbers. More likely that future projections based on today's game play will be false (past performance is not guarantee of future performance).
- **Casino**: There's a small leap from a racino to a casino and it is a familiar strategy to start as a slot parlor as a step to a casino <u>as Twin</u> <u>River is proposing</u>.

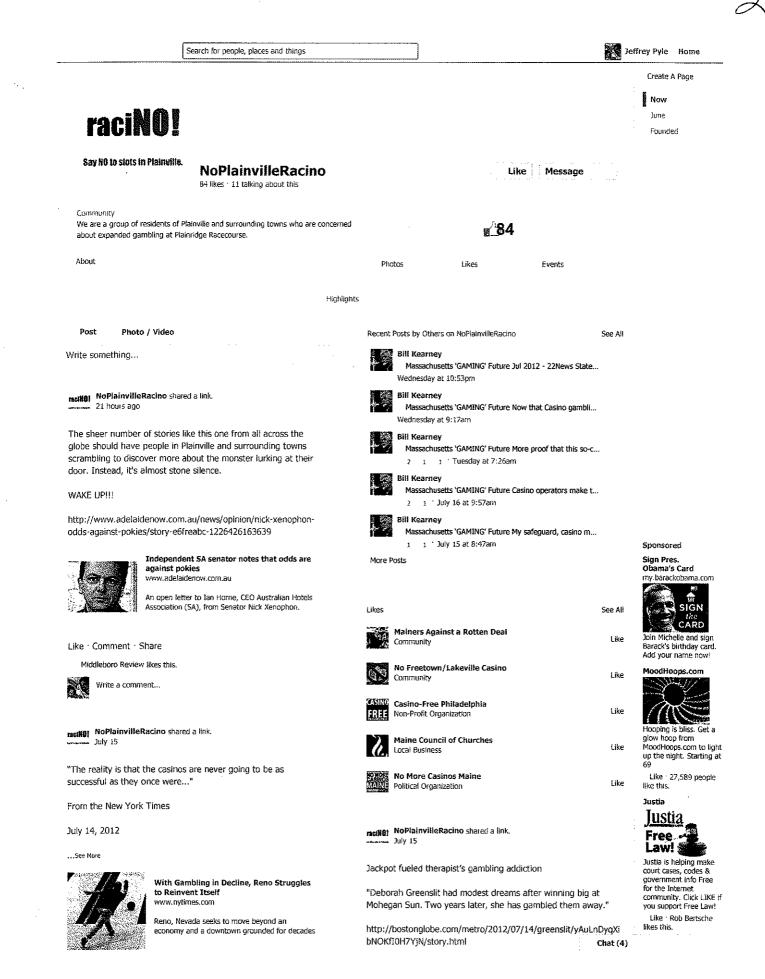
<u>Please let us know</u> if you have any additions, corrections or amplifications to the information presented above.

Contact Us: info@noplainvilleracino.com

¹ U.S Bureau of Labor Statistics, page 5.

² Ballotpedia.org





http://www.facebook.com/





Chat (4)



NoPlainvilleRacino

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URGENT: Search for people, places and things		Jeffrey Pyle Home
Plainville Board of Selectmen MEETING TONIGHT at 6:30 at the Plainville Town Hall Please attend, if you can.	Like · Comment · Share 2	Create A Page
They're going to "take the first steps" toward hiring a gaming consultant. It's essential that as many of us as $possiblsee$ More	nelle: NoPlainvilleRacino shared a link. June 11	June Founded
In Plainville, girding for slots www.thesunchronicle.com PLAINVILLE - Selectmen will take the first steps tonight toward hiring a gaming consultant and entering into negotiations with Plainridge Racecourse on bringing slot machines to town.	"According to the Canadian Centre for Substance Abuse, 80% of problem gamblers in Ontario cite slot machines as their problem./ The largest percentage are seniors and low-income earners."	
Like · Comment · Share	In Plainville, the money of "seniors and low-income earners" will go straight into the pockets of Gary Piontkowski and other Plainidge investors, with the town getting our comparatively meager Enabler's Fee:	
nseiN01 NoPlainvilleRacino shared a link.	Carleton research outlines addiction of slots	
Just imagine what the loss of Lottery funds will do for Plainville:	Believe it or not, there's science behind gambling.	
Mass. gambling commission chairman warns of threat that casinos pose to state lottery's local aid		
blogs.wickedlocal.com Massachusetts Gaming Commission chairman Steve Crosby wants his new agency to work as a partner	Like · Comment · Share 2 · 1 radiki NoPlainvilleRacino shared a link.	
Like · Comment · Share	Slot Machines Kill Jobs	
BeiNei NoPlainvilleRacino June 7	"Kindt recalls promises 20 years ago that casinos in Illinois would solve the state's budget problems forever. Now, Illinois and two	
Get involved with No Plainville Racino today:	other states with large gambling industries (California and Nevada) lead the nation in budget shortfalls. He's convinced that "the accumulated taxpayer costs that accompany gambling	
 Email info@noplainvilleracino.com to get information about our next meeting and plans; 	facilities" are a major factor in Illinois' budget crisis."	Sponsored Sign Pres.
 Encourage your friends and neighbors in Plainville, Wrentham, North Attleborough, Foxborough(!), Cumberland RI, Norfolk, Walpole and Attleborough to 'Like' our page to get the word out (a slot barn will affect our neighboring towns, as well); 	Black www.newstips.org Mayor Emanuel is promising to spend his new \$140 million a year from the Chicago casino he expects on wonderful things that we'll all love. While casinos will	Obama's Card my.barackobama.com
• Email the PlainSee More	Like · Comment · Share	Join Michelle and sign Barack's birthday card.
Like Comment Share 3 2		Add your name now! MoodHoops.com
ncižěj NoPlainvilleRacino June 5	nseiki) NoPlainvilleRacino shared a kink. June 7	
Can Plainville learn from this?	Plainville rejects anticasino group petition - The Boston Globe www.bostanglobe.com	Hooping is bliss. Get a glow hoop from MoodHoops.com to light
"If we allow our elected officials to control the tone and content of the dialog about the Suffolk Downs casino proposal, then we surrender our ability to say, 'No, this is not the right way forward for our community." - Mike Russo, No Eastie Casino	Tempers flared at the Plainville Town Meeting over a petition urging selectmen to hire an outside consultant with no ties to Plainridge Racecourse to study the pros and cons for the town if slot machines are eventually allowed at the horse track. Town officials blasted the petition,	up the night. Starting at 69 Like · 27,589 people like this. Justia
Like Comment Share 1 1	Like · Comment · Share 1 1 :	
nciili) NoPlainvilleRacino June 3	ncille: NoPlainvilleRacino June 4 The citizen's article for an independent cost/benefit analysis failer	Law! Justia is helping make court cases, codes & government info Free for the Internet
CAN YOU HEAR US NOW?	in Plainville tonight.	community. Click LIKE if you support Free Law! Like * Rob Bertsche
Casino vote in Lakeville yesterday: 172 yes, 1735 NO!	Like · Comment · Share 2 9 · Chat (4	i a se

	Search for people, places and things	racikel NoPlainvilleR	lacino shared a link.	ffrey Pyle Hom
Incline I June 1	hared a link.	June 3	·····	Create A Page
		The very definition	of "carrion comfort":	Now
		"I think it's going to	be a noisy process all the way to the end and	June
		University of Massa	s," [Clyde] Barrow [a casino specialist at the chusetts-Dartmouth] said, "but the processes and nobody has been indicted."	Founded
		6	Rocky rollout to era of Mass. casino gambling www.boston.com	
		boston.com	The first six months of the casino era have been hampered by controversies and false starts, proving that little is easy when it comes to	

Les Bernal delivers his Stop Predatory Gambling presentation to members of the No Plainville Racino group. Please watch and circulate widely.

Les Bernal's Stop Predatory Gambling presentation

Les Bernal delivers his Stop Predatory Gambling presentation to members of the No Plainville Racino group.

Like · Comment · Share

Likes June



Liked No Freetown/Lakeville Casino

Show all stones from June 2012



Sign Pres. Obama's Card my.barackobama.com



Barack's birthday card. Add your name now!



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Like · 27,589 people like this.



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TOWN OF PLAINVILLE

WARRANT for the ANNUAL TOWN MEETING

MONDAY, JUNE 4, 2012 AT 7:00 P.M.

THE COMMONWEALTH OF MASSACHUSETTS

Norfolk, ss

To Either of the Constables of Plainville:

In the name of the Commonwealth of Massachusetts, you are hereby required to notify and warn the inhabitants of the Town of Plainville qualified to vote in town affairs, to meet in the Beatrice H. Wood Elementary School Auditorium, 72 Messenger Street, in said Plainville, on

MONDAY, JUNE 4, 2012

at seven o'clock in the evening, then and there to act on the following articles, viz:

ARTICLE 1: To choose all other necessary Town Officers not chosen at the Annual Election of April 2, 2012.

ARTICLE 2: To consider and act on the reports of the Selectmen, and other Town Officers. (Sponsor: Board of Selectmen)

<u>ARTICLE 3</u>: To see if the Town will vote to have the Surety Bonds of the Collector of Taxes, the Assistant Collector of Taxes, Treasurer, Assistant Treasurer, and, Town Clerk placed with a Fidelity or Guarantee Company, or do or act in any manner relative thereto. *(Sponsor: Board of Selectmen)*

<u>ARTICLE 4</u>: To see if the Town will vote to authorize the Board of Selectmen to accept and enter into a contract for the expenditure of any funds allotted or to be allotted by the Commonwealth and/or County for the construction, reconstruction and improvements of Town roads, and to authorize the Town Treasurer to borrow in anticipation of such funds, or do or act in any matter relative thereto. (Sponsor: Board of Selectmen)

ARTICLE 5: To see if the Town will vote to appropriate and transfer \$273,723 or any other sum from funds received by the Town of Plainville as so called "Chapter 90" monies for costs associated with road resurfacing, restoration, maintenance, and land or easement purchases or takings, or do or act in any manner relative thereto. (Sponsor: Board of Selectmen)

<u>ARTICLE 6</u>: To see if the Town will vote to raise and appropriate, or to transfer from available funds, \$4,680 or any other sum to pay for services rendered to citizens of Plainville by South Norfolk County Association for Retarded Citizens, Inc., such payment to be made in accordance with a fee for services agreement to be entered into by the Board of Health on behalf of the Town of Plainville, or do or act in any manner relative thereto. (Sponsor: Board of Health)

ARTICLE 7: To see if the Town will vote to raise and appropriate, or to transfer from available funds, \$20,000 or any other sum for the payment of fees associated with the collection of ambulance billings, or do or act in any manner relative thereto. (Sponsor: Fire Department)

ARTICLE 8: To see if the Town will vote to raise and appropriate, or transfer from available funds, \$25,000 or any other sum for the purpose of conducting an audit of Fiscal Year 2012, or do or act in any manner relative thereto. (Sponsor: Board of Selectmen)

Meaning and intending to describe that parcel of land shown as Harness Path on a plan entitled, "As-Built Plan of Harness Path, 'Shepardville Woods' Plainville, MA"; dated: May 2010; scale: As Noted, prepared by: Bay Colony Group, Inc., 4 School Street, Foxborough, MA.

Or, to see if the Town will vote to do or act in any manner relative thereto. (Sponsor: Planning Board)

ARTICLE 41: To see if the Town will vote to petition the General Court, or take any other action necessary to establish a regional public safety communications and dispatch center for area Towns including, but not necessarily limited to the Towns of Norfolk, Wrentham and Franklin, or do or act in any manner relative thereto. (Sponsor: Board of Selectmen)

ARTICLE 42: To see if the Town will vote to amend the Code of the Town of Plainville, section 430-14 by replacing the last sentence therein with the following:

The penalty for violation under the provisions of MGL c. 40, \$21 of this bylaw shall be \$300 per offense and may include the removal of the vehicle in accordance with MGL c. 40, §22D.

Or, to see if the Town will vote to do or act in any manner relative thereto. (Sponsor: Board of Selectmen)

ARTICLE 43: To see if the Town will vote to require the Board of Selectmen to obtain an independent cost/benefit analysis about the impact of a slot machine parlor on the residents of Plainville. This analysis would be obtained prior to and/or concurrent with negotiations for a Host Community Agreement for a Class 2 gaming license in Plainville, and made public prior to any town-wide referendum on any Host Community Agreement. (Sponsor: By Petition)

ARTICLE 44: To see if the Town will vote to amend the Town Zoning Map and re-zone property in the vicinity of High Street and Chestnut Street as shown on the records of the Assessors as Map 5, Lots, 9, 11, 13, 14, 16, and 17, currently in the "RA-Single Family Residential District" to now be in the "IB-Limited Industrial District", as shown on a plan on file with the Town Clerk, or do or act in any manner relative thereto. (Sponsor: By Petition)

And you are directed to serve this Warrant by posting copies thereof in six (6) public places, in said Town, fourteen (14) days at least before the time of holding said meeting.

Hereof, fail not, and make due return of the Warrant with your doing thereon, to the Town Clerk at or before the time and place of said meeting as foresaid.

Given under our hands this 16th day of May, in the year of our Lord two thousand and twelve.

Andrea Soucy.

Robert Rose

A true copy Attest:

. 2012

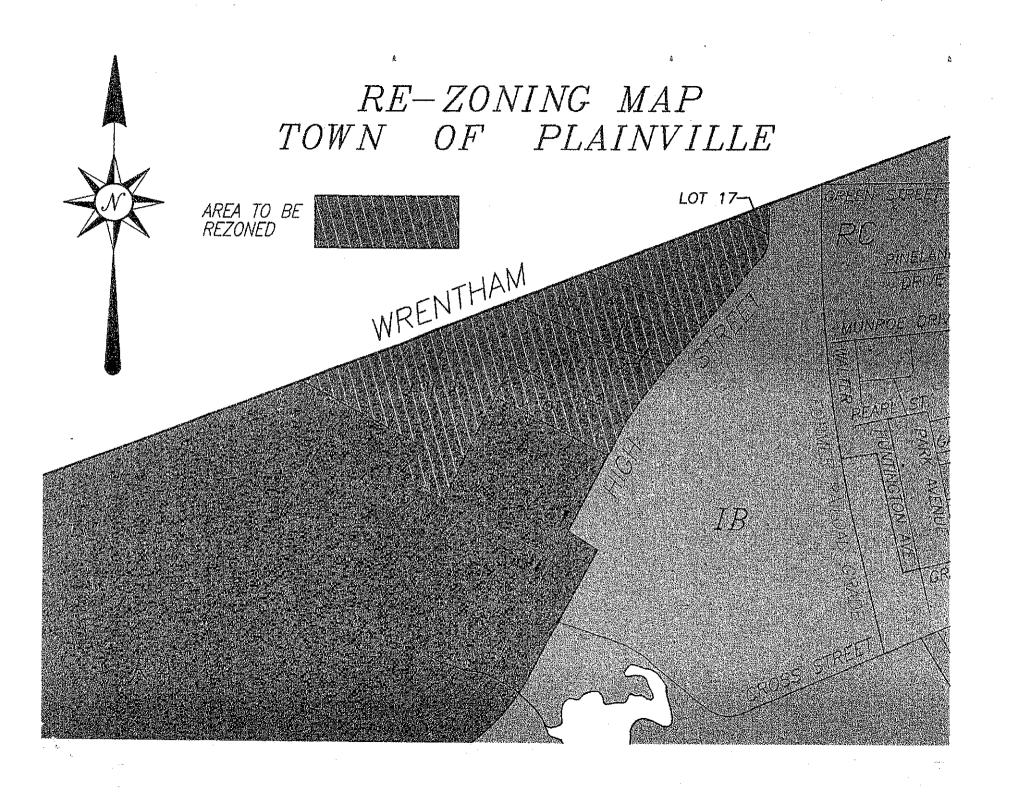
I have this day posted six (6) copies in six (6) public places in the Town of Plainville and have returned one signed copy to the Town Clerk, Return of the Warrant May 17, 2012

Constable

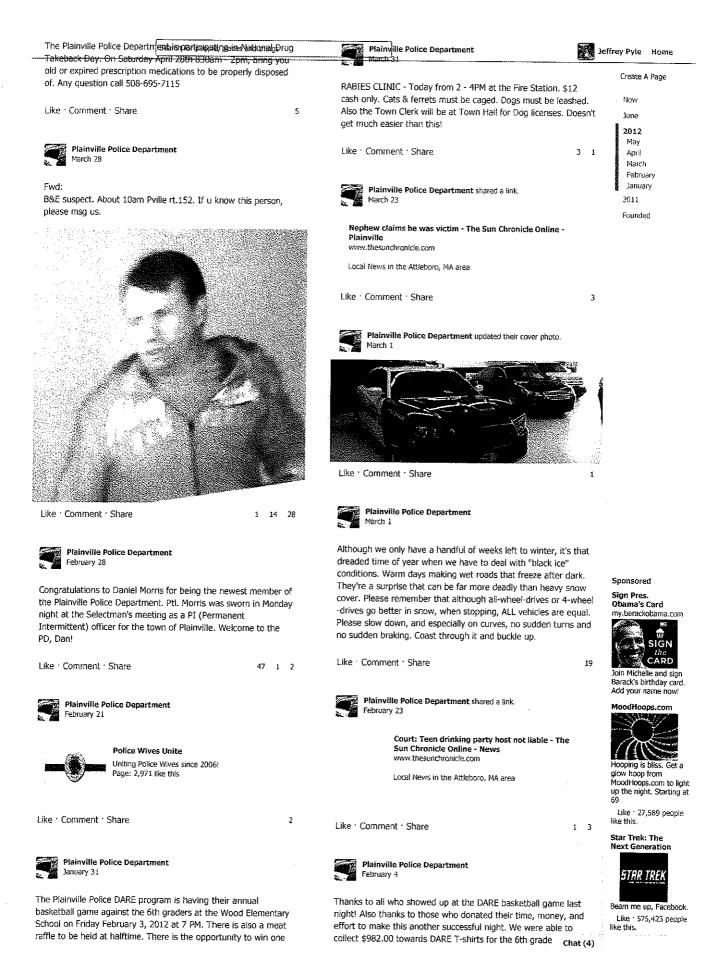
A True Copy, Attest:

2012

Page 12 of 12 Colleen A. Gardner, Assistant Town Clerk







Upload your Ino - YouTube

No Plainville Racine: Opposed to the ad: _____ of slot machines to Plainridge Racecourse

(2) NoPlainvilleRacino



KRAUS & HUMMEL LLP

99A COURT STREET PLYMOUTH, MASSACHUSETTS 02360 (508) 747-4200 (508) 747-0788 Fax www.kraushummel.com

April 20, 2012

Via Certified Mail; Return Receipt Requested No. 7011 1570 0000 4194 6172 and Via First Class Mail

Mr. Thomas Keen

50 Taunton Street Plainville, MA 02762

Dear Mr. Keen:

Please be advised that this office represents PlaInridge Racecourse, a Harness Horse Racing facility located at 301 Washington Street, Plainville, MA 02762 (the "Track").

It has come to our attention that you are operating a web site found at http://www.noplainvilleracino.com and a social media site "NoPlainvilleRacino" on facebook. I have attached the Domain Registration Information and the facebook information page from your sites to verify that you are indeed the Registrant and Administrator of the website and social media page and you are the person responsible for the content published on the sites.

The content of your website and facebook page is controlled and created by you and published in opposition to the proposed expansion of my clients business and facility. On your websites you state that approval of expanded gaming at my client's facility will increase the crime rate in the area along with other unsubstantiated claims you make in opposition to expanded gaming.

On March 28, 2012 you posted on your facebook page a picture of a person who was suspected of breaking and entering a dwelling/building on Route 152 in Plainville. On March 28, 2012 at 1:01 PM a person affiliated with your site posted "I wonder if they checked over at the racetrack, Io!" in the comments section below the picture that you had posted.

Your efforts to try and bolster your unfounded claims about increased crime through expanded gaming at my client's facility by posting a picture of a suspect in a crime in the area that is totally unrelated to my client's facility or business on your platform of opposition is objectionable, unprofessional and actionable. The publishing of these damaging posts on your platform to support your Via CM, RRR and Regular Mail Mr. Thomas Keen April 20, 2012 Page 2 of 4

unsubstantiated belief that my client's business attracts or supports these types of nefarious individuals is actionable. You were clearly trying to associate an alleged crime with the Track when in fact there was no relation - that is wrong and we cannot allow such aspersions to go unanswered. It is easy to see that you did this intentionally to cheaply promote your cause, sensationalize the crime to your benefit at my client's expense, create a chuckle amongst your group by your bravado, and intentionally infer a connection between the crime and my client via a coincidental geographic location.

My client has an impeccable reputation and relationship with the Town of Plainville and all of its Departments including Public Safety. The level of communication and cooperation my client maintains with the Town of Plainville is unprecedented and is a role model for all to follow. Plainridge by far is the most policed and regulated business in the Town of Plainville if not the Commonwealth. The Plainville Police Department has a sub-station at the facility which is staffed by a uniformed off duty officer(s) during all hours of public operation. The Massachusetts State Police also have a sub-station on the premises at Plainridge and this office is staffed by Detectives and Troopers on a daily basis. The Massachusetts State Racing Commission has a suite of offices at Plainridge that include Investigators, Inspectors, Auditors and Licensing staff. During live racing events we have additional uniformed Plainville and State Police Officers and an ambulance that Plainridge bought and donated to the Town on site staffed by EMT's. All of the costs of this Public Safety presence at my client's facility are totally borne by my client with <u>NQ</u> Town or State aid or reimbursement.

Your attempt to fabricate a relationship between crime in the neighborhood and my client's business to further your personal agenda under the veil of a "group of concerned citizens" by publishing the aforementioned posts is reckless and liable conduct and this type of defamation and slander will not be tolerated by my client.

We believe you have willfully and intentionally damaged and impugned our client's rights and reputation with these postings that you have published and allowed to stand on your facebook page to this date. Your facebook page is readily available and readable by clicking on your link that you have posted on your noplainvilleracino.com website or a simple facebook or internet search.

Defamation is both tortious and actionable if the following has occurred (1) you made a statement concerning the Track to a third party; (2) the statement

Via CM, RRR and Regular Mail Mr. Thomas Keen April 20, 2012 Page 3 of 4

could damage the Track's reputation in the community; (3) you are responsible for the statement; and (4) the statement either caused the Track economic loss or is actionable without proof of economic loss. Ravnikar v. Bogojavlensky, 438 Mass. 627, 782 N.E.2d 508, 16 A.L.R.6th 815 (2003).

For your information and consideration, I strongly suggest that you review the following cases relating to defamation that may affect you and your belief, evidently, that you can say anything you wish regarding the Track: Backman v. Guiliano, 331 Mass. 231, 232, 118 N.E.2d 78, 79 (1954), Dowd v. Iantosca, 27 Mass.App.Ct. 325, 331-333, 538 N.E.2d 33, 36-38 (1989), Godin v. Niebuhr, 236 Mass. 350, 351, 128 N.E. 406, 407 (1920), Comey v. Hill, 387 Mass. 11, 20, 438 N.E.2d 811, 816 (1982), Powers v. Leno, 24 Mass. App. Ct. 381, 384-385, 509 N.E.2d 46, 48-49 (1987), Huges v. New England Newspaper Pub. Co., 312 Mass. 178 (1942); Tosti v. Ayik et al., 394 Mass. 482 (1985); Sharratt v. Housing Innovations, Inc., et al. 365 Mass. 141 (1974; Ingalls v. Hastings & Sons Pub. Co., 304 Mass. 31, 22 N.E.2d 657 (1939); Com. v. Clap, 4 Mass. 163 (1808); Brauer v. Globe Newspaper Co., 351 Mass. 53, 217 N.E.2d 736 (1966). These cases illustrate the nature of the action that could be instituted against you given your statements. These cases also clearly indicate damages imposed upon individuals or entities found liable for defaming the good name and reputation of a particular business or person.

We hereby demand that you immediately cease and desist in this type of conduct, and remove the postings immediately.

Based upon the foregoing, we hereby demand that your confirm to us in writing within ten (10) days of receipt of this letter that: (i) you have removed the aforementioned damaging images and comments from your site; (ii) you will refrain from posting any similar damaging material on the Internet or any other online service in the future; and (iii) you will offer an apology on your website, facebook page and in the Sun Chronicle newspaper to my client for falsely inferring that my client's business was the reason for the person committing this crime. You have left us with no other choice but to pursue all available legal and equitable remedies against you. *Via CM, RRR and Regular Mail* Mr. Thomas Keen April 20, 2012 <u>Page 4 of 4</u>

We do not challenge your right to public input, but we will not stand by and allow you to recklessly and maliciously impugn the reputation of the Track, its ownership and its dedicated employees.

Sincerely

Robert Kraus

RK/kl Enclosures cc: Client

S:\KH Documents\PLAINVILLE RACING CO\T Keene-cease desist 2(4-19-12).doc

The data contained in GoDaddy.com, LLC's WhoIs database, while believed by the company to be reliable, is provided "as is" with no guarantee or warranties regarding its accuracy. This information is provided for the sole purpose of assisting you in obtaining information about domain name registration records. Any use of this data for any other purpose is expressly forbidden without the prior written

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you agree not to use this data to allow, enable, or otherwise make possible, dissemination or collection of this data, in part or in its entirety, for any purpose, such as the transmission of unsolicited advertising and and solicitations of any kind, including spam. You further agree not to use this data to enable high volume, automated or robotic electronic processes designed to collect or compile this data for any purpose, including mining this data for your own personal or commercial purposes.

Please note: the registrant of the domain name is specified in the "registrant" field. In most cases, GoDaddy.com, LLC is not the registrant of domain names listed in this database.

Registrant:

Thomas Keen 50 Taunton St. Plainville, Massachusetts 02762 United States

Registered through: GoDaddy.com, LLC (http://www.godaddy.com) Domain Name: NOPLAINVILLERACINO.COM Created on: 24-Mar-12 Expires on: 24-Mar-13 Last Updated on: 24-Mar-12

Administrative Contact: Keen, Thomas tj@keensense.com 50 Taunton St. Plainville, Massachusetts 02762 United States +1.5083160358

Technical Contact: Keen, Thomas tj@keensense.com 50 Taunton St. Plainville, Massachusetts 02762 United States +1.5083160358

Domain servers in listed order: NSG1.DOMAINCONTROL.COM NSG2.DOMAINCONTROL.COM **NoPlainvilleRacino** shared Plainville Police Department's photo.

Fwd:

us.

B&E suspect. About 10am Pulle rt. 152. If u know this person, please msg

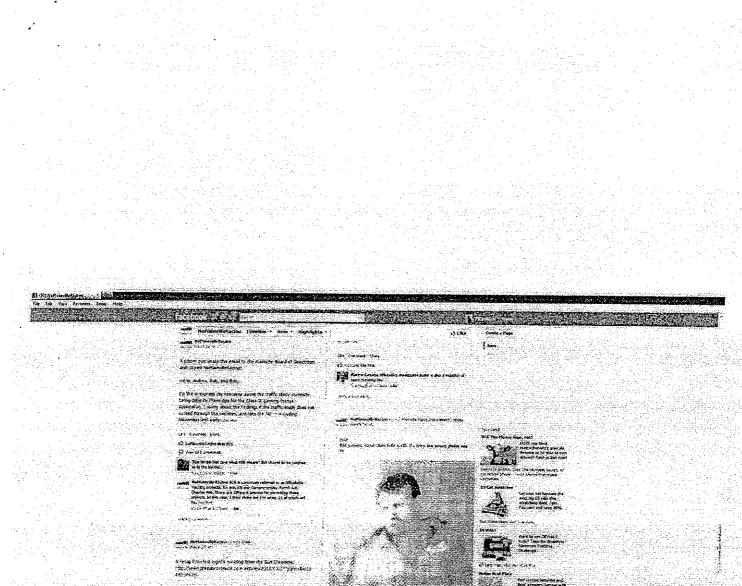


Like · Comment · Share



Buck Farack I wonder if they checked over at the racetrack, lol March 28 at 1:01pm · Like · A 2

Write a comment.



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Sarah Wunsch, Staff Attorney ACLU Foundation of Massachusetts 211 Congress Street, Boston, Massachusetts 02110 Phone: 617-482-3170, ext. 323 Fax: 617-451-0009 email: swunsch@aclum.org

April 25, 2012

BY FAX 508-747-0788 and email r.kraus@kraushummel.com Robert Kraus, Esq. Kraus & Hummel LLP 99A Court Street Plymouth, MA 02360

Re: Thomas Keen

Dear Mr. Kraus:

I am writing on behalf of Thomas Keen in response to your letter threatening him with a defamation lawsuit on behalf of the Plainridge Racecourse in relation to various postings on facebook and a website which argue that expanded gaming at the racecourse may increase the crime rate. You identify only one specific posting on facebook which asks, "I wonder if they checked over at the racetrack, lol." This posting was made by someone else in response to another posting on the facebook page asking for help in identifying a picture of someone suspected of breaking into a dwelling in town.

You have demanded confirmation from Mr. Keen in writing that 1) (unspecified) damaging images and comments be removed; 2) that similar material not be posted in the future; and 3) that Mr. Keen offer an apology to your client on the website, facebook page, and in the Sun Chronicle newspaper.

Let me confirm at the outset that the specific posting about "checking at the racetrack, lol" has been removed in the interests of not having to fight about a statement that was plainly intended by the poster as a joke. However, discussion about possible links between increased crime and gaming is legitimate and a fair topic for public debate and discussion. Indeed, these subjects have been raised throughout the debates when the Massachusetts legislature was considering allowing casinos in Massachusetts.

Most importantly, I am sure you are aware of the Massachusetts "Anti-SLAPP" statute which was enacted to give enhanced protection to those residents of our communities who are willing to take part in public affairs and to deter lawsuits aimed at making people afraid engage in the debates of the day. See G.L. c. 231, § 59H. SLAPP is an acronym for "Strategic Lawsuit Against Public Participation." The statute's definition of protected petitioning is very broad and would encompass the statements to which you seem to object on the website and facebook page.

As used in this section, the words "a party's exercise of its right of petition" shall mean any written or oral statement made before or submitted to a legislative, executive, or judicial body, or any other governmental proceeding; any written or oral statement made Robert Kraus, Esq. April 25, 2012 Page 2 Re: Thomas Keen and noplainvilleracino.com

> in connection with an issue under consideration or review by a legislative, executive, or judicial body, or any other governmental proceeding; any statement reasonably likely to encourage consideration or review of an issue by a legislative, executive, or judicial body or any other governmental proceeding; **any statement reasonably likely to enlist public participation in an effort to effect such consideration**; or any other statement falling within constitutional protection of the right to petition government. (Emphasis added).

Plainly, the No Plainville Casino group is attempting to communicate with the public to enlist participation in matters that are being considered by the town and other governmental bodies. The anti-SLAPP statute would protect the statements on the webpage and on facebook. If your client did proceed to sue Mr. Keen or those involved with the group, I believe the lawsuit should promptly be dismissed under the terms of G.L. c. 231, § 59H and your client would be responsible for paying the attorney's fees of those you sue.

In general, vigorous debate and discussion on matters of public concern is protected not only by the anti-SLAPP statute but also by the First Amendment to the U.S. Constitution. Your client certainly has every right to respond to assertions and expressions of opinion with which it disagrees. This kind of debate enhances public consideration of important issues. Threats of lawsuits, however, serve to frighten people and limit public debate, a result which the statute was aimed at preventing. I do not believe it would serve the interests of your client, the community, or anyone else to commence litigation over the expression of ideas and views that are relevant to the matters under consideration in town and that have a reasonable basis. The discussion about crime on the website is general and certainly does not accuse your client of committing any crimes. See, e.g.,

Crime: Crime, including embezzlement, robbery, DUIs, aggravated assaults and domestic violence rates, increases 8-10% right after casino is built and continues to increase after that. Ledyard, CT (home to Foxwoods), has seen a 30-fold increase in calls to 911 since casinos were introduced. CT State Police have seen a dramatic increase in DUI arrests, followed by a leveling off of DUI arrests. The leveling off was followed by an increase in drunken driving DEATHS. The state police determined that DUI occurrences had continued to rise but they did not have enough police resources to CATCH them.

http://noplainvilleracino.com/ (accessed on April 25, 2012).

The facebook page contains a similar kind of information about crime and gaming:

Unlike Massachusetts, New Hampshire actually conducted an INDEPENDENT COST BENEFIT ANALYSIS and determined the COSTS exceeded the benefits/revenues. From New Hampshire:

"Crime Increase. The NH Gaming Study Commission (page 83) found that even one Salem or Hudson casino would cause an additional 1,200 serious crimes each year against innocent victims. Shopping malls and parks do not cause gambling addiction and related crimes. The NH Association of Chiefs of Police and every NH Attorney General Robert Kraus, Esq. April 25, 2012 Page 3 Re: Thomas Keen and noplainvilleracino.com

for the past 35 years have opposed legalized casinos because they increase serious crime. "http://www.nh.gov/gsc/documents/20100520.pdf

http://www.facebook.com/NoPlainvilleRacino (March 26th posting and link).

Providing this kind of information to the public to enlist participation in governmental affairs is precisely the kind of "petitioning" protected by our state law and the constitution.

I would appreciate hearing from you as soon as possible to discuss this matter further. Thank you.

Sincerely, Sarah Wensch

Sarah Wunsch

cc: Thomas Keen

CASINOS, CRIME, AND COMMUNITY COSTS

Earl L. Grinols and David B. Mustard*

Abstract-We examine the relationship between casinos and crime using county-level data for the United States between 1977 and 1996. Casinos were nonexistent outside Nevada before 1978, and expanded to many other states during our sample period. Most factors that reduce crime occur before or shortly after a casino opens, whereas those that increase crime, including problem and pathological gambling, occur over time. The results suggest that the effect on crime is low shortly after a casino opens, and grows over time. Roughly 8% of crime in casino counties in 1996 was attributable to casinos, costing the average adult \$75 per year.

Introduction I.

PRIOR to 1978, there were no casinos in the United States outside Nevada. Since 1990, casinos have expanded to the point where the vast majority of Americans now have relatively easy access to one. This paper utilizes the natural experiment created by casino openings to examine how casinos affect crime. There are many reasons why understanding this link is particularly valuable. First, the casino industry has grown rapidly in the last decade and has become one of the most controversial and influential industries. Commercial casino revenues increased 203% from \$8.7 billion to \$26.3 billion between 1990 and 2000. Including Class III American Indian casinos, revenues were \$38.8 billion, or \$200 per adult, in 2001. Casino industry revenues are comparable to those of the cigarette market, and all forms of gambling total more than seven times the amount spent on theater tickets.¹ From 1982 to 2000, GDP increased 201% while casino revenues increased more than 660%. This rapid expansion generated extensive debate about the impact of casinos on many social, economic, and political issues.²

Second, the casino industry has become a major lobbying presence. Between 1992 and 1997, \$100 million was paid in lobbying fees and donations to state legislators (Harvard Medical School, 1997). Concerns were sufficiently pronounced that the U.S. Congress established the National Gambling Impact Study Commission (NGISC) in 1996 to study casinos exhaustively. Its final report called for additional research about the effects of casinos and a moratorium on further expansion.

Third, research suggests that on a national basis casino gambling generates externality costs in the range of \$40

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* Baylor University, and Terry College of Business, University of Georgia and the Institute for the Study of Labor, respectively.

We thank workshop participants at the American Law and Economics Association, American Economics Association Annual Meetings, Baylor University, and the Universities of Buffalo, Georgia, Illinois, and Rochester for their helpful comments.

1 1997 cigarette sales were \$45 billion. 2002 theater ticket and gambling revenues were \$9.3 and \$68.7 billion. ² Kindt (1994), Grinols (1996), Henriksson (1996), and Grinols and

Omorov (1996) discussed a number of these.

billion annually.3 and crime is one of the biggest components of these social costs.

Last and most important, in spite of the substantial attention devoted to the casino-crime link, there is a paucity of convincing research about it. Economists have been virtually silent, and studies from other disciplines typically exhibit many fundamental weaknesses. First, no study has examined the intertemporal effect of casinos, which we contend is essential to understanding the relationship. Second, nearly every study used small samples, most frequently Las Vegas, Atlantic City, Reno, and Deadwood (Albanese, 1985; Lee & Chelius, 1989; Friedman, Hakim, & Weinblatt, 1989; Buck, Hakim, & Spiegel, 1991; Chiricos, 1994; Margolis, 1997) or Wisconsin (Thompson, Gazel, & Rickman, 1996a; Gazel, Rickman, & Thompson, 2001), or a selection of a handful of casino markets (Albanese, 1999). Four of these studies conclude that casinos increase crime, two argue that there is no effect, and one maintains that Florida regions with casinos have lower crime rates than selected Florida tourist cities if visitors are included in the population base denominator.

Another problem with the existing research is that some studies (Albanese, 1999; Hsing, 1996) reached conclusions about crime rates without actually examining crime rates. Instead of analyzing offenses, they used arrests, but did not discuss the problems inherent in using arrest rates to infer anything definitive about crime rates.

A fourth criticism is that most studies are subject to substantial omitted variable bias because they rarely controlled for variables that affect crime. Margolis (1997), Florida Department of Law Enforcement (1994), and Florida Sheriffs Association (1994) included no control variables. Nearly all of the other studies control for very few factors.

Fifth, the literature has generally neglected discussing the theoretical links between casinos and crime, as Miller and Schwartz (1998) document in detail.

Last, many studies were agenda-driven, conducted or funded by either progambling or law enforcement organizations. Nelson, Erickson, and Langan (1996), Margolis (1997) and Albanese (1999) were funded by explicitly progambling groups. As expected, they concluded that gambling had no impact on crime. The Florida Department of Law Enforcement (1994) and Florida Sheriffs Association (1994), which both opposed casinos, concluded that crime and drunk driving increased in Atlantic City and Gulfport, MS, as a result of casinos.

The General Accounting Office (GAO) and NGISC concluded that definitive conclusions cannot yet be reached

³ See, for example, Grinols and Mustard (2001, p. 155) and Grinols (2004, p. 170).

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The Review of Economics and Statistics, February 2006, 88(1): 28-45

about the casino-crime link. According to the GAO (2000, p. 35), "In general, existing data were not sufficient to quantify or define the relationship between gambling and crime.... Although numerous studies have explored the relationship between gambling and crime, the reliability of many of these studies is questionable." This paper contributes to the literature on this important issue by addressing each of the above limitations.

The paper is organized as follows. Section II explains the data we use. Section III analyzes the theoretical links between casinos and crime, and section IV outlines our estimation strategy. Section V discusses our basic empirical results, and section VI extends the results to border counties. Section VII concludes. We find that crime increases over time in casino counties, and that casinos do not just shift crime from neighboring regions, but create crime. We estimate the crime-related social costs in casino counties at approximately \$75 dollars per adult per year.

II. Data

Our sample covers all 3,165 U.S. counties from 1977 to 1996. The Federal Bureau of Investigation's (FBI) Uniform Crime Report⁴ provided the number of arrests and offenses for the seven FBI Index I offenses: aggravated assault, rape, robbery, murder, larceny, burglary, and auto theft.⁵ With the exception of Alaska, the county jurisdictions remained unchanged over our sample period.

We used U.S. Census Bureau data for demographic control variables, including population density per square mile, total county population, and population distributions by race, age, and sex.⁶ The Regional Economic Information System, of the Bureau of Commerce, provided data on income, unemployment, income maintenance transfers, and retirement.⁷

⁴U.S. Department of Justice, FBI, Uniform Crime Reports: County-Level Detailed Arrest and Offenses Data, 1977–1996, Washington, DC: U.S. Department of Justice, FBI; Ann Arbor, MI: Inter-university Consortium for Political and Social Research (ICPSR, distributor).

⁵ The definitions are listed in *Crime in the United States: 1993* (U.S. Department of Justice, Federal Bureau of Investigation), Appendix H, pp. 380-381.

⁶ ICPSR (8384): "Intercensal Estimates of the Population of Counties by Age, Sex and Race (U.S.): 1970-80, "U.S. Department of Commerce, Bureau of the Census, Winter 1985, ICPSR, Ann Arbor, MI 48106. "Intercensal Estimates of the Population of Counties by Age, Sex and Race: 1970-1980 Tape Technical Documentation," U.S. Bureau of the Census, Current Pop. Reports, Series P-23, 103, "Methodology for Experimental Estimates of the Population of Counties by Age and Sex: July 1, 1975." U.S. Bureau of the Census, Census of Population, 1980: "County Population by Age, Sex, Race and Spanish Origin" (preliminary OMB-consistent modified race). The natural operating measure for casinos is gross revenue or profits. Unfortunately, such panel data do not exist— American Indian casinos are not required to report revenues. We therefore used the year a county first had an operating Class III⁸ gambling establishment, including riverboat casinos, American Indian casinos, land-based casinos, and, in the case of Florida and Georgia, "boats to nowhere" cruises that travel outside U.S. boundary waters so passengers can gamble. Not all forms of gambling qualify as casinos. For example, Montana has hundreds of small gambling outlets that offer keno or video poker, many in gas stations along the highway. Also, California has many card houses, some of which were illegal. These establishments are distinct from casinos in size and type of play.

To obtain casino opening dates we first contacted state gaming authorities. In cases like Washington, this was an expeditious way to ascertain the first year a casino opened. However, even the central gaming authorities and Indian affairs committees often lacked information on Indian casinos. Therefore, in most states we called each casino to obtain its opening date or first date of Class III gambling if it had previously operated other forms of gambling.⁹ We also used lists from the Casino City Web site, www. casinocity.com, which lists casinos in every state, and verified it against the annually produced *Casinos: The International Casino Guide* (B.D.I.T., 1997).

Table 1 presents summary statistics for casino and noncasino counties. Noncasino counties had no casino in any year of the sample. Casino counties had a casino in operation during one or more years of the period. Casino counties had higher population, land area, income, and crime rates. The regressions later in the paper show no statistically significant differences between casino and noncasino preopening crime rates when control variables are included.

⁷ Income maintenance includes Supplemental Security Insurance (SSI), Aid to Families with Dependent Children (AFDC), food stamps, and other income maintenance (which includes general assistance, emergency assistance, refugee assistance, foster home care payments, earned income tax credits, and energy assistance). Unemployment insurance benefits include state unemployment insurance compensation, Unemployment Compensation for Federal Civilian Employees (UCFE), Unemployment for Railroad Employees, Unemployment for Veterans (UCX), and other unemployment compensation (which consists of trade readjustment al-

lowance payments, Redwood Park benefit payments, public service employment benefit payments, and transitional benefit payments). Retirement payments included old age survivor and disability payments, railroad retirement and disability payments, federal civilian employee retirement payments, military retirement payments, state and local government employee retirement payments, federal and state workers' compensation payments, and other forms of government disability insurance and retirement pay.

⁸ According to the Indian Gaming Regulatory Act of 1988, Class I gambling consists of "social games solely for prizes of minimal value." Included in Class I gambling are traditional Indian games identified with tribal ceremonies and celebrations. Class II gambling includes bingo and "games similar to bingo." Class III gambling includes "all forms of gaming that are not Class I gaming or Class II gaming," such as blackjack, slot machines, roulette, and other casino-style games.

⁹ We distinguish the operation date of Class III casinos from other dates such as the legislation date to authorize casinos and the operation date of Class I or II establishments. Within a state, different counties acquired casinos at different times. Also, bingo halls operated by American Indians converted to Class III gambling during our sample. Nevada legalized commercial casino gambling (in 1931) prior to the start of our sample. Excluding Nevada from our sample slightly increased the magnitude of the estimated casino-crime effect. For example, when Nevada was excluded from the table 4 regressions, 39 of the 42 post-opening coefficient estimates became more positive or less negative. Excluding New Jersey, whose Atlantic City casinos opened in 1978, produced similar results.

Variable		Casino Countie	s	Noncasino Counties			
	Mean	Std. Dev.	Sample Size	Mean	Std. Dev.	Sample Size	
Population	145,330	288,149	3,533	73,209	252,381	59,053	
Population density (pop./sq. mi.)	204	491	3,533	217	1,462	59,045	
Area (square miles)	2,021	3.056	3,533	1,008	2,883	59,060	
Per capita personal income	\$11,306	\$2,689	3,533	\$10,808	\$2,618	59,040	
Per capita unemployment ins.	\$78	\$54	3,533	\$65	\$51	59,024	
Per capita retirement comp.	\$10,771	\$6,544	3,538	\$9,831	\$6,243	59,028	
Aggravated assault rate	259	276	3,245	188	245	54,551	
Rape rate	29	28	3,182	20	32	53,882	
Robbery rate	82	136	3,254	44	143	54,623	
Murder rate	5.9	9.3	3,254	5.5	10.5	54,62	
Larceny rate	2,548	1,423	3,254	1,738	1,940	54,623	
Burglary rate	1,056	666	3,254	770	1,110	54,619	
Auto theft rate	267	264	3,254	167	276	54,62	

TABLE 1.-DEMOGRAPHIC AND CRIME DATA: CASINO VERSUS NONCASINO COUNTIES

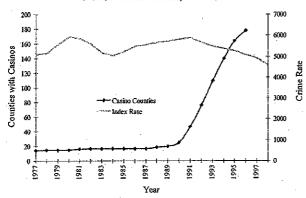
Notes: Crime rates are annual incidents per 100,000 population. Monetary amounts are in 1982-1984 dollars

The differences in the crime rates are due to the postopening differences between casino and noncasino counties.

Between 1977 and 1996 the number of states with some form of casino gambling rose from 1 to 29. Counties with casinos grew from 14 (all in Nevada) to nearly 180. The Indian Gaming Regulatory Act of 1988 increased the number of Indian casinos by mandating that states allow American Indian gambling on trust lands if the state sanctioned the same gambling elsewhere. The semisovereign status of Indian tribes and their management by the Federal Bureau of Indian Affairs gave them greater leverage with the states. By 1996, 21 states permitted casinos on Indian reservations.

Figure 1 shows the relationship between the number of counties with casinos (left scale) and the crime rate (right scale). The crime rate fluctuated between 1977 and 1990 when the number of casinos was relatively constant. However, between 1990 and 1996, when the number of counties with casinos increased rapidly, the crime rate dropped substantially. This contemporaneous casino growth and crime reduction is important. Some have used these data to suggest that casinos reduced crime. For example, Margolis (1997) stated. "Crime rates in Baton Rouge, LA have decreased every year since casino gaming was introduced."

FIGURE 1.—INDEX CRIME RATE AND NUMBER OF COUNTIES WITH CASINOS: UNITED STATES, 1977-1998



1991. Therefore, it is more appropriate to compare the magnitude of the decreases between casino and noncasino counties. We provide two comparisons of this type. Each suggests that crime rates in counties that opened casinos during our sample increased relative to crime rates in noncasino counties.

The first example, shown in figure 2, contrasts the crime rate for casino and noncasino counties between 1991 and 1996. FBI Index I offenses were summed by year for casino counties. Average crime rates for 1991–1996 were calculated by dividing these totals by the populations of the counties in the corresponding years. The series was then scaled to take the value 100 in the year 1991. The same procedure was applied to noncasino counties.¹⁰ Though crime dropped in both sets of counties, crime dropped 12.0 percentage points more in counties without casinos than in casino counties. The absolute reduction in crime in noncasino counties (90.3 offenses per 100,000) was approximately 3 times as large as the reduction (30.6 offenses per 100,000) in counties that opened a casino.

The second example, shown in figure 3, presents casinocounty crime data centered on the year of opening, where the average crime rate for the two years prior to casino opening and the year of opening is set to 100. Crime rates were stable prior to opening, were slightly lower in the year of casino introduction, returned to approximately average levels for the next two or three years, and increased thereafter. By the fifth year after introduction, robbery, aggravated assaults, auto theft, burglary, larceny, rape, and murder were 136%, 91%, 78%, 50%, 38%, 21%, and 12% higher, respectively. These effects by year after introduction

¹⁰ Data on Florida are excluded from figure 2 because it changed its crime reporting from summary-based to incident-based on January 1, 1988, and switched back to summary-based in 1995. Crime data are missing in the transition years. However, a Florida-only analysis is consistent with figure 2. Between 1977 and 1995 Florida counties that opened casinos experienced greater growth than noncasino counties in murder, rape, robbery, aggravated assault, burglary, larceny, and auto theft (19.9, 29.3, 27.3, 33.6, 7.7, 16.9, and 81 percentage points higher, respectively).

suggest the need to estimate lead and lag structures to identify the relevant time dependencies.

III. Theory

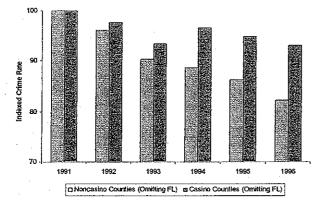
Previous studies focused on the empirical relationship between casinos and crime, but neglected theoretical explanations of how casinos affect crime. We present two reasons why crime could decrease and five reasons why crime could increase. We then discuss their different effects over time, an essential, but previously ignored issue. These factors are not mutually exclusive, and our empirical results estimate the total effect of these factors.

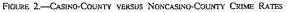
A. Theoretical Connections between Casinos and Crime

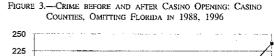
Casinos might reduce crime directly by improving legal earning opportunities, or indirectly through development effects.

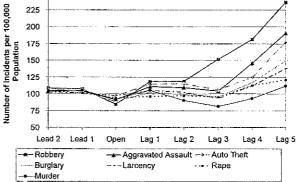
Wage Effects: Grogger (1997) argued that increases in wages reduce crime, and Gould, Weinberg, and Mustard (2002) showed that increased employment and wages of low-skilled individuals reduce crime. Therefore, if casinos provide greater labor market opportunities to low-skilled workers, they should lower crime. Evans and Topoleski (2002) contend that when casinos are opened by American Indians, the fraction of adults who are poor, who are more likely to commit crime, declines by 14% and that employment increases significantly.

Development: Casinos may reduce crime indirectly through development effects. In the Midwest, for example, legislation decriminalizing casino gambling cited economic development as its rationale. Decaying waterfronts and derelict sections of town that once harbored crime may be less amenable to it when renovation occurs, streetlights appear, and resident presence increases. The streets near Las Vegas casinos, even at night, are often cited as some of the safest.









Likewise, casinos may increase crime through direct and indirect channels.

Development: Casinos may raise crime by harming economic development, the opposite of the indirect effect discussed above. While some commend casinos for bringing growth, others criticize them for draining the local economy, for attracting unsavory clients, and for leading to prostitution and illegal gambling-related activities.

Increased Payoff to Crime: Casinos may increase crime by lowering the information costs and increasing the potential benefits of illegal activity. Travelers are often more vulnerable to crime victimization, and because casinos attract gamblers and money, there is an increased payoff to crime from a higher concentration of cash and potential victims. A 1996 Kansas City case is illustrative: a local restaurant owner was followed home, robbed, and murdered in his garage after winning \$3,000 at a casino (Reno, 1997). Similar stories exist in other locations with casinos.

Problem and Pathological Gambling: Crime may increase through problem and pathological gamblers. Pathological gambling is a recognized impulse control disorder of the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Association. Pathological gamblers (often referred to as "addicted" or "compulsive" gamblers) are identified by repeatedly failing to resist the urge to gamble, relying on others to relieve the desperate financial situations caused by gambling, committing illegal acts to finance gambling, and losing control over their personal lives and employment. Problem gamblers have similar problems, but to a lesser degree. Compared to those arrested for crime, problem and pathological gamblers are more likely to be female, are older, and have higher incomes.¹¹

¹¹ See NGISC (1999, Tables 4–2, 4–5) and Bureau of Justice Statistics (2002, Tables 4.7–4.10, 6.13, 6.16, 6.17).

The geographical spread of casinos lowers the cost of buying the addictive good, which increases the quantity consumed by problem gamblers, as evidenced by the rapid increase in Gamblers Anonymous programs after casinos open. For example, the number of Wisconsin communities holding Gamblers Anonymous meetings grew from 6 to 29 in the seven years after Indian tribes initiated agreements with the state to open casinos in 1992. Eleven people who contacted the Wisconsin group in 1997 committed suicide because of gambling (*Chicago Tribune*, August 2, 1999). The NGISC also reported a large increase in Gamblers Anonymous from 650 chapters in 1990 to 1,328 in 1998, "a period of rapid legalized gambling expansion" (NGISC, 1999, p. 4–17).

Conversely, when gambling is restricted, the cost of consuming the addictive good increases. Beginning July 1, 2000, South Carolina banned slot machines by court order. Six months later, the number of Gamblers Anonymous groups had dropped from 32 to 11, and the attendance fell from a typical size of approximately 40 to as few as 1 or 2 (Bridwell & Quinn, 2002, p. 718). During the same time, the number of help-line calls in Horry County (Myrtle Beach) dropped from 200 per month to 0 (ibid.)

An often-cited Maryland study found that 62% of the Gamblers Anonymous group studied committed illegal acts because of their gambling (Maryland Department of Health and Mental Hygiene, 1990); 80% had committed civil offenses, and 23% were charged with criminal offenses. A similar survey of nearly 184 members of Gamblers Anonymous showed that 56% admitted stealing to finance their gambling. The average amount stolen was \$60,700 (median \$500), for a total of \$11.2 million (Lesieur, 1998).

Visitor Criminality: Crime may also rise because casinos attract visitors who are more prone to commit and be victims of crime. Chesney-Lind and Lind (1986) suggested that one reason tourist areas often have more crime is that tourists are crime targets. However, in the following section we show that visitors to national parks do not increase crime. Therefore, if casino visitors induce crime, it is because they are systematically different from national park visitors or visitors to other attractions. The three largest single tourist attractions in the United States in 1994 were the Mall of America (Bloomington, MN), Disney World (Orlando, FL), and Branson, MO (country and western music) receiving 38, 34, and 5.6 million visitors, respectively. For comparison, Hawaii received approximately 6 million and Las Vegas received 30.3 million visitors in 1994. Visitors per resident were 1,345 for Branson, 436 for Bloomington, 188 for Orlando, and 40 for Las Vegas. If visitors of any type are the predominant mechanism for crime, Branson and Bloomington should be among the most crime-ridden places in North America. Even adding visitors to residents in the denominator to calculate diluted crime rates, the crime rate per 100,000 visitors-plus-residents was 187.3 for Las Vegas, 64 for Orlando, 16.4 for Branson, and 11.9 for Bloomington. Bloomington received 7.7 million more visitors than Las Vegas, but had a diluted crime rate less than $\frac{1}{15}$ of Las Vegas's. One indication of the different clientele casinos attract is the large increases in pawnshops that occur when casinos open. Other tourist areas do not experience similar increases.

A few of the numerous press examples that explicitly link casino gambling to crime are as follows:

Authorities linked a woman arrested in Bradenton, FL to one of the largest and most profitable burglary rings in the country. Baton Rouge, La., police Detective Jonny Dunham said that Barbara Dolinska and her cohorts like to gamble, and they committed many crimes in areas that either had riverboat gambling operations or other kinds of gaming. (*Sarasota* [FL] *Herald-Tribune*, December 23, 1999)

A man arrested in the armed robbery of a [New Orleans] bar told deputies of his motive for the hold up: he wanted to recover the several hundred dollars he lost playing the lounge's video poker machines. (*Las Vegas Sun*, June 14, 1999)

Former San Jose police officer, Johnny Venzon Jr., was imprisoned for stealing from people on his own beat while in uniform. Venzon, who blamed his actions on a gambling addiction, often burglarized homes and then investigated the crimes. (*San Francisco Chronicle*, February 25, 1999)

Daniel Blank confessed to stealing over \$100,000 and killing six Louisiana residents from October 1996 to July 1997. Blank's motivation for his brutality was to obtain cash to support almost daily trips to video poker halls and casinos. Sometimes Blank headed for casinos right after committing the crimes. ([New Orleans] *Times-Picayune*, January 28, 1999)

Casino-Induced Changes in Population Composition: Gambling, along with gambling-related industries such as hotels and restaurants, is one of the few growth sectors with a high demand for unskilled labor. An increase in demand for unskilled and lower-income employees may alter the composition of the underlying labor force and residents toward those who are more apt to engage in criminal activity.

B. Effects across Types of Crime

Different crime mechanisms need not have the same effects across crimes. For example, improvements in the legal sector reduce property crime more than violent crime (Gould et al. 2002). Although murder has been tied to casino activities as described above, the statistical connection is harder to detect, because murder is rare in comparison with other crimes and because other causes predominate. For this reason we expect casinos to contribute less to the overall explanation of murder rates. Pathological gamblers generally commit crimes to generate money either to deal with their debts or to gamble. Peoria and Tazewell counties, surrounding one of Illinois's oldest riverboats, have documented a significant increase in casino-related embezzlement, theft, and burglary, much of it committed by professionals like teachers and lawyers (Copley News Service, June 28, 1999). Burglary, larceny, and auto theft, and the violent crime of robbery, have pecuniary payoffs. Casinos may affect aggravated assault because assault often occurs in the context of a crime with an economic payoff. Because the FBI classifies each incident involving multiple offenses under the most serious offense, property crimes and robberies that become assaults are categorized as assaults.

Identifying the link between casinos and rape is less obvious. Casinos may attract visitors more likely to commit rape or to be its victims, and have an indirect effect through the population composition effect and social climate. Changed population might be related to casino-generated growth in adult entertainment, escort services, and related industries, which show significant increases as measured by advertising or the number of listings in the yellow pages. Many law enforcement officials have testified that prostitution increased dramatically after casinos opened (FBI Conference on Casino Gaming, 1999). Pinnacle Entertainment was fined \$2.26 million by the Indiana Gaming Commission for supplying prostitutes and gambling money to attendees at a golf outing sponsored by its Beltera Casino Resort (Piskora, 2002).

C. Intertemporal Effects on Crime

The theory importantly predicts that the effects of casinos will vary over time. Reduction of crime through improvements in labor market opportunities is observed prior to and shortly after the casino opening as low-skilled people may be hired by the casino or casino-related industries. The economic development theories (whether positive or negative) imply that a casino's effect after opening will grow until the casino market reaches equilibrium. Likewise, the visitor effect and the effect of changing composition of the population appear with the casino's opening and grow as people are attracted to the area.

Effects operating through problem and pathological (P&P) gamblers will not be felt until a gambling problem has developed. Breen and Zimmerman (2002) studied the time to pathology. "We found that the men and women who 'got hooked' on video gambling became compulsive gamblers in about one year. Those who got hooked on other kinds of gambling (such as horses, sports betting, blackjack, etc.) became compulsive gamblers after about three and a half years" (RI Gambling Treatment Program, 2002). According to gambling treatment specialists, "Many addicted gamblers follow essentially the same course. . . [T]hey enter a desperation stage, [the treatment specialist] said, and when they've used up their own money and lines of credit

they often turn to stealing" (Schneider, 2003). In the same article, police and prosecutors "told the newspaper that in recent years, with the arrival of casino gambling in the area, they have seen an increase in exactly the kinds of crimes [the convicted subject of the story] has acknowledged committing" (ibid.). The successful Evansville attorney Allan Lossemore's case (Rohrig, 2002) is symptomatic of the role of time lags. He began going to the Casino Aztar in July 1997 and for the first three or four months won enough money to subsidize his fledgling law practice. But by early 1998 he began to lose. "I started to draw from charge cards and from a line of credit in an attempt to get even," he reported. He tried to get back on track by barring himself from the casino and staying away from gambling, but late in 1999 he gambled again and lost. After a series of personal and professional financial circumstances, in mid-2000 he misappropriated clients' funds. "From there, I was just robbing Peter to pay Paul. I was gambling at that point pretty heavily-I was really trying to make up the difference." He was arrested in November 2000 and later jailed.

Research conducted for the NGISC reported that the population percentage of problem gamblers rose from 0.3% to 1.1% when the distance to the nearest casino fell from more than 250 miles to less than 50 miles, and rose from 0.4% to 1.3% for pathological gamblers (National Opinion Research Center, 1999, pp. 28--29). Distances less than 50 miles were not studied; thus a difference of 1.7% in P&P gambling probably understates the actual fraction. Research on the degree of P&P gambling in Las Vegas found the rate was 6.6% (Strow, 1999), suggesting that a difference of 5.9% is closer to an upper bound. If problem and pathological gamblers are an important explanation of crime, we expect to observe crime increase over time as more people start to gamble, develop gambling problems, and eventually commit crimes to fund their losses. Because different causes are at work, and may operate differently for different crimes, there is no presumption that intertemporal effects must be identical.

IV. Estimation Strategy

Our empirical strategy addresses many limitations of the current research. First, by conducting the most exhaustive investigation and utilizing a comprehensive county-level data set that includes every U.S. county, we eliminate sample selection concerns. Second, by analyzing crime effects over time we exploit the time series nature of our data. Third, we are the first to articulate a comprehensive theory about how casinos could increase or decrease crime. Last, we use the most exhaustive set of control variables, most of which are commonly excluded from other studies.

A. Direct and Indirect Effects

As noted, casinos may affect crime rates directly through their effects on the resident local population and indirectly by increasing the number of casino visitors. The total includes both direct and indirect effects, as expressed in the following equations, where crime (C_{it}) in county *i* in year *t*, is a function of the presence of a casino, the number of casino visitors (V_{it}) to the county, and other variables that affect crime (summarized in the term *Other*), and where *a*, *b*, *c*, and *d* are unknown coefficients:

 $C_{it} = a \ Casino_{it} + bV_{it} + Other_{it},\tag{1}$

$$V_{it} = c \ Attractions_i + d \ Casino_{it}. \tag{2}$$

Casino visitors in (2) depend on both the visitor attractiveness of the county (*Attractions_i*) and the presence of the casino. The coefficient *a* measures the direct effect of the casino on crime. The coefficients *b* and *d* measure the indirect effect via casino visitors. Substituting from (2) into (1) gives

$$C_{ii} = \beta_i + \delta \ Casino_{ii} + Other_{ii} \tag{3}$$

where $\delta = a + bd$, and $\beta_i = bc Attractions_i$. The total effect of the casino on crime, δ , in (3) includes the effects on both the local population and casino visitors. Estimating *a* in (1) would give only a partial effect, because it would not take into account the visitor effect.¹² The key to our being able to estimate the full effect is having panel data. Because many studies of the casino-crime relationship used cross-sectional data, they were limited to estimating only a partial effect.

B. Visitors

Although distinguishing direct and indirect effects is important, it is also important to avoid the assumption that anything that attracts the same number of visitors will have the same crime effects. Different types of visitors may have systematically different effects on crime even if the effect for all types of visitors is positive. The presence of a casino in (3) proxies for direct effects on crime and for an increased number of casino visitors. It does not necessarily follow that the same number of visitors for another purpose would generate the same crime outcomes. Visitors for other purposes appear in the variable *Other*_{in} which we now address.

Time series visitor data do not exist at the county level and certainly do not distinguish visitors for different purposes. Running the regression (3) without such information, therefore, risks omitted variable bias. In partial defense, no other crime studies have been run with these data either. However, more importantly, in the case of casinos the omitted variables are likely uncorrelated with a new casino. Fortunately, for at least one type of tourist, data *are* available that we can use to test the hypotheses of being uncorrelated with openings and having an effect on crime different from the effect of casinos. We obtained National Park Service time series data from 1978 to 1998 on all visitors to national parks, monuments, historic sites, recreation areas, and so on. These parks and attractions, scattered across the country, receive millions of visitors annually-some as many as 14 million. Some, such as Yellowstone National Park, are in counties with sparse population; others are in highly populated areas. In most cases the correlation between park visitors and the casino variables used in the study was well below 1%, and in no case was a correlation above 1.7%. This is consistent with the view that this type of omitted variable bias is likely to be small or zero. Although it is always preferable to include such variables when possible, we are confident that in the case of casinos the procedure employed in (3) of treating data on other visitors as part of the constant term and the error term is not a problem for the coefficients of interest.¹³

A second analytical issue is whether to use *diluted* or undiluted crime rates. Should the number of crimes be divided by population-the conventional way to generate the crime rate (undiluted)-or by population plus visitors (diluted)? Four possibilities exist, depending on whether one considers total or partial effects, and studies diluted or undiluted crime rates. Some have argued for one combination or another without realizing that the choice is not methodological, but depends on what questions the researcher wants to answer. A common but invalid claim is that the diluted crime rate should be used to determine the change in probability that a resident would be the victim of a crime. However, knowing what happens to the diluted crime rate does not give the needed information and could even move the answer in the wrong direction. To illustrate, let s_1 be the share of the resident population P victimized by residents, and let s_2 be the share of the resident population victimized by V visitors. Similarly, let σ_1 be the share of visitors victimized by residents, and σ_2 the share of visitors victimized by visitors. Then the crime rate is $s_1 + s_2 + (\sigma_1 + \sigma_2)^{V}_{\overline{p}}$; the diluted crime rate is $(s_1 + s_2)w_P + (\sigma_1 + \sigma_2)w_V$ where w_P and w_V are the shares of visitors plus residents made up by residents and visitors, respectively; and the probability of a resident's being a crime victim is $s_1 + s_2$. If residents do not victimize visitors $(\sigma_1 = 0)$, then P = V, and $s_2 + \sigma_2$ is smaller than s_1 . The

¹³ When visitors to National Park Service sites were included, the regressions (3) showed that an additional one million park visitors annually were associated with statistically significantly *fewer* crime incidents for rape, murder, robbery, and burglary, and had a statistically insignificant effect on auto thefts. The effects of park visitors on larceny and assaults were statistically significant but socially insignificant compared to the crime effects found for casinos (coefficient δ) and reported in section V. For example, we estimated the long-run effect of a casino on larcenies to be 615, which was roughly 60 times larger than the effect of one million national park visitors. This means that if the crime consequences of casino visitors and national park visitors annually to account for 615 additional larcenies. Las Vegas, the single largest casino gambling destination in the United States, attracted 30.3 million visitors in 1994.

¹² Ideally we would like to know both a and b. Because of data constraints, we must estimate only the total effect δ . Casino visitor data do not exist at the county level. Both a and b might be estimated using other variables to proxy for the number of casino visitors, but no annual time-series data exist at the county level.

probability of a resident being victimized is s_1 without visitors, and it rises to $s_1 + s_2$ with visitors. The diluted crime rate is s_1 without visitors and falls to $(s_1 + s_2 + \sigma_2)/2$ with visitors. Thus in this case the diluted crime rate falls while the probability of a resident being victimized rises.

In this study we are interested in the costs to the host county associated with a change in crime from whatever source. We are therefore interested in the total effect of casinos on crime, and thus use the undiluted crime rate based on equation (3).

C. Timing: Separating Casino Effects from Other Effects

The version of equation (3) that we estimated is

$$C_{it} = \alpha + \beta_i X_i + \gamma_t T_t + \delta L_{it} + \theta A_{it} + \varepsilon_{it}, \qquad (4)$$

where C_{ii} is the crime rate (offenses per 100,000 people) of county *i* in year *t*, α is a constant, and β_i is the vector of estimated coefficients on the county-level fixed effects that control for unobserved characteristics across counties. The time fixed effect, T_{ρ} controls for national crime rate trends. Our base specification of L_{ii} is a vector of the casinoopening dummy variables that includes two leads and five lags of the opening variable and captures the important intertemporal effects outlined earlier. The opening dummy variable takes the value 1 in the year the casino began operation and 0 in other years. In the reported regressions we used two years of leads, because it is unlikely that a casino would affect the crime rate more than two years prior to its opening. We stopped at five years of lags because the numbers of counties with casinos open three to five years, not counting Nevada counties, were 91, 59, and 35, respectively. Twelve counties (26 including Nevada counties) had casinos open for 6 or more years, and seven (21 including Nevada counties) had casinos open 7 or more years. For each group, however, observations are scattered widely across the decades and geography of our sample.

 A_{ii} is a vector of 22 control variables. It includes population density, the percentage of the population that was male, the percentage that was black, the percentage that was white, and the percentages in the age ranges 10–19, 20–29, 30–39, 40–49, 50–64, and over 65.¹⁴ Economic variables in A_{ii} are real per capita personal income, real per capita unemployment insurance payments, real per capita retirement compensation per old person, and real per capita income maintenance payments. All income figures were adjusted to a 1982–1984-dollar basis. A_{ii} also includes a dummy variable indicating whether the county honored a shall-issue right allowing citizens to carry a concealed firearm upon request, and two years of leads and five years of lags on the shall-issue dummy. ε_{ii} is the regression error. Including leads and lags, the regression had 50 explanatory

¹⁴ The remaining groups were Hispanics and those between 0 and 9 years.

variables plus one constant for each county (3,165) for a total of 3,215 explanatory variables. This set was expanded to 58 variables plus county constants when we analyzed the effects of casinos on adjacent counties. Excluding observations with missing data reduced the sample size in most regressions to approximately 58,000, leaving more than adequate degrees of freedom for estimation.

We independently estimated each lead and lag of the casino opening year (describing the timing of crime effects) without cross restrictions. We weighted regression observations by county population.

V. Results

Before reporting the more sophisticated lag structure discussed above, we begin with a simple dummy variable for whether a county has a casino. Table 2 reports two such regressions for each crime. The left column for each crime reports the estimated coefficient for the casino dummy variable. The variable Casino takes the value of 1 if a casino is operating in the county for the year in question and 0 otherwise. No other explanatory variables are present in the leftmost regression. The regressions all show large, statistically significant elevated crime rates for counties with operating casinos. For example, according to table 2 such counties experience 157 more aggravated assaults annually per 100,000 population. This compares to average aggravated assault crime rates of 188 per 100,000 population for counties without casinos in any year of the sample reported in table 1. The right column for each crime reports the estimate of the casino dummy when year and county fixed effects are the only other explanatory variables included in the regression. In each case the effect attributed to an operating casino declines. Aggravated assault, for example, falls from 157 to less than 18. The coefficient estimates are positive and statistically significant for five crimes. The estimated effect is positive for murder and negative for burglary; neither is statistically significant. To summarize the two regressions, when a simple dummy variable specification is used for a casino being open, the estimated casino effect is positive and statistically significant in twelve of the fourteen regressions. The other two results are not statistically different from 0. These before-after results obscure the intertemporal effects, so we now turn our attention to the model that includes leads and lags.

Tables 3 and 4 report coefficient estimates and *t*-statistics for specifications of (4) that allow for the timing of the effects of casino opening. Table 3 includes year fixed effects and county fixed effects but excludes the control variables A_{ib} whereas table 4 includes these regressors.¹⁵ For example, the estimated coefficient of lag 4 in the table 3 column labeled "Aggravated Assault" indicates that the aggravated

¹⁵ We report casino variables. Results for the 588 other coefficient estimates for the seven crime regressions are omitted for lack of space, because they are used as controls, and because we are primarily interested in the casino variables.

	Violent Crime										
	Aggravate	d Assault	R	ape	Rob	bery	Mu	rder			
Casino	157.254 (23.04)	17.825 (4.29)	11.521 (17.91)	0.973 (2.04)	86.905 (12.09)	34.175 (10.07)	1.522 (6.88)	0.117 (0.75)			
Year fixed effects	No	Yes	No	Yes	No	Yes	No	Yes			
County fixed effects	No	Yes	No	Yes	No	Yes	No	Yes			
Ν	57,796	57,796	57,064	57,064	57,877	57,877	57,882	57,882			
F	530.68	754.52	320.88	126.60	146.06	212.39	47.30	81.94			
Prob. $> F$	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			
R-squared	0.0091	0.8147	0.0056	0.7234	0.0025	0.8861	0.0008	0.7506			
			Property	Crime							
	Larc	eny	Bur	glary	Auto	Theft					
Casino	1128.547	218.850	144.373	-23.927	266.582	217.416					
1 <u>1</u>	(31.88)	(9.44)	(7.58)	(-1.58)	(21.72)	(30.87)					
Constant	Yes	No	Yes	No	Yes	· No					
Year fixed effects	No	Yes	No	Yes	No	Yes					
County fixed effects	No	Yes	No	Yes	No	Yes					
N	57,876	57,876	57,873	57,873	57,881	57,881					
F	1016.63	138.15	57.45	635.32	471.71	472.89					
Prob. $> F$	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000					
R-squared	0.0173	0.7839	0.0010	0.6699	0.0081	-0.8328					

TABLE 2.—CASINO CRIME RATE REGRESSIONS EMPLOYING CASINO DUMMY VARIABLE ONLY

Notes: Coefficient estimates are additional annual crime incidents per 100.000 population. t-statistics are in parentheses.

assault rate was higher by 62.153 offenses per 100,000 population four years after a casino opened in the county. The number of observations for each regression varied from 57,023 to 57,841. The R^2 was between 0.67 and 0.89.

The patterns in both tables show that casino effects tend to increase over time after a lag of 2–3 years. In table 3, which does not include control variables, the estimates on the casino leads are often positive and statistically significant, consistent with the common belief that casinos are more likely to be placed in high-crime areas. However, when control variables are included, all of the leads are statistically indistinguishable from 0 except for those on auto theft.

Another key difference is that table 3 shows much larger increases in crime in the lagged years. When the control variables are included in table 4, these larger positive

	Aggravated Assault	Rape	Robbery	Murder	Larceny	Burglary	Auto Theft
Lead 2	4.325	1.189	13.178	,725	113.498	33.865	114.440
	(0.61)	(1.42)	(2.26)	(2.73)	(1.64)	(0.79)	(9.46)
Lead I	4.455	0.708	19.067	1.270	160.828	28.071	142,864
	(0.64)	(0.86)	(3.32)	(4.85)	(1.82)	(0.57)	(11.98)
Open	8.799	.250	19.142	1.251	229.687	- 19.609	182.095
	(1.19)	(0.29)	(3.15)	(4.53)	(2.61)	(-0.55)	(14.47)
Lag 1	16.656	1.765	47.031	1.360	315.990	54.171	236,103
	(2.24)	(2.06)	(7.72)	(4.91)	(2.99)	(0.76)	(18.69)
Lag 2	3.647	0.684	56.089	1.305	193.729	3.025	225.876
-	(0.46)	(0.76)	(8.63)	(4.41)	(0.89)	(0.03)	(16.75)
Lag 3	29.953	3.436	81.467	0.801	201.816	13.797	253.046
	(3.22)	(3.23)	(10.67)	(2.30)	(1.51)	(0.25)	(15.98)
Lag 4	62.153	7.021	75.755	0.429	460.681	153.209	246.417
	(4.76)	(4.72)	(7.08)	(0.88)	(2.74)	(2.74)	(11.11)
Lag 5	124.683	7.076	76.725	-1.496	715.031	236.992	376.278
	(7.80)	(3.87)	(5.84)	(-2.50)	(2.65)	(2.97)	(13.80)
Control variables A _l	No	No	No	No	No .	No	No
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	. Yes
County fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	57,755	57,023	57,836	57,841	57,835	57,832	57,840
F	562.01	95.50	163.79	63.83	19.25	79.81	358.19
Prob. > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
R-squared	0.8149	0.7236	0.8865	0.7511	0.7843	0.6730	0.8334

TABLE 3.---CASINO CRIME RATE REGRESSIONS EXCLUDING CONTROL VARIABLES.

Notes: Coefficient estimates are additional annual crime incidents per 100,000 population. r-statistics are in parentheses. We used robust standard errors for larceny and burglary, which the Broush-Pagan test indicated had beteroskedasticity.

	Aggravated Assault	Rape	Robbery	Murder	Larceny	Burglary	Auto Theft
Lead 2	-3.843	0.157	6.924	0.438	37.710	16.481	97.006
	(-0.55)	(0.19)	(1.21)	(1.00)	(0.63)	(0.43)	(8.43)
Lead 1	-8.498	-0.815	8.164	0.969	47.645	-6.164	113.656
	(-1.24)	(-1.01)	(1.44)	(1.34)	(0.61)	(-0.14)	(10.00)
Open	0.376	-0.644	11.218	1.103	148.279	-23.625	152.659
	(0.05)	(-0.77)	(1.88)	(1.37)	(1.74)	(-0.72)	(12.72)
Lag 1	2.613	0.955	32.588	1.188	173.836	30.661	183.73
	(0.36)	(1.14)	(5.43)	(1.68)	(1.83)	(0.55)	(15.24)
Lag 2	-9.739	-0.267	39.137	1.181	-0.447	-51.987	161,791
	(-1.25)	(-0.30)	(6.08)	(1.46)	(-0.00)	(-0.68)	(12.53)
Lag 3	20.306	3.339	70.427	1.099	4.132	-48.495	206.769
	(2,22)	(3.20)	(9.30)	(1.32)	(0.03)	(-0.89)	(13.60)
Lag 4	42.844	6.503	52.188	0.572	184.855	64.367	161.64
-	(3.34)	(4.47)	(4.93)	(0.54)	(1.41)	(0.92)	(7.60)
Lag 5	99.982	9.979	65.240	-0.458	614.695	325.147	271.848
	(6.38)	(5.59)	(5.02)	(0.55)	(1.98)	(2.30)	(10.43)
Control variables A _i	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	57,724	56,992	57,805	57,810	57,804	57,801	57,809
F	393.15	129.78	143.37	13.34	42.97	121.18	346,19
Prob. $> F$	0.0000	0.00000	0.0000	0.0000	0.00000	0.00000	0.0000
R-squared	0.8252	0.7410	0.8913	0.7623	0.7992	0.6997	0.8504

TABLE 4.—CASINO CRIME RATE REGRESSIONS INCLUDING CONTROL VARIABLES

Notes: Coefficient estimates are additional anoual crime incidents per 100,000 population. r-statistics are in parentheses. We used robust standard errors for larceny and burglary, which the Breush-Pagan test indicated had heteroskedasticity.

estimates are reduced. Because the table 4 estimates have better fit in the lead variables and the added control variables reduce omitted variable bias, we emphasize these results, that show smaller casino effects on crime.

A. Violent Crime

Figure 4 displays the information on violent crime from table 4. The horizontal axis plots the casino opening leads and lags, and the vertical axis plots the coefficient estimates. The vertical lines show the 95% confidence intervals, the range within which the regression indicates the true coefficient should lie with 95% probability.

For aggravated assault, only estimates for the third and subsequent year after opening are significantly above 0, and the trend rises. The estimated high occurs in the fifth year after opening, when the aggravated assault rate is 100 assaults higher per year. This pattern of crime increase is unlike the typical pattern of visitor increases after casino opening. Grinols and Omorov (1996) showed that the number of visitors to Illinois casinos typically rose immediately after opening and reached equilibrium after 6 months or less.¹⁶

Figure 4 for rape shows coefficient estimates that are not significantly different from 0 prior to the opening. However,

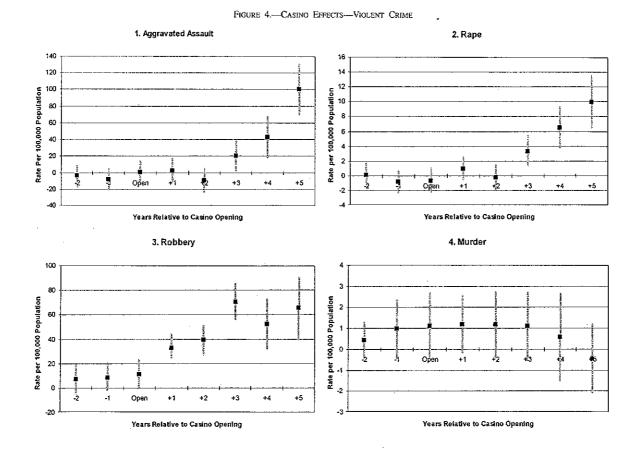
they are positive and significant in the third and subsequent years after the casino opened, rising from the third year on. A county that introduces a casino might expect a negligible effect in the first two years after opening, but a higher rape rate by 6.5 to 10 incidents per 100,000 population in the fourth and fifth years after opening.

The pattern for robbery in figure 4 is similar to the patterns for aggravated assault and rape, with one important exception—the increase in robbery begins immediately. In the first year there were approximately 35 more robberies per 100,000 people, which increases to over 60 three years after opening.

As expected, the impact of casinos on murder is the smallest among all offenses. Figure 4 shows that casino counties have slightly higher murder rates than noncasino counties both before and after opening. However, murder shows no statistically significant coefficient estimates for any of the casino leads or lags, and the change from before to after is not statistically significant. Gambling-related murders include incidents such as the disgruntled gambler who killed a casino teller when he tried to retrieve his gambling losses, a spouse who fought over the other's gambling losses and was murdered, a parent's gambling leading to the death of her child, murder for insurance, and similar tales.¹⁷ However, because murder is the least fre-

¹⁶ In addition to the regressions reported, we ran regressions that included as many as 4 leads and 7 years of lags of the casino opening variable. With few exceptions, leads continued the pattern of being statistically indistinguishable from 0, and later lags showed comparable or greater estimated effects to the fifth year lag. In the case of murder, the sixth and seventh lags continued the pattern of being statistically indistinguishable from 0.

¹⁷ See Jeffry Bloomberg, Prepared Statement, Hearing Before the Committee on Small Business, House of Representatives, 103rd Congress, Second Session, 21 September 1994, Serial No. 103–104, Washington, DC: USGPO, p. 47. Accounts of the more spectacular gambling-related murders and deaths (most often suicides) frequently appear in the press. USA Weekend, February 10–12, 1995, p. 20, for example, describes a man



quently committed crime and most counties have zero murders, murder rates typically have high variance, which makes it difficult to identify effects.

B. Property Crime

Figure 5 displays the coefficient estimates in table 4 for property crimes. The larceny estimates increase from 0 in the second year after opening, to 4.1 in the third, 185 in the fourth, and over 615 in the fifth year after opening. Burglary increases from negative estimates in the second and third years after opening, to 64 in the fourth, to 325 in the fifth. Only the fifth-year estimates are individually statistically significant, so we investigated further the significance of the rising third-, fourth-, and fifth-year coefficient estimates. We checked whether the rising patterns of coefficient estimates in the last three years with the lag 5 estimated coefficients positive and significant persisted or disappeared after the fifth year. Estimates of the sixth- and seventh-year lags were 745 and 1,069 for larceny and 201 and 229 for burglary, respectively. Moreover, lags 5 through 7 pass a 5% F-test for significance for both offenses.

Figure 5 for auto theft presents a different picture. It is the only crime that showed statistically significant leads, which were positive. After opening, the rates increase slightly for a few years and increase substantially after five years. The data indicate that casino counties did not experience the same decreases in auto thefts that noncasino counties did after 1991, when the number of casinos increased rapidly.¹⁸

A second factor may be that we were unable to control for Lojack, an electronic tracking system that allows police to quickly locate and recover stolen autos. Ayres and Levitt (1998) found that Lojack accounted for a significant reduction in auto thefts in the 1990s. Because cities that implemented Lojack generally do not have casinos, we may overstate the effect of casinos on auto theft.¹⁹ It is also

killing his wife and beating up his daughter in a fight over his gambling away thousands of dollars. The Associated Press, September 3, 1997, reported on a 10-day-old infant in South Carolina who died of dehydration after being left in a warm car for approximately 7 hours while her mother played video poker. A mother in Illinois was convicted of killing her infant children for insurance money because of her gambling.

¹⁸ A similar divergence in Florida started in 1984 and grew after that, consistent with Florida casino openings. The first Florida casinos opened in two counties in 1982, two more opened in 1988, and the rest opened between 1990 and 1995.

¹⁹ Ayres and Levitt (1998) showed that Lojack had little effect on other offenses, so our results for the other crimes will not be affected.

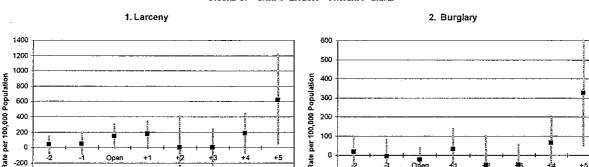
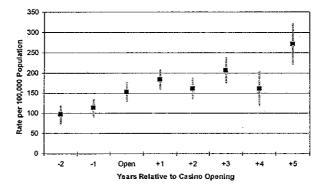


FIGURE 5.-CASINO EFFECTS-PROPERTY CRIME



-100

·200



possible that Lojack's use is not yet sufficiently widespread to greatly affect our estimates.

Years Relative to Casino Opening

C. Additional Robustness Checks

-400 -600

The precisely correct model of crime is not known. Thus, in addition to the comparison of tables 3 and 4, we considered several additional formulations to test the robustness of the results.

Law Enforcement Variables: All the regressions reported to this point omit law enforcement variables. Although including them reduces omitted variable bias, it also introduces sample bias by significantly limiting the number of counties with available data.²⁰ To examine this tradeoff we included two additional sets of law enforcement control variables. When we included the arrest rate as an explanatory variable, the estimated casino effects for almost every year after opening and for almost all crimes were higher than those reported in table 4. Therefore, the table 4 results that we emphasize are biased against the finding that casinos increase crime.

Years Relative to Casino Opening

Although arrest rates are often undefined, the problem is even bigger for other law enforcement variables. Countylevel conviction rates and sentence lengths are available for only four states (Mustard, 2003), and annual police employment is unavailable at the county level.

We also included explanatory variables that estimated the probability of capital punishment, which we estimated in four different ways.²¹ When these variables are included, the results are qualitatively the same as for the base regression. There are slight differences of the estimated effects for

²⁰ For example, the arrest rate is undefined when there are 0 offenses for a given crime type. Many small counties record no offenses even for property crimes for a given year, and even large counties frequently record no offenses for murder and rape, which consequently produce a large number of missing observations for the arrest rate. For some offenses including the arrest rate eliminated over 30,000 observations. See Lott and Mustard (1997) and Levitt (1998) for more detailed discussions.

²¹ The first was a prorated number of executions in the previous and current year divided by the number of people sentenced to death six years ago. The second was the number of executions in the first three quarters of the current year and last quarter of the previous year divided by the number of people sentenced to death six years ago. The third is a prorated count of executions in the previous and current year divided by the number of persons on death row at that time. The last was the number of executions in the first three quarters of the current year and the last quarter of the previous year, divided by the number of persons on death row at that time. Gittings and Mocan (2003) provided the first two variables, and Gittings and Mocan (2001) explain the last two in more detail.

different crimes in different postopening years, but the *D*. general qualitative trends are similar.

That the inclusion of law enforcement variables generally increases the estimated casino effects is consistent with reports from law enforcement officials that enforcement expenditures increased substantially when casinos opened. Stephen Silvern (FBI in Atlantic City) documented that expenditures for the Atlantic City Police Department and Prosecutor's Office grew much more rapidly in the late 1970s and early 1980s than similar expenditures in the rest of the state and nation (Federal Bureau of Investigation Conference on Casino Gaming, 1999). The director of the Indiana Gambling Commission reported that Indiana hired an additional 120 state troopers when the casinos opened in 1995.22 Allocations for police services also rose substantially in New Orleans upon introduction of casinos.²³ Law enforcement officials emphasize that to maintain public safety, spending on enforcement resources must increase when casinos open. Because we cannot measure all these additional resources that reduce crime, our estimates without enforcement variables tend to understate the effect of casinos on crime.

Casino-Population-Density Interactions: A natural question is whether the effect of casinos on crime varies with the type of county, such as a rural-urban difference related to population density. To test for a populationdensity interaction, we multiplied each of the eight casinoopening lead and lag variables by the county population density and reran the original regressions including these eight new variables. The density interaction coefficient estimates were statistically significant as a group at the 1% or better level for all regressions except aggravated assault and larceny, which were significant at the 11% and 46% levels, respectively. With the exception of murder and auto theft, the same rising pattern of crime after casino introduction was observed as found in the original regressions. Crime is not statistically different from zero in the years before casino introduction and immediately thereafter, but begins to rise three or four years after introduction. By the fifth year after casino introduction, a statistically significantly elevated crime rate for both low- and high-density counties appears. Introducing a density effect does not change the prediction of the model. These results give us confidence that the effect of casinos on crime is similar in large and small counties. For auto theft the casino effect is largest for less densely populated counties.

D. Summary

We summarize the results in table 4 and figures 4 and 5. First, the casino-opening lead variables suggest that after controlling for other variables casinos were not more likely to be placed in areas that had systematically different crime environments than other regions.

Second, after casinos opened, casino-county crime rates increased relative to the noncasino-county rates. Of the 42 estimated casino effects (one opening and five lags for each of seven offenses), 34 are positive, of which 19 are statistically significant at the 0.05 level, and others are significant at the 0.10 level. In contrast, none of the 8 negative estimates are statistically significant. As expected, murder exhibits no relation to casino gambling.

Third, the time pattern of estimated coefficients implies that the casino effects may change over time. With the exception of murder, all crimes show higher estimates for the last two coefficients (lags 4 and 5) than for the first two (leads 2 and 1). For most offenses, the statistically significant differences tend to appear two or three years after casino opening. Only one estimated coefficient for the year of opening is statistically significant. Estimates of the sixth and seventh lags (run but not reported) are typically positive and statistically significant.

Fourth, the increase over time in casino effect is consistent with the effects outlined in the theory. For example, the crime-mitigating influences through increased wages and employment should occur before and shortly after opening. In contrast, the crime-increasing factors are more long-term. Casino-induced changes in population and the effects of negative development grow over time. Also, clinical research shows that problem and pathological gamblers typically take approximately 2 to 4 years to start gambling, become addicted, exhaust alternative resources, and eventually commit crimes. Studies that did not have large data sets or a sufficient number of years of observations after casino opening, and that did not allow for the effects of casinos to change over time, missed these effects. An additional potential explanation of the time pattern is that casinos have an immediate impact on crime, but that impact is ameliorated by a large increase in police resources, which are typically significantly increased when casinos open, but do not maintain the same rate of growth over time. The slightly more immediate impact of casinos on violent crime may be explained in terms of *imported* criminals. It may take less time to habituate to a new casino's location than for people to exhaust their resources.

E. Evaluation

The regressions in table 4, of course, cannot decompose the net number of offenses to assign them to each alternative explanation. Nevertheless, it is instructive to ask how many crimes table 4 would imply per additional P&P gambler if all estimated additional crime incidents were arbitrarily

²² John Thar, director of the Indiana Gambling Commission, report at Federal Bureau of Investigation Conference on Casino Gaming (1999). ²³ Lt. Joseph P. Lopinto, Jr., commander of the Gambling Section of the New Orleans Police Department, reported that his department has been significantly resource-constrained since the opening of New Orleans's casinos and the resulting increase in demand for police services (Federal Bureau of Investigation Conference on Casino Gaming, 1999).

assigned to this one source. The coefficient estimates report additional crime incidents per 100,000 population. If x is the coefficient, and y is the change in P&P share of the population, then

$$\frac{x}{10^{5}} \frac{\text{Offenses}}{\text{Capita}} \times \frac{10^{-5}}{10^{-5}} \times \frac{1}{y} \frac{\text{Capita}}{\text{Problem and Pathological}} = \frac{x}{y}$$

$$\times 10^{-5} \frac{\text{Offenses}}{\text{Problem and Pathological}}.$$
(5)

The total number of crime incidents estimated in table 4 in the fifth year after casino opening is x = 1,386.4. If y = 0.059 (as in the numbers reported for Las Vegas, for example), then the average additional P&P gambler would have to commit 0.23 crime incidents per year to account for all additional crime, so that roughly one in four P&P gamblers would have to commit a crime annually. This figure rises to 0.82 if y = 0.017 at the other extreme. Thus 20%–80% are reasonable proportions relative to the information reported above that 80% of problem gamblers studied committed civil offenses, 56% had stolen, and 23% were charged with criminal offenses. In contrast, if the calculation suggested that each P&P gambler would be required to commit a dozen crime incidents per year, the numbers would be of a different magnitude.

The estimated coefficients in table 4 also allow us to gauge the fraction of observed crime due to casinos. Summing the estimated number of crimes attributable to casinos for each county, taking into account how many years the casino was in operation, and dividing by the casino counties' total population measures the contribution of casinos to observed crime. Estimates of the share of crime attributable to casinos in 1996 for individual crimes ranged between 5.5% and 30%. Auto theft was the highest, followed by robbery at 23%. The values for the rest of the offenses were between 5.5% and 10%.

We provide three estimates of the implied cost of additional crime. First, we use the cost per victimization figures adjusted to 2003 dollars using the CPI-U to calculate the total social cost of crimes committed in casino counties that are attributable to the casino presence according to the estimated coefficients in table 4 (Miller, Cohen, & Wiersema, 1996, column 4 of Table 9, p. 24). We also report the total social cost for casino counties on a per adult basis. Finally, although the social cost of property crime is not synonymous with the value of the lost property, the latter is nevertheless useful in describing the effect of casinos. The Sourcebook of Criminal Justice Statistics (Bureau of Justice Statistics, 2002, table 3.112, p. 298) contains data about the average property loss for four of the offenses in this paperrobbery, larceny, burglary, and auto theft. For those offenses we took the fifth-year lag coefficient estimates for each crime and multiplied them by the average loss per crime adjusted to 2003 dollars using the CPI-U. This produced

property loss numbers per 100,000 population, which can be aggregated to the entire adult population.

In 1996 the total costs for the 178 casino counties exceeded \$1.24 billion per year. If the estimated coefficients from table 4 are applied to a representative county of 100,000 population, 71.3% of which are adults (as is representative of the United States as a whole), then the social costs per adult are \$75 in 2003 dollars. These costs reflect the profile of the lagged effect on crimes experienced by the particular sample of casino counties making up our data set. The value of lost property from the four property crimes is \$2.905 million for a population of 100,000 (\$29.05 per adult), which becomes \$5.91 billion when aggregated to the national level for 2003.

We can compare these costs with other estimates that relied on a different methodology. Social costs of casinos have commonly been estimated in terms of the average cost imposed on society by a P&P gambler²⁴ multiplied by their number. In the most recent comprehensive study of this type of which we are aware, Thompson, Gazel, and Rickman (1996b) found that total social costs were \$135 per adult in 1996 dollars, of which \$57 (40%) were due to police and judicial-related costs and to thefts.25 Thompson et al. reported that they intentionally "projected numbers believed to be very conservative," and that the crime costs in their sample (Wisconsin) were probably lower than similar costs in other locations. Adjusting crime costs to 2003 dollars, their estimate is \$67. Taking into account the different samples and methodologies, their estimate is remarkably close to the direct costs estimated here for 1996 (\$75).

Corrective taxes reflect the costs that an industry imposes on society. Assuming crime costs no lower than \$75 (there are crimes other than FBI Index I, such as embezzlement, not considered here), crime costs equal to 40% of total social costs, and revenues for a representative casino of \$400 per adult²⁶ each year implies tax rates above 47% of revenues. In a few cases tax schedules for high-end casinos include portions where average tax rates reach these levels.²⁷ Having applied proper taxes, continued operation would be efficient in a Kaldor-Hickes sense.²⁸ If it is feasible to offer gambling in an altered manner that causes fewer P&P

adjusting upward for price level changes. ²⁷ In Illinois the average tax rate rises from 43% to 50% as casino annual gross revenues rise from \$250 to \$340 million. Revenues this large imply a verv successful casino.

a very successful casino. ²⁸ This observation is due to the anonymous referee. Whether casinos expand, shrink, or disappear will be immaterial, because whatever out-

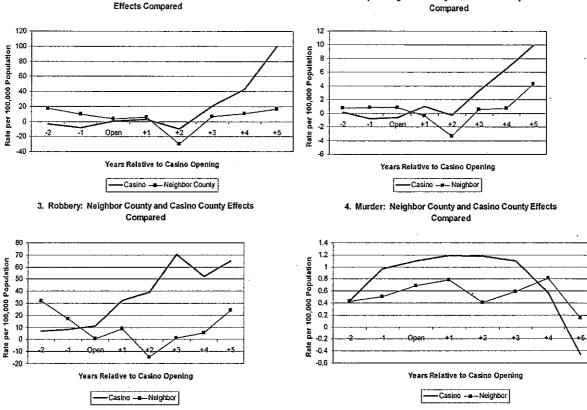
²⁴ Some studies group problem gamblers with pathological gamblers; some treat the two groups separately. Costs are computed by learning the behavior of P&Ps through direct questionnaires and surveys.
²⁵ The social-cost effect of casino-related serious problem gamblers was

²⁵ The social-cost effect of casino-related serious problem gamblers was \$138,453,113. Dividing this by the number of adults over 20 in the counties with casinos gives the per adult figure in the text. The proportion of costs due to police, theft, and judicial-related costs is determined from their tables A-2 and A-5.

²⁶ Research for the NGISC estimated that average losses by adults living near a casino might be in the \$400-\$600 range per year. Other estimates, including some by the gambling industry for losses by residents in Las Vegas and Atlantic City to casinos, are lower than \$400, even after adjusting upward for price level changes.

FIGURE 6.-HOME AND NEIGHBOR CASINO-CRIME EFFECTS: VIOLENT CRIME RATES

1. Aggravated Assault: Casino County and Neighbor County



gamblers and less crime, then this may be better for society than a response based on taxes.

VI. Do Casinos Simply Attract Crime from Elsewhere?

The estimates suggest that after five years, 8.6% of the observed property crime and 12.6% of the violent crime in casino counties are due to casinos.²⁹ However, do casinos create crime, or merely move it from elsewhere? If the casino-induced increases in crime come only from neighboring regions, casinos produce no new crime. This untested hypothesis is first tested here. To address this question we examine the crime rates of counties that border casino counties. When casinos open, neighboring county crime rates could either decrease, remain the same, or increase. The first possibility supports the idea that casinos move crime from adjacent counties but do not create crime. In the second and third cases, adjacent counties experience no change or an increase in crime, both of which indicate that total crime rises and that casinos create crime.

To implement a test strategy we reestimate the table 4 regressions with neighbor leads and lags as additional control variables. We define neighbor lead, opening, and lag variables, similar to those in tables 3 and 4 for the host county. The neighbor opening variable took a value of 1 if a casino opened in an adjacent county in the given year. Adjacent counties are the relevant unit of measurement, because the vast majority of casino patrons come from the local region surrounding the casino. For example, in Illinois over 92% of casino customers come from within 75 miles (Gazel & Thompson, 1996). A few casinos, mainly in Nevada, draw their customers from outside their immediate area. However, our estimates do not rely on these casinos to identify the effects, because these casinos opened prior to the beginning of our sample.

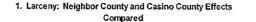
2. Rape: Neighbor County and Casino County Effects

Figures 6 and 7 summarize the estimated casino effect for neighboring and home counties for violent and property crimes, respectively. When the neighbor variables were included, the host-county crime coefficient estimates were virtually unchanged, in terms of both point estimates and statistical significance. For the years before casinos open, there is virtually no effect of the casino on crime rates in neighboring counties. Of the 42 opening and postopening

come occurs will be the result of socially optimal decisions by the firms themselves.

²⁹ Section V C explains the computation of these numbers.

FIGURE 7.—HOME AND NEIGHBOR CASINO-CRIME EFFECTS: PROPERTY CRIME RATES

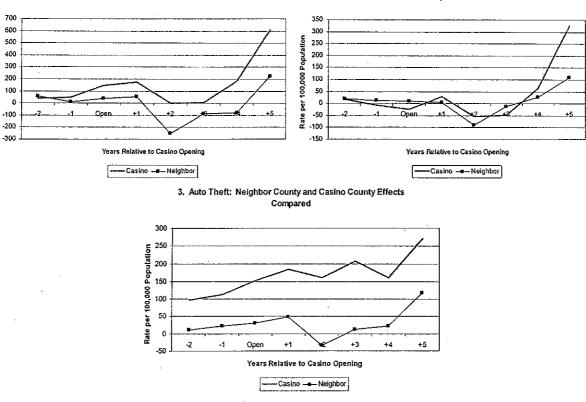


100,000 Population

рег

Ratė

2. Burglary: Neighbor County and Casino County Effects Compared



coefficient estimates on the neighbor variables, 32 are positive, of which 15 are statistically significant at the 0.05 level. Of 21 estimated coefficients for lags 3-5, 18 are positive, of which 8 are individually statistically significant. None of the three negative coefficients for lags 3-5 are statistically significant. All crimes but murder display elevated and rising lags 3, 4, and 5.

For all offense types the data reject the contention that the increase in crime in the casino counties can be attributed to decreases in neighboring counties, and thus support the contention that casinos create crime. F-tests reject at the 5% level for all crimes the hypothesis that host-county openingand lag-coefficient estimates are matched with negative estimates of equal size in neighboring counties. On the contrary, a simple correlation of host- and neighbor-county coefficient estimates for opening and lags ranges from 0.61 to 0.82, with the exception of robbery (0.14). However, there is ambiguity about the extent to which casinos increase crime in neighbor counties. Murder clearly exhibits no spillover effects. For the other offense types the neighbor time pattern is similar to the home-county time pattern. Crime typically increases in later lags, but at half or less the magnitude of the home-county effect, and many of these neighbor-county effects are not statistically significant until the very last lags. *F*-tests of the proposition that neighbor county coefficient estimates equal their host-county counterparts are rejected at the 5% level for aggravated assault, rape, robbery, and auto theft, but not for the other three crimes.

In our discussion of host-county auto theft rates we speculated as to why the host-county estimated coefficients displayed a different pattern of continually growing crime. This pattern of host-county coefficient estimates did not appear closely related to the introduction of casinos. However, auto theft for neighbor counties displays the pattern of crime increases observed for other crimes. There is a statistically significant, discernibly different crime rate three or more years after the opening of the neighboring casino, but not in the years before. The neighbor-county effect suggests possible spillover of auto theft crimes due to the casino.

VII. Conclusions

Our analysis of the relationship between casinos and crime is the most exhaustive ever undertaken in terms of the number of regions examined, the years covered, and the

control variables used. Using data from every U.S. county from 1977 to 1996 and controlling for over 50 variables to examine the impact of casinos on the seven FBI Index I crimes (murder, rape, robbery, aggravated assault, burglary, larceny, and auto theft), we concluded that casinos increased all crimes except murder, the crime with the least obvious connection to casinos. Most offenses showed that the impact of casinos on crime increased over time, a pattern very consistent with the theories of how casinos affect crime. The crime-ameliorating effects of casinos through increased employment opportunities and wages for low-skilled people will be concentrated shortly after opening. Also, law enforcement agencies can frequently use casino openings to leverage greater immediate staffing increases, but are unable to sustain this growth. This effect further reduces the immediate impact of casinos on crime. However, over time these effects are dominated by casino-related factors that increase crime. Specifically, problem and pathological gamblers commit crimes as they deplete their resources, nonresidents who visit casinos may both commit and be victims of crime, and casino-induced changes in the population start small but grow. The data show that these crime-inducing and crime-mitigating effects offset each other shortly after opening, but over time the crime-raising effects dominate, and crime increases in subsequent years. Furthermore, we believe these estimates to be lower bounds on the true effect because they omit measures of law enforcement, which is typically increased substantially when casinos open. When we include law enforcement measures, the estimated effects are larger.

According to the estimates, between 5.5% and 30% of the different crimes in casino counties can be attributed to casinos. This translates into a social crime cost associated with casinos of \$75 per adult in 1996. This figure does not include other social costs related to casinos, such as crime in neighboring counties, direct regulatory costs, costs related to employment and lost productivity, and social service and welfare costs. Overall, 8.6% of property crime and 12.6% of violent crime in counties with casinos was due to the presence of the casino. Although robbery, the offense that exhibited the largest increase, is classified as a violent crime, it is similar to property crime in that its motivation is financial.

We also investigated whether the crime in casino counties is attracted (moved) from other regions or is created. Counties that neighbor casino counties did not experience compensating crime reductions, indicating that crime was created in casino counties, rather than simply being shifted from one area to another. There is mixed evidence about whether casino openings increase neighbor-county crime rates. Murder rates in neighbor counties are unaffected. The other offenses exhibit increasing neighbor rates, but are generally not statistically significant until the fourth and fifth year after opening.

REFERENCES

- Albanese, Jay S., "The Effect of Casino Gambling on Crime," Federal Probation 49:2 (1985), 39-44.
- Albanese, Jay S., "Casino Gambling and White Collar Crime: An Examination of the Empirical Evidence," prepared for the American Gaming Association (1999), http://www.americangaming.org/ assets/files/studies/white_collar_crime.pdf, last accessed October 7. 2005.
- Ayres, Ian and Steven D. Levitt, "Measuring Positive Externalities from Unobservable Victim Precaution: An Empirical Analysis of Lojack," Quarterly Journal of Economics 113:1 (1998), 43-77.
- B.D.I.T., Casinos: The International Casino Guide, 6th ed, (Port Washington, NY: B.D.I.T., Inc., 1997). Breen, R.B., and M. Zimmerman, "Rapid Onset of Pathological Gambling
- in Machine Gamblers," Journal of Gambling Studies 18:1 (2002), 31 - 43
- Bridwell, R. Randall, and Frank L. Quinn, "From Mad Joy to Misfortune: The Merger of Law and Politics in the World of Gambling," Mississippi Law Journal 72:2 (2002), 565-729.
- Buck, Andrew J., Simon Hakim, and Uriel Spiegel, "Casinos, Crime and Real Estate Values: Do They Relate?" Journal of Research in Crime and Delinquency 28 (1991), 288-303.
- Bureau of Justice Statistics, Sourcebook of Criminal Justice Statistics 2002, 30th ed. Utilization of Criminal Justice Statistics Project, Ann L. Pastore and Kathleen Maguire (Eds.), University at Albany, School of Criminal Justice, Hindelang Criminal Justice Research Center, Albany, NY. Available online: www.albany.edu/sourcebook, accessed March 5th, 2004.
- Chesney-Lind, Meda, and Ian Y. Lind, "Visitors against Victims: Crimes against Tourists in Hawaii," Annals of Tourism Research 13 (1986), 167-191.
- Chiricos, Ted, "Casinos and Crime: An Assessment of the Evidence,"
- University of Nevada, Las Vegas, Special Collections (1994). Evans, William N., and Julie Topoleski, "The Social and Economic Impact of Native American Casinos," University of Maryland working paper (2002).
- Federal Bureau of Investigation Conference on Casino Gaming, sponsored by the Federal Bureau of Investigation, The United States Attorney's Office, the Kentucky Association of Chiefs of Police, and the Kentucky Association of Commonwealth Attorneys, Louisville, KY (1999).
- Florida Department of Law Enforcement, "The Question of Casinos in Florida: Increased Crime: Is It Worth the Gamble?" Tallahassee, FL: State of Florida (1994).
- Florida Sheriffs Association, "Casinos and Crime: Is It Worth the Gamble? A Summary Report and Position Paper," Tallahassee, FL: Florida Sheriffs Association (1994).
- Friedman, Joseph, Simon Hakim, and J. Weinblatt, "Casino Gambling as a "Growth Pole" Strategy and Its Effect on Crime," Journal of Regional Science, 29 (1989), 615-623.
- Gazel, Ricardo C., Dan S. Rickman, and William N. Thompson, "Casino Gambling and Crime: A Panel Study of Wisconsin Counties," Managerial and Decision Economics 22 (2001), 65-75.
- Gazel, Ricardo, and William Thompson, "Casino Gamblers in Illinois: Who Are They?" report for the Better Government Association of Chicago (1996).
- Gittings, Kaj, and Naci Mocan, "Pardons, Executions and Homicide." NBER working paper no. 8639 (2001).
- "Getting off Death Row: Commuted Sentences and the Deterrent Effect of Capital Punishment," Journal of Law and Economics, 45:2 (2003), 453-478.
- Gould, Eric D., Bruce A. Weinberg, and David B. Mustard, "Crime Rates and Local Labor Market Opportunities in the United States: 1977-1997," this REVIEW, 84:1 (2002), 45-61.
- Government Accounting Office, "Impact of Gambling," GAO/GGD-00-78 (2000), pp. 1-68.
- Grinols, Earl, "Incentives Explain Gambling's Growth," Forum for Applied Research and Public Policy 11:2 (1996), 119-124.
- Gambling in America: Costs and Benefits (New York: Cambridge University Press, 2004).
- Grinols, Earl, and David B. Mustard, "Business Profitability vs. Social Profitability: Evaluating the Social Contribution of Industries with

Externalities and the Case of the Casino Industry," Managerial and

- Decision Economics 22 (2001), 143–162. Grinols, Earl, and J. D. Omoroy, "Development or Dreamfield Delusions?: Assessing Casino Gambling's Costs and Benefits," Journal of Law and Commerce 16:1 (1996), 49--88.
- Grogger, Jeff, "Market Wages and Youth Crime," NBER working paper no. 5983 (1997). Harvard Medical School and Massachusetts Council on Compulsive Gambling, "Political Contributions by the Gaming Industry," *The Wager: The Weekly Addiction Gambling Ed-*ucation Report 2:39 (1997), http://www.basisonline.org/backissues/
- 1997/vol2pdf/w239.pdf, last accessed October 7, 2005. Henriksson, Lennart E., "Hardly a Quick Fix: Casino Gambling in Canada," *Canadian Public Policy* 22 (1996), 116–128.
- Hsing, Yu, "An Analysis of Arrests Regarding Illegal Drugs: The Determinants and Policy Implications," American Journal of Economics and Sociology 55 (1996), 53-60.
- Kindt, John W., "Increased Crime and Legalized Gambling Operations: The Impact on the Socio-Economics of Business and Govern-
- ment," Criminal Law Bulletin 43 (1994), 538-539. Lee, Barbara A., and James Chelius, "Government Regulation of Labor-Management Corruption: The Casino Industry Experience in New Jersey," Industrial and Labor Relations Review 42 (1989), 536-548.
- Lesieur, Henry R., "Costs and Treatment of Pathological Gambling," Annals of the American Academy of Political and Social Sciences 556 (1998), 153-171.
- Levitt, Steven D., "Why Do Increased Arrest Rates Appear to Reduce Crime: Deterrence, Incapacitation, or Measurement Error?" Economic Inquiry 36 (1998), 353-372.
- Lott, John R., and David B. Mustard, "The Right-to-Carry Concealed Handguns and the Importance of Deterrence," Journal of Legal Studies 26:1 (1997), 1-68.
- Margolis, Jeremy, "Casinos and Crime, an Analysis of the Evidence," American Gaming Association, unpublished (1997).
- Maryland Department of Health and Mental Hygiene, Alcohol and Drug Abuse Administration, Final Report: Task Force on Gambling Addiction in Maryland (Baltimore, 1990).
- Miller, Ted R., Mark A. Cohen, and Brian Wiersema, Victim Costs and Consequences: A New Look (Washington, DC: National Institute of Justice, 1996).

- Miller, William J., and Martin D. Schwartz, "Casino Gambling and Street Crime," Annals of the American Academy of Political and Social Science 556 (1998), 124-137.
- Mustard, David B., "Reexamining Criminal Behavior: The Importance of Omitted Variable Bias," this REVIEW, 85:1 (2003), 205-211.
- National Gambling Impact Study Commission, "Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission" (1999). National Opinion Research Center, "Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission" (1999), http://govinfo.library.unt.edu/ ngisc/reports/gibstdy.pdf, last accessed October 8, 2005.
- Nelson, Dennis J., Howard L. Erickson, and Robert J. Langan, "Indian Gaming and Its Impact on Law Enforcement in Wisconsin," API Consulting Services (1996).
- Piskora, Beth, "Casino Gets \$2.26 M Fine in Girls-and-Golf Scandal," New York Post (August 6, 2002), reported on www.casinowatch.org/ prostitution/prostitution_1.html, accessed on April 18, 2003.
- Reno, Ronald A., "False Hope," Citizen, 11:6 (1997), 10-13.
- RI Gambling Treatment Program, "Video Slots: The Most Addictive Form of Gambling in History" (2002), on www.lifespan.org/Services/ MentalHealth/RIH/Gambling/Research/default.htm, accessed on July 13, 2003.
- Rohrig, Byron, "Gambling Addiction Takes Away Life," Evansville [IN] Courier & Press, March 7, 2002.
- Schneider, Grace, "Grandmother Pleads Guilty in Fraud Case; Grandmother Sentenced to Three Years, Must Repay Brinly-Hardy Co. \$129,000," Louisville Courier Journal, July 3, 2003.
- Strow, David, "Study Pinpoints Prevalence of Problem Gambling," Las Vegas Sun, May 24, 1999. Available online: www.lasvegassun.com/ sunbin/stories/sun/1999/may/24/508837298.html?Bo%20Bernhard, accessed August 18, 2004.
- Thompson, William N., Ricardo Gazel, and Dan Rickman, "Casinos and Crime in Wisconsin: Is There a Connection?" Milwaukee: Wisconsin Policy Research Institute, vol. 9 (1996a), no. 8.
 - "The Social Costs of Gambling in Wisconsin," Milwaukee: Wisconsin Policy Research Institute, vol. 9 (1996b), no. 6, pp. 1-44

State Senate approves casino bill

By Noah Bierman

Globe Staff / October 14, 2011

The Massachusetts Senate approved casino gambling yesterday, setting the stage for Governor Deval Patrick to sign the measure by the end of this year, with slot machines arriving as early as 2012.

Proponents called it the culmination of a decades-long debate, and said the 24-14 vote offers an opportunity to recapture hundreds of millions of gambling dollars that have crossed state lines - mostly to casinos in Connecticut - as well as the jobs that accompany them.

"The must-haves for me are jobs, and that's what it's all about," said Senate President Therese Murray, a Plymouth Democrat. "We have over 250,000 people out of work in the Commonwealth, and that's why we're doing this bill."

Opponents warned of spiking crime, increased addiction, and potential corruption, and said the state's historic character would be forever compromised as local businesses are squeezed out by new competition.

"This is a fancy name for a tax on the poor," said Senator Sonia Chang Diaz, a Jamaica Plain Democrat.

But the Senate's vote put many of those arguments in the rearview mirror, at least at the state level.

The House overwhelmingly passed a similar proposal last month, and Patrick has said he agrees with the major elements approved by both chambers. Yesterday his office said in a statement that he was "pleased to see continued movement on a gambling bill."

The House and Senate now have to work out what several lawmakers characterized as minor differences in the bills, including variations over who would be allowed to approve a casino at the local level, before submitting a final version to Patrick. Senator Stanley C. Rosenberg, an Amherst Democrat who helped write the legislation, predicted the governor would have a final product on his desk by Thanksgiving. House Speaker Robert A. DeLeo agreed the House and Senate would move quickly.

"We've got a good foundation," DeLeo said yesterday. "The good thing is that the major pieces of the bill are in place."

After a drawn-out dispute between Patrick and DeLeo last year over the number and types of gambling facilities that would be allowed, Beacon Hill's power brokers spent the summer behind closed doors, ironing out their differences, to help ensure approval this time.

The proposal would authorize up to three full-scale casinos: one designated for Western Massachusetts, another in the southeast, and a third in or around Boston or Worcester. It would also allow a slot machine parlor, which could be located anywhere in the state.

The bill would give the Mashpee Wampanoag a leg up in obtaining the right to open the casino in the southeast, one of several provisions that could prompt a court battle among competing developers that could delay construction.

Developers, who have spent millions lobbying the Legislature over the past four years, have been lining up potential sites around the state, including the Suffolk Downs race track in East Boston, a spot in Palmer, Plainridge Race Course in Plainville, and various locations in the South Coast.

Casino gambling has proliferated throughout the Northeast in recent years, as cash-strapped states have sought a way to balance their budgets without raising taxes. Massachusetts' decision to enter the industry has prompted another flurry of activity among border states, including New York and New Hampshire, with lawmakers eager to get a slice of the market share.

http://www.boston.com/news/local/massachusetts/articles/2011/10/14/massachusetts_senat... 7/16/2012

One oft-cited Patrick administration study estimated it could take five years to set up regulations and build fullscale casinos in Massachusetts. But DeLeo and Rosenberg have predicted a shorter time-frame, perhaps two to three years for a full-scale casino. And they say a slot parlor could be up and running within a year, because it requires far less capital investment than resort-style casinos and could be housed at an existing track.

For the full-scale casinos, the state envisions something akin to Mohegan Sun, which has a full compliment of table games, restaurants, and live entertainment. The proposals require a minimum \$500 million investment and the promise of a hotel in order to win a full casino license.

Operators would pay the state a licensing fee of at least \$85 million, with the slot parlor paying \$25 million. Casinos would be taxed at 25 percent, while the slot parlor would pay 55 percent under the Senate's plan and 49 percent under the House plan. The state's share would be divvied up for a number of purposes, including schools, the state's rainy day fund, transportation projects, and gambling addiction programs.

But before any facilities are built, the bills would require communities to approve casinos in a referendum. That issue is one of the few sticking points between the House and Senate. The House version exempts Boston, Springfield, and Worcester from a citywide vote. In those cities only a local neighborhood or ward would be allowed to decide whether a casino can be built. The Senate bill carves out only Boston and Worcester, but it leaves it up to their city councils to decide who can vote.

Opponents see local approval as the next battlefront for casinos. Opposition groups have already formed near several potential locations, including East Boston and the southeastern part of the state.

"It moves to those fights," said Senator Patricia D. Jehlen, a Somerville Democrat. "Most people are very nervous about having a casino in their neighborhood."

The bill would designate a five-member gambling commission - appointed by the governor, the treasurer, and the attorney general - to make most of the major decisions about where casinos can open, the final licensing fee, and other regulations.

That commission would decide how much slot machines would have to pay out to players. Rosenberg said on average, slot machines pay out 92 percent of what they take in. But some states allow casinos to pay out closer to 80 percent, he said.

The Senate bill also differs from the House in two other areas. It includes a happy-hour provision to allow restaurants and bars around the state to provide free and discounted drinks, as a way to compete with casinos.

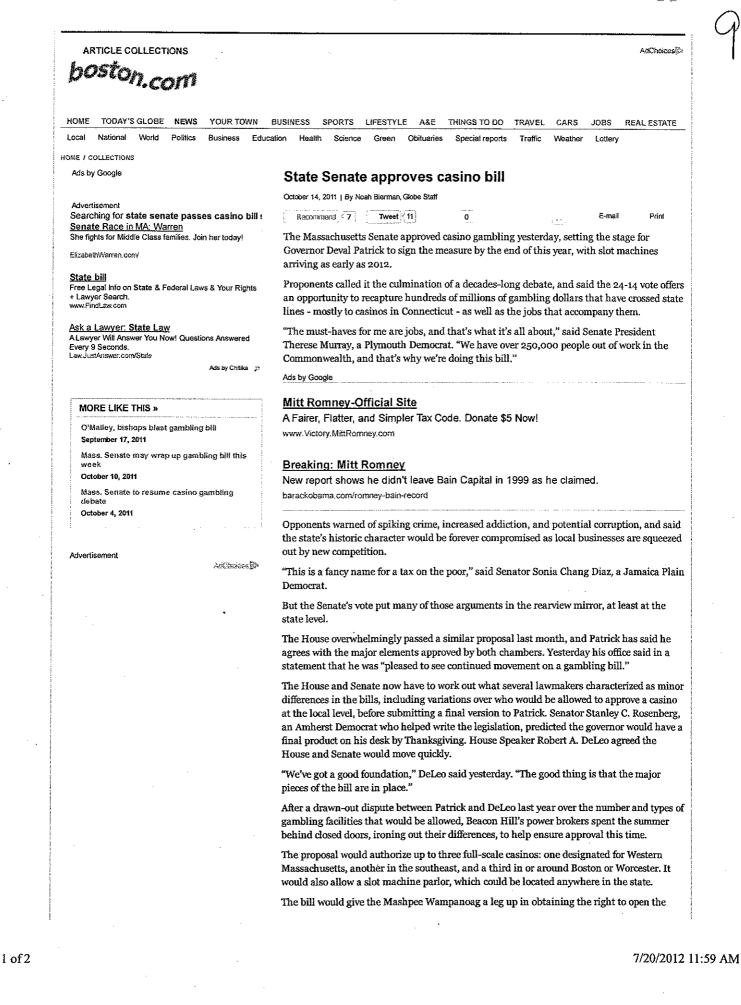
It requires lawmakers to remain out of office for a year before they can take a job with a casino. The House bill has no such requirement.

The initial proposal in the Senate called for a five-year moratorium, but Senate leaders balked, taking the debate behind closed doors before emerging with a one-year ban.

Frank Phillips of the Globe staff contributed to this article. Noah Bierman can be reached at nbierman@globe.com. Follow him on Twitter @noahbierman.

Correction: The original version misstated which cities are carved out in the Senate version of the bill.

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casino in the southeast, one of several provisions that could prompt a court battle among competing developers that could delay construction.

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Econ Journal Watch, Volume 5, Number 1. January 2008, pp 4-20.

Do Casinos Really Cause Crime?

DOUGLAS M. WALKER¹

A COMMENT ON: EARL L. GRINOLS AND DAVID B. MUSTARD, "CASINOS, CRIME, AND COMMUNITY COSTS," THE REVIEW OF ECONOMICS AND STATISTICS 88(1), FEBRUARY 2006: 28-45.

Abstract

The Review of Economics and Statistics published "Casinos, Crime, and Community Costs" by Earl Grinols and David Mustard in February 2006. The authors claim that their analysis of casinos and crime is "the most exhaustive ever undertaken in terms of the number of regions examined, the years covered, and the control variables used" (43-44). The paper is a noteworthy contribution to the gambling literature. The scope of their analysis is impressive.

Since its publication the Grinols and Mustard paper has generated much discussion in the press, activist websites, policymaking discourse, and the gambling literature.² Because the Grinols and Mustard paper is published in a refereed journal with high academic prestige, it is likely to be influential in subsequent research and political discussions of the casino-crime relationship.

The Grinols and Mustard analysis utilizes county level data on FBI Index I

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I would like to thank— without implication—several people who made helpful comments and suggestions that improved this paper: Jay Albanese, Bill Eadington, David Forrest, Mark Nichols, Don Ross, Richard Thalheimer, and especially John Jackson and Ben Scafidi. Several referees provided important comments and editorial suggestions.

² For example, several newspaper reports have highlighted the Grinols and Mustard study (Morin 2006, Vitagliano 2006, Yarbrough 2006). In recent months the study was discussed in articles in *Parade Magazine* (Flynn 2007) and *The Wall Street Journal* (Whitehouse 2007). Policy reports have utilized the study (Policy Analytics 2006), and recent research has reported the Grinols and Mustard findings (Morse and Goss 2007, 79-82). The paper (or an earlier version, Grinols and Mustard 2001a) has also been posted on activist websites such as the National Coalition Against Legalized Gambling (link) and CasinoFreePA (link).

offenses³ for all U.S. counties from 1977 through 1996. Using a series of dummy variables to account for the existence of casino gambling in counties, as well as a number of control variables, the authors model crime rates and find that they have fallen in both casino and non-casino counties during the sample period. However, Grinols and Mustard report the crime rate dropped by 12 more percentage points in non-casino counties than in casino counties (Grinols and Mustard 2006, 30). Their analysis leads them to conclude that the higher crime rates in casino counties are caused by the existence of casinos. Grinols and Mustard find that for the first two or three years following casino openings there is little or no effect of casinos on crime. However, during the fourth and fifth years after casino openings, most forms of crime begin to escalate in the casino counties. The estimated crime effects are used in conjunction with cost of crime estimates to arrive at the estimated cost of crime caused by casinos of \$75 per adult in U.S. casino-hosting counties (28, 41).

Grinols and Mustard provide a detailed discussion of the theoretical connection between casinos and crime (31-32). They discuss two potential factors through which casinos may reduce crime. First, if casinos present better job opportunities for low-skilled workers, crime may fall. Second, there may be economic development effects attributable to casino gambling that could reduce crime.

On the other hand, Grinols and Mustard discuss five ways in which casinos may lead to an increase in crime. First, casinos may harm economic development by draining the local economy of resources. Second, casinos may lead to an increased crime payoff, resulting in more crime. Third, pathological gambling may increase with the spread of casinos, and this can lead to more crime. Fourth, casinos may also attract criminals to a region, leading to more crime. Finally, Grinols and Mustard explain that casinos may induce a change in the local population, toward one more apt to commit crimes. The Grinols and Mustard mechanisms between casinos and crime seem reasonable and largely uncontroversial.

Unfortunately, the Grinols and Mustard empirical analysis has problems, including: (1) a lack of needed data and its effect on measuring the crime rate, (2) potential problems with their crime data, (3) a possible sample self-selection bias, (4) a poor measure of casino gambling activity, and (5) skewed interpretations of the empirical results. Since the Grinols and Mustard paper has been so influential, its shortcomings need to be thoroughly explored.

Gambling is a controversial issue. It may be one of those issues where most conventional sources of support are disinclined to support research that might come to politically incorrect conclusions. Such a situation gives rise to the hazard that politically-incorrect research and interested industry groups tend to make connections, and research with any connection to such groups is then discounted, regardless of its scholarly merits and arguments. In the Appendix to this paper I make disclosures and discuss the general problem of researcher motivations and commitments.

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³ These offenses include aggravated assault, rape, robbery, murder, larceny, burglary, and auto theft.

CALCULATING THE CRIME RATE

The crime rate is typically measured as the number of crimes committed divided by the population. This is usually multiplied by 100,000:

crime rate = $\frac{\text{\# of crimes committed x 100,000}}{\text{population}}$ = crimes per 100,000 people (1)

If we let C be the number of crime incidents and P be the population, then the crime rate in (1) can be expressed as $C/P \times 100,000$. This rate gives a fair indication of the risk of being victimized by crime.

Relative to the U.S. population, the number of tourists is small. So an adjustment for visitors and the crimes they commit is not likely to affect significantly the U.S. crime rate or the residents' risk of being victimized by crime. However, if one is considering a very small area, such as a county that has a large tourist attraction, then for the crime rate to represent accurately the risk of being victimized, it must be adjusted to account for the crimes committed by visitors *and* for the increase in the population at risk of being victimized by crime.

Several authors have discussed how tourism should be considered when analyzing the crime rate. Nettler (1984, 48) explains, "to increase the accuracy of forecasts, a rate should be 'refined' so that it includes in its denominator *all those persons and only those persons who are at risk* of whatever kind of event is being tallied in the numerator." Nettler describes rates that do not correctly represent the population at risk as "crude" (48). Boggs (1965) considers central business districts, which attract large numbers of visitors. She explains that ignoring the visitors produces a spuriously high crime rate (900). Curran and Scarpitti (1991, 438) explain that the FBI, the source of the Grinols and Mustard crime data, warns against "comparing statistical data...solely on the basis of their population."

To illustrate the effect of visitors (tourists) on the crime rate, let C_{R} be the crimes committed by residents and C_{V} be crime committed by visitors. Also let P_{R} be the resident population and P_{V} be the population who are visiting. Then the total number of crimes committed will be $C_{R} + C_{V}$ and the population at risk is $P_{P} + P_{V}$. We can rewrite the crime rate from equation (1) as⁴

Crime rate =
$$\frac{C_{R} + C_{V}}{P_{R} + P_{V}}$$
 (2)

Clearly, if we are interested in the crime rate for a single county that is attracting relatively many visitors then it is critical to account for visitors in both the

4 For simplicity we hereafter ignore the standard practice of multiplying the rate by 100,000.

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numerator (C_v) and the denominator (P_v) .

Grinols and Mustard use as the crime rate $C_R + C_V/P_R$, which is greater than $C_R + C_V/P_R + P_V$. Obviously, the difference between the two measures is greater the more tourists there are. Grinols and Mustard explain that county level visitor data are not available (34). As a result, they have no option but to exclude P_V from the denominator of the crime rate. But they do include C_V in the numerator. The result is that Grinols and Mustard overstate the crime rate in casino counties and therefore, overstate the risk to casino county residents of being victimized by crime. This latter observation is particularly important, since the apparent objective of the Grinols and Mustard paper is to analyze the risk of casino county residents falling victim to crime (34, 35). If these risks are overstated then so will be the estimated costs of crime due to casinos.

Grinols and Mustard attempt to justify their crime rate measure by first creating names for two types of crime rate: "undiluted" and "diluted" (34). The "undiluted" or "traditional" rate used in their analysis is what Nettler (1984) refers to as a "crude" rate. It is shown using our notation from above:

"undiluted" crime rate = crude crime rate =
$$\frac{C_R + C_V}{P_p}$$
 (3)

When the number of visitors (P_v) is added to the population at risk measure, Grinols and Mustard call the result the "diluted" crime rate. This is what Nettler (1984) refers to as a "refined" rate, and it is the original crime rate from equation (2). The terminology "diluted" and "undiluted" appears to be original with Grinols and Mustard. They explain their "decision" to use the "undiluted" crime rate:

Some have argued for one [rate]...or the other without realizing that the choice is not methodological, but depends on what questions the researcher wants to answer. A common but invalid claim is that the diluted crime rate should be used to determine the change in probability that a resident would be the victim of a crime. However, knowing what happens to the diluted crime rate does not give the needed information and could even move the answer in the wrong direction.^[5] (34)

Grinols and Mustard provide an example to show why the "diluted" crime rate may not provide "the needed information"—and that as a result, P_v should be excluded from the crime rate calculation:

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⁵ Note that Grinols and Mustard do not explain *why* the claim that "the diluted rate should be used" is invalid. Nor do they cite work where the claim is invalidly made.

...let s_i be the share of resident population P victimized by residents, and let s_2 be the share of the resident population victimized by Vvisitors. Similarly, let σ_i be the share of visitors victimized by residents and σ_2 the share of visitors victimized by visitors. Then the [undiluted] crime rate is $s_i + s_2 + (\sigma_i + \sigma_2)V/P$; the diluted crime rate is $(s_i + s_2)w_p + (\sigma_i + \sigma_2)w_v$ where w_p and w_v are the shares of visitors plus residents made up by residents and visitors, respectively; and the probability of a resident's being a crime victim is $s_i + s_2$. If residents do not victimize visitors $(\sigma_i=0)$, then P=V, and $s_2 + \sigma_2$ is smaller than s_i . The probability of a resident being victimized is s_i without visitors, and it rises to $s_i + s_2$ with visitors. The diluted crime rate is s_i without visitors and falls to $(s_i + s_2 + \sigma_2)/2$ with visitors. Thus in this case the diluted crime rate falls while the probability of a resident being victimized rises. (34-35)

They explain that their interest is in "the costs to the host county associated with a change in crime from whatever source. We are therefore interested in the total effect of casinos on crime, and thus use the undiluted crime rate..." (35).⁶

It appears that their conclusion—the risk to residents rises even though the "diluted" rate falls—occurs only because of their assumptions: "If residents do not victimize visitors ($\sigma_1=0$), then P=V, and $s_2+\sigma_2$ is smaller than s_1 " (34).⁷ One *can imagine* a situation which provides the conclusion that the risk to residents rises even though the "diluted" crime rate falls. But this is by no means the only possible outcome.

To illustrate, consider Albanese's (1985, 41) simple numerical example:

A city with a population of 100 citizens might experience 10 reported Index crimes in a year. Therefore, the probability that any one citizen will be the victim of one of these crimes is 1 in 10. If the population of this city suddenly doubles [after a casino opens]

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⁶ Presumably, Grinols and Mustard are interested in the costs to the host county because these jurisdictions may be responsible for bearing the costs associated with any casino-related crime. In addition, some residents will be the victims of visiting criminals. Since the decision to adopt casinos is made locally, one could argue that a focus on the local, county-level effects is warranted. On the other hand, one could argue that the casino legalization question begins with the state, so state-level effects are more important to the politicians responsible for the initial legalization. In addition, casinos pay hefty fees and significant taxes that may partially offset any locally-incurred costs of casinos. Even if one agrees with Grinols and Mustard that the local effects are of primary concern, it does not necessarily imply the "undiluted" crime rate is the appropriate one.

⁷ As the sentence reads, it does not make sense. First, P=V does not follow from the assumption that σ_i =0; nor does "($s_2 + \sigma_2$) is smaller than s_1 " follow. Perhaps Grinols and Mustard transposed "then" and "and". In an earlier version of the Grinols and Mustard paper (2001a, 14), this sentence is worded differently: "For example, assume that residents do not victimize visitors (σ_i =0), P=V, and ($s_2 + \sigma_2$) is smaller than s_1 ." This wording clearly indicates that all three conditions are assumptions.

to, say, 200 citizens, it is likely that the number of crimes that occur there will also rise—simply because there are more people to be offenders and victims. If the number of crimes also doubled to 20, it would appear as if crime increased 100%. However, this is not the case. If 200 people are now at risk and 20 crimes are committed, the probability of being a victim is *still* 1 in 10 (i.e., 20 in 200). Therefore, the risk of being victimized by crime can remain the same when *both* the population and crime increase together.

One can fabricate an example in which Grinols and Mustard's conclusion obtains, beginning with 100 residents and 10 crimes and the Grinols and Mustard assumption that residents do not victimize visitors. Suppose that now 100 visitors come and commit 8 crimes. Then the "diluted" crime rate will fall to 18 in 200 (9 in 100). If only one of the new crimes is committed against a resident, then the risk to residents rises to 11 in 100. It is unlikely that visitors will only victimize visitors, so the Grinols and Mustard assumption that residents do not victimize visitors virtually ensures that the risk to residents will increase, whether the "diluted" rate rises or falls. But the necessary assumptions to ensure that Grinols and Mustard's conclusions obtain are very contrived, so the justification for excluding visitors from the population at risk and using the "undiluted" rate is very weak.

Recall that the crime rate is typically used to measure the likelihood of being victimized by crime for the population at risk. If we exclude visitors from the population at risk, then we are implicitly assuming that only residents are at risk of being victimized. When Grinols and Mustard choose the "undiluted" crime rate, $C_{R} + C_{V}/p_{R}$, they are implicitly forcing the assumption that *all crime is committed against residents*—since visitors are excluded from the denominator. This certainly overstates the crime rates in tourist counties and will overstate the true risk of those counties' residents being victimized.⁸

Clearly there are a number of possibilities for how the "diluted" crime rate will move relative to the residents' risk of being victimized; Grinols and Mustard highlight one scenario. Now let's consider others. Again start with 10 crimes and 100 residents, and the Grinols and Mustard assumption that residents only victimize residents. If 100 visitors come and commit an additional 10 crimes, here are a few of the possibilities: (i) if visitors commit 5 crimes against residents and 5 crimes against visitors, then the risk to residents rises to 15 in 100, while the "diluted" crime rate remains constant (it changes from 10 in 100 to 20 in 200); (ii) if visitors commit all 10 crimes against other visitors, then the risk to residents and the "diluted" crime rate are unchanged; (iii) if visitors commit 5 crimes against visitors and 5 against residents, and the resident criminals also attack residents and visitors equally, then the risk to residents remains constant, and the

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⁸ The more tourism in a county, the larger the overstatement of the crime rate and the risk to residents.

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"diluted" rate is unchanged; (iv) if all criminals attack only visitors, then the risk to residents falls to zero, while the "diluted" rate is unchanged. Obviously there are other possible scenarios.

The important point is that the relationship between risk to residents and the "diluted" and "undiluted" crime rates depends critically on who the criminals are and who the victims are.⁹ Unfortunately, Grinols and Mustard do not have these data. But a variety of research, as well as common sense and common experience, suggests that tourists are popular targets for criminals (Chesney-Lind and Lind 1986, Harper 2001, Miller and Schwartz 1998, and Fujii and Mak 1980).

What are the odds that all resident and visiting criminals ignore tourists and attack only residents, as Grinols and Mustard implicitly assume? Without evidence to the contrary, it seems more likely that a resident and a visitor are roughly equally likely to be victimized. In this case, clearly the "diluted" crime rate is the appropriate one to use if we are trying to measure the risk to residents and/ or visitors of being victimized. The Grinols and Mustard "undiluted" crime rate will overstate the crime rate in tourist (casino) counties. This is perhaps the most significant problem in the Grinols and Mustard paper.

ANOMALIES IN THE CRIME DATA

There are two potential problems with the Grinols and Mustard crime data, the Uniform Crime Reports (UCR). The UCR data at the county level are based on voluntary crime reporting by a number of agencies within each county. The crimes reported by the various agencies are aggregated to arrive at the county-level UCR data. The problem arises from the fact that unreported crime data are imputed. For the 1977-93 data, the UCR explains that the reason for the imputation was to "ensure cross-sectional data comparability and quality." But it warns, "if there were major changes in the [agencies] reporting in a county across years, artifactual changes in the longitudinal data for a county could be introduced because of potential variation in the type of [agency] used to compute imputed county totals and rates each year" (ii). In order to make the data more useful for longitudinal analyses, for 1994 and later, the UCR changed its method of imputing missing data (i).

There are two problems with the UCR data as they relate to the Grinols and Mustard study. The first is that the imputation for crime by non-reporting agencies may introduce anomalies into the Grinols and Mustard crime data.¹⁰ Maltz

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⁹ Knowing where the crimes occur (on casino premises or off) would also provide some insight into the relative probabilities of being victimized. See Curran and Scarpitti (1991).

¹⁰ Grinols and Mustard do note that some of their observations (about 5,300) had missing data and were not included in the model (p. 35). However, they do not explain what the missing data are. Even if this refers to imputed UCR data, the absence of those data could still potentially affect their results. Grinols and Mustard do indicate that they used regressions weighted by county population (35). This could mitigate some of the data problems, to the extent that less populated counties are less likely to

(1999, 26) explains, "Most observers believe that the effect on the estimate of the *overall* crime rate in the United States would be minimal, but that it could be quite problematic when investigating the crime rate for a smaller unit such as a State or county, or when looking at rural crime rates."¹¹ Maltz and Targonski (2002) believe the problems are so serious that, "until improved methods of imputing county-level crime data are developed, tested, and implemented, they should not be used, especially in policy studies" (297).

The second problem is that, although the Grinols and Mustard sample period is 1977-96, the authors' model apparently does not account for the 1994 change in UCR data reporting. The UCR data codebook includes a section titled, "Break in Series," in which it warns, "*data from earlier year files should not be compared to data from 1994 and subsequent years* because changes in procedures...may be expected to have an impact on aggregates for counties in which some [agencies] have not reported for all 12 months" (p. i; emphasis added).

It difficult to speculate on how exactly these data issues might affect the Grinols and Mustard analysis, but the effect could be serious. Much of the U.S. casino expansion occurred in 1991-93.¹² As discussed below, Grinols and Mustard find crime in casino counties starts to rise four or five years after casinos are introduced. For counties that adopted casinos in the early 1990s, this increase in crime rate corresponds to 1994 or later—after the UCR imputation change. It is possible that Grinols and Mustard's finding of a crime effect results from the UCR data imputation, the 1994 change, or both.

SAMPLE SELF-SELECTION

Grinols and Mustard use a dummy variable to track the first opening of a casino into the county. Variables are also used to account for time relative to the first casino opening in a county, from two lead years to five lag years. The empirical results show no significant changes in casino county crime rates until four or five years after the introduction of casinos. Grinols and Mustard claim that "[by] conducting the most exhaustive investigation and utilizing a comprehensive county-level data set that includes every U.S. county, we eliminate sample selection concerns" (33). The authors do not choose a biased sample, but there is a potential sample self-selection bias in their model.

12 Only Nevada, New Jersey, and South Dakota had commercial casinos prior to 1991.

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report crime. This issue is discussed in the debate between Maltz and Targonski (2002, 2003) and Lott and Whitley (2003).

¹¹ It is surprising that Grinols and Mustard used the UCR data at all. In the context of the "right-tocarry" gun law debate, Lott and Whitley (2003) mention that Lott and Mustard were well aware of problems with the UCR data, and that they "had compiled an eight page single-spaced list of problems" (186, note 6). Grinols and Mustard should have at least acknowledged that there are potential problems with the data, even if they are the best data available.

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Grinols and Mustard do not account for the fact that counties self-select into the "casino county" category by the decision to permit casinos.13 Since casino gambling has often been sold as a potential growth or tax revenue strategy (Walker 2007a), there is good reason to believe that counties with relatively poorly performing economies might be more likely to introduce casinos and to do so more quickly than counties that are better off economically. Indeed, Grinols and Mustard mention the common belief that casinos are more likely to be placed in high-crime areas (36), and that the number of casinos began increasing rapidly in 1991 (38). The time was toward the end of a recession, and corresponds to the 1996 Lag 5 crime estimates, which are the only basis for some of the Grinols and Mustard cost of crime estimates (41). Some states and counties may have legalized casinos in part because of economic hardships caused by the recession of 1990-91, representing factors that may be driving Grinols and Mustard's results. The importance of state self-selection is shown by Fink, Marco, and Rork (2004) in the case of lottery adoption and the lotteries' impact on state budgets. A similar consideration should have been incorporated into the Grinols and Mustard analysis.

Grinols and Mustard argue that because they include control variables in the model and find no significant differences between casino and non-casino lead period crime rates, "casinos were not more likely to be placed in areas that had systematically different crime environments than other regions" (40; also see 36). But the lead period crime rates are mostly positive (though statistically insignificant) in casino counties. Perhaps there are observed or unobserved factors that explain casino adoption. Grinols and Mustard do not account for the possibility of sample self-selection bias in their model.¹⁴

CASINO DUMMY VARIABLES

Aside from the potential self-selection problems for casino counties, the variables Grinols and Mustard use to measure casino activity have other problems. They note that the ideal measure of casino activity would be revenues or profits (29), but that such data are not available for Indian casinos.¹⁵ Grinols and Mustard instead use a dummy variable indicating the year in which a casino first opened in the county (35) and lead and lag dummies to account for the existence of casinos for various lengths of time.

The Grinols and Mustard casino dummy may show how sensitive crime rates are to the opening of a casino, but if there is a relationship between casino

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¹³ This obviously occurs only after the state has legalized casinos.

¹⁴ A standard procedure for dealing with sample self-selection bias is the Heckman (1979) two-step method. See Fink et al. (2004) for an application of this procedure to lotteries, or Walker and Jackson (2008a) for an application to an analysis of the relationships among gambling industries.

¹⁵ There are available measures of casino volume. For example, Walker and Jackson (2008a) use Indian casino square footage as a proxy for gambling volume.

gambling and crime, one would expect that relationship to be dependent on the volume or size of the casino, the number of casinos, and perhaps even on the types of games offered. But the Grinols and Mustard first-year dummy cannot pick up any such variations in the casino industry in the counties. It essentially treats all the Las Vegas mega-casinos as having the same impact on crime in the county as, say, a single small casino in a Colorado county.

Furthermore, the dummy variable technique used by Grinols and Mustard to denote casino counties will pick up *any* differences in the crime rates between casino and non-casino counties, not just those differences that are due to the presence of casinos. In general, anything that distinguishes the casino counties from national norms will be picked up by the dummy. Even the effects of the included demographic and other normalizing variables, to the extent that their impact on the crime rate differs between casino and non-casino counties, will be picked-up by the dummy. Thus, inferring that a positive and significant dummy coefficient for casino counties implies a higher crime rate in those counties *because of the presence of casinos* is conjectural.¹⁶

For example, it is possible that the crime effect found by Grinols and Mustard in casino counties is due to *tourism in general* rather than to *casino-specific tourism*.¹⁷ If a county had decided to build new attractions along an urban strip and was deciding to authorize *either* a casino or an adventure water park that would attract teens and young adults, it might be misled if it interpreted Grinols and Mustard's results as speaking of casino-specific tourism. Had they compared casino counties with similar non-casino tourism counties,¹⁸ their results would have been more likely to show any existing crime effect attributable to casino-specific tourism.

LAG 5 CRIME RATES

Grinols and Mustard's conclusion that "roughly 8% of crime in casino counties in 1996 was attributable to casinos, costing the average adult in casino

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¹⁶ This problem is related to the previous issue, self-selection bias. The Grinols and Mustard dummy variables may be indicative of those variables that would help explain the casino adoption decisions by counties.

¹⁷ Grinols and Mustard anticipate this argument and use available visitor data from Las Vegas and the three largest tourist attractions in the U.S. (Mall of America, Disney World, and Branson, MO) along with National Parks (32, 34; also see Grinols and Mustard note 13). They show that, adjusted for the numbers of tourists, the crime rate in Las Vegas is significantly higher than at the other venues. The implication is that casino tourists are more likely than other tourists to commit crimes. While this may be true, the Grinols and Mustard comparisons do not show it. First, most Las Vegas tourists are adults, while many tourists to the comparison destinations are children. Second, Mall of America and Disney World are destinations principally enclosed in an encompassing private area, quite unlike "the strip" and environs in Las Vegas. Third, National Parks are usually located far outside of urban settings. 18 Stitt, Nichols, and Giacopassi (2003) perform an analysis of casinos and crime using control communities.

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counties \$75 per year" (28; also see 41) is based on a series of questionable assumptions and interpretations, most of which have the effect of increasing the apparent casino effect on crime.

At least some of the of the Grinols and Mustard results and conclusions are 'based on only the Lag 5 casino crime rate estimates,¹⁹ a technique that calls for two objections. First, the Lag 5 crime rate estimates are the highest of any in the model (37, Table 4).²⁰ Second, the Lag 5 estimates are based on only 49 of the 178 casino counties (or about 28% of them; p. 35).²¹ The truncation raises questions about whether these early adopting casino counties with the highest estimated crime rates are representative of all casino counties. After all, the early-adopting counties represented by Lag 5 crime rates likely attracted more tourism than those counties represented in more recent lag periods, when casinos had become more widespread. This would suggest that the Lag 5 casino county crime rates are probably the most overstated of any period's, because the "undiluted" crime rate used by Grinols and Mustard excludes visitors from the population at risk.

Finally, one may question whether the Grinols and Mustard results accurately portray the marginal effect of casinos on crime. Their Lag 5 crime rates, for example, show how high the mean crime rates in casino counties (which have had casinos for 5 years) are relative to the mean crime rates of non-casino counties. But this does not take into consideration the fact that the crime rate coefficients in casino counties were often positive (albeit mostly insignificant) relative to noncasino counties prior to the introduction of casinos. As Grinols and Mustard indicate (36), there is a common belief that casinos are more likely to be placed in high-crime areas.

Rather than focusing on Lag 5 casino crime rates relative to non-casino county crime rates, one could argue that a more accurate picture of the effect of casinos on crime could be drawn from, for example, subtracting the average

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¹⁹ Grinols and Mustard use the fifth year crime rate alone in estimating the number of crimes that would be committed by problem and pathological gamblers if that was the one source of additional crime in casino counties (40-41). They also use only the fifth year period to calculate the average property loss for four of the criminal offenses they study (41). However, when calculating their "implied cost of additional crime" due to casinos (\$75 per adult in casino counties; p. 41), Grinols and Mustard are not clear about how the calculation is made. They write, "Summing the estimated number of crimes attributable to casinos for each county, taking into account how many years the casino was in operation, and dividing by the casino counties" total population measures the contribution of casinos to observed crime" (41). A reasonable reader could infer from the surrounding discussion that the authors based their results on only the Lag 5 crime rate estimates because they explicitly state that these were the crime rates used in the other calculations, described above. For such a critical issue, one would expect the authors to provide a clear, detailed explanation.

²⁰ Recall that the Lag 5 estimates correspond closely to counties that adopted casinos toward the end of a recession.

²¹ Each lag period crime coefficient is based on a partially changing sample of casino counties. For example, the Lag 4 sample includes all the Lag 5 counties plus counties that introduced casinos four years ago. Lag 3 includes the counties from Lags 4 and 5, plus counties that adopted casinos three years ago.

lead-period crime rates in casino counties—which are mostly positive—from the average lag period crime rates. This calculation takes into account crime rates both before and after casinos are introduced, and it better accounts for all casino counties. The Grinols and Mustard Lag 5 crime rates are between 1.5 and 5.5 times higher than the average change in crime rates from before to after the introduction of casinos.²² This suggests that Grinols and Mustard may be seriously overstating the true average effects of casinos on crime.

CONCLUSION

Other studies examine crime rates while accounting for visitors in particular casino markets. They find mixed results.²³ It is reasonable to believe that tourist areas might act as "hot spots" for crime, and attract criminals. Casino patrons often carry lots of cash, and many casinos serve free alcohol, so patrons may be less alert than usual. On the other hand, casinos are famous for their security measures. Stitt et al. (2003, 281) conclude that casinos built with the approval of the surrounding community probably do not act as "hot spots."

Grinols and Mustard confidently present their study as being the "most exhaustive ever undertaken" (43) and their results as being "lower bounds on the true effect [of casinos on crime]" (44). But in this comment I have identified several serious problems with their data, model, analysis, and interpretation of results. Most of the problems identified here will have the effect of overstating the estimated effect of casinos on crime.

My point is not to suggest that casinos do not cause crime. They might.²⁴ Many economists will concede that there are problems in any empirical study. However, the errors in the Grinols and Mustard study deserve attention because of the influence their study seems to be having among researchers, policymakers, the media, and voters.

APPENDIX: COMMITMENTS AND MOTIVATIONS

Gambling research is still fairly young, developing mostly since the spread of casino gambling across the U.S. in the 1990s. Casino gambling is a controversial

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²² For each type of crime I took the average lead crime rates and subtracted them from the average lag crime rates. The resulting marginal impacts of casinos on crime were, for the most part, lower than the average lag crime rates, and were much lower than the Grinols and Mustard Lag 5 crime rate estimates used in some of their cost calculations. The only exception is for murder; Grinols and Mustard found a slightly negative coefficient for murder in Lag 5. The difference in means is slightly positive.

²³ See Albanese (1985), Curran and Scarpitti (1991), Stitt et al. (2003), and Stokowski (1996).

²⁴ It would be ideal to replicate the Grinols and Mustard analysis using appropriate data and analysis. Unfortunately, the required data (county visitor count) simply do not exist. In addition, county-level crime data are potentially unreliable. Still, it would be interesting to see if the Grinols and Mustard results hold using more recent data, say through 2006.

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policy issue, and the controversy has stimulated debate, both public and academic, especially over how to identify and measure the costs and benefits. Readers may wonder what motivated the present comment on the Grinols and Mustard paper. I explain that, as well as some background on gambling research.

My own contributions to this literature and debate have dealt with empirical issues such as the state-level economic growth and tax effects of casino gambling in the U.S., as well as the relationships among gambling industries; and methodological issues surrounding social costs.²⁵ My empirical work has found short-term regional economic growth from the introduction of casino gambling, but there appears to be no longer-run economic growth effect. One of my studies currently under review indicates that casino gambling decreases tax revenues in casino states. My work on social costs has focused on methodological problems in identifying and measuring the social costs of gambling.²⁶ Overall, my research leads me to believe that there is some evidence that casinos may have a positive economic effect in the short-term, but the long-term effects are less certain. This is hardly a warm endorsement of casinos. But at the same time, I do reject the assessment that Grinols and Mustard would have us believe.

In addition to publishing in peer-reviewed journals, I have done a variety of consulting work, primarily on the social costs of gambling. This work has been aimed at identifying potential problems for researchers attempting to measure the costs and benefits of gambling, as well as the refutation of specific costbenefit analyses which appeared to me to be seriously flawed. Sponsors of my consulting work have included the casino industry (e.g., American Gaming Association, Nevada Resort Association, Casino Association of Indiana) as well as government/research organizations (Alberta Gaming Research Institute and the Canadian Centre on Substance Abuse). I assume that the industry has hired me as a consultant because my social cost methodology (welfare economics) leads to significantly lower social cost estimates than the methodologies used by other researchers, including Grinols and Mustard.²⁷

Much has been made of financial ties that researchers sometimes have to industry. For example, Grinols and Mustard have questioned the validity of casinocrime research that was conducted or funded by pro- or anti-casino groups (28). In other work, Grinols has cited a paper of mine (Walker 2003) as being an example of "shadow research," or work that is "funded in the hope or expectation that it will contradict research unfavorable to the sponsoring industry" (Grinols 2007,

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²⁵ See Walker and Jackson (1998, 2007, 2008a, 2008b), Walker and Barnett (1999), and Walker (2007a, 2007b).

²⁶ I have been critical of a variety of researchers who have attempted to measure social costs without first giving a clear explanation of what they are trying to measure. See Walker (2007a, chapters 6-8). 27 Grinols and Mustard (2001b) and Grinols (2004) provide social cost estimates based on previous research, most of which was not peer-reviewed (Grinols and Mustard 2001b, 152). Such social cost studies have been criticized as being somewhat arbitrary (National Research Council 1999, 185). For a detailed discussion, see Walker (2007a).

517).²⁸ At the same time, Grinols claims to believe that "research can be evaluated on its own merit, regardless of its sponsor. It is certainly not improper for an industry to sponsor research or for a researcher to accept industry money" (516).

In order to address any perceived conflict of interest, I should emphasize that my consulting work has always been an application of my un-funded, peerreviewed published work. Furthermore, my current comment on Grinols and Mustard's crime paper was not funded by, nor even discussed with, any industry representative or organization. My motivation for writing this comment was simply to question the Grinols and Mustard analysis and results because they were published in such a prestigious journal and have been influential, despite with what I see as flagrant errors. But even my being paid to write the comment would not, in itself, invalidate the arguments.

Every researcher has sensibilities related to the subjects he studies. To claim otherwise would be disingenuous. The Nobel laureate economist Gunnar Myrdal propounded the view that whenever personal commitments, financial, intellectual, or otherwise, might color one's formulation or analysis, science and ethics demand that such commitments be made known to readers (Myrdal 1969). I generally take a libertarian perspective on consumer issues such as gambling.²⁰ However, I try to keep these sensibilities from distorting my research, and I attempt to be as transparent as possible in explaining my methods and reasoning.

I do not believe either Grinols or Mustard does paid consulting work on gambling. However, Grinols recently co-authored an op-ed piece with the cochair of Citizens Against Casino Gambling in Erie County (Grinols and Rose 2007). In fact, he has consistently argued that the costs of casinos are greater than the benefits, at least as early as 1992, prior to there being much of any data on the effects of casinos outside of Las Vegas and Atlantic City.³⁰ And Grinols and Mustard's work is posted or cited on a variety of anti-casino activist websites. Do these things indicate that Grinols and Mustard are biased, or view casino gambling as a negative "merit good"? No more than being an industry consultant is indicative of a pro-casino bias. Regardless of how controversy, personal or religious beliefs, funding sources, and other factors may affect a researcher's work, the best way to assess a dispute among researchers is on the basis of the research itself.

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²⁸ But as Grinols and Mustard's paper demonstrates, some gambling research is flawed. I see no good reason that researchers should shy away from debating flawed research simply because there are interested parties.

²⁹ I note that Grinols and Mustard have been, respectively, President and Vice President of the Association of Christian Economists (link), so their personal views of gambling may well be different from mine. I am not suggesting, however, that these views distorted their research findings.

³⁰ An anti-gambling op-ed by Grinols was entered into the Congressional Record by Senator Simon on January 22, 1992 (p. S187). In the article, Grinols refers to gambling as a "delusion."

References

Albanese, J. 1985. The effect of casino gambling on crime. Federal Probation 48: 39-44.

Boggs, S.L. 1965. Urban crime patterns. American Sociological Review 30: 899-908.

Chesney-Lind M., and I. Lind. 1986. Visitors against victims: Crimes against tourists in Hawaii. Annals of Tourism Research 13: 167-191.

Congressional Record. 22 January 1992. Washington, D.C.

- Curran, D., and F. Scarpitti. 1991. Crime in Atlantic City: Do casinos make a difference? Deviant Behavior 12: 431-449.
- Fink S.C., A.C. Marco, and J.C. Rork. 2004. Lotto nothing? The budgetary impact of state lotteries. *Applied Economics* 36: 2357-2367.
- Flynn, S. 2007. Is Gambling Good for America? Parade Magazine. 20 May. Link.
- Fujii, E., and J. Mak. 1980. Tourism and crime: Implications for regional development policy. Regional Studies 14(1): 27-36.
- Grinols, E.L. 2004. Gambling in America: Costs and Benefits. New York, NY: Cambridge University Press.
- Grinols, E.L. 2007. Social and economic impacts of gambling. In Research and Measurement Issues in Gambling Studies, ed. G. Smith, D. Hodgins, and R. Williams, 515-539. Boston, MA: Academic Press.
- Grinols E.L., and D.B. Mustard. 2001a. Measuring industry externalities: The curious case of casinos and crime. Paper posted on the website of the National Coalition Against Legalized Gambling. Link.
- Grinols, E.L., and D.B. Mustard. 2001b. Business profitability versus social profitability: Evaluating industries with externalities, the case of casinos. *Managerial and Decision Economics* 22: 143-162.
- Grinols, E.L., and D.B. Mustard. 2006. Casinos, crime, and community costs. The Review of Economics and Statistics 88(1): 28-45.
- Grinols, E.L., and J.S. Rose. 2007. Another voice: Laudatory report misstates conclusions on gambling. *Buffalo News*. 13 March.
- Harper, D.W. 2001. Comparing tourists crime victimization. Annals of Tourism Research 28(4): 1053-1056.
- Heckman, J.J. 1979. Sample selection bias as a specification error. *Econometrica* 47(1): 364-369.
- Lott, J.R., and J. Whitley. 2003. Measurement error in county-level UCR data. Journal of Quantitative Criminology 19(2): 185-198.

Maltz, M.D. 1999. Bridging gaps in police crime data. Bureau of Justice Statistics. Link.

Maltz, M.D., and J. Targonski. 2002. A note on the use of county-level UCR data.

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Journal of Quantitative Criminology 18(3): 297-318.

- Maltz, M.D., and J. Targonski. 2003. Measurement and other errors in county-level UCR data: A reply to Lott and Whitley. *Journal of Quantitative Criminology* 19(2): 199-206.
- Miller, W.J., and M.D. Schwartz. 1998. Casino gambling and street crime. Annals of the American Academy of Political & Social Science 556: 124-137.
- Morin, R. 2006. Casinos and crime: The luck runs out. Washington Post. 11 May.
- Morse, E.A., and E.P. Goss. 2007. Governing Fortune: Casino Gambling in America. Ann Arbor: University of Michigan Press.

Myrdal, G. 1969. Objectivity in Social Research. New York: Pantheon Books.

- National Research Council. 1999. Pathological Gambling: A Critical Review. Washington, DC: National Academy Press.
- Nettler, G. 1984. Explaining Crime. 3rd ed. New York: McGraw-Hill.
- Policy Analytics. 2006. A benefit-cost analysis of Indiana's riverboat casinos for FY 2005: A report to the Indiana Legislative Council and the Indiana Gaming Commission. 17 January. Link.
- Stitt B.G., M. Nichols, and D. Giacopassi. 2003. Does the presence of casinos increase crime? An examination of casino and control communities. *Crime & Delinquency* 49(2): 253-284.
- Stokowski, P. 1996. Crime patterns and gaming development in rural Colorado. Journal of Travel Research 34: 63-69.
- Uniform Crime Reports. 1994. Codebook for UCR 1994 (ICPSR 6669). University of Michigan, Inter-University Consortium for Political and Social Research. Link.
- Vitagliano, E. 2006. Casinos and crime: A sour bet. American Family Association Journal (August). Link.
- Walker, D.M. 2003. Review of Schwer, Thompson, and Nakamuro, "Beyond the limits of recreation: Social costs of gambling in Las Vegas." Paper prepared for the Nevada Resort Association.
- Walker, D.M. 2007a. The Economics of Casino Gambling. New York, NY: Springer.
- Walker, D.M. 2007b. Problems with quantifying the social costs and benefits of gambling. American Journal of Economics and Sociology 66(3): 609-645.
- Walker, D.M., and A.H. Barnett. 1999. The social costs of gambling: An economic perspective. Journal of Gambling Studies 15(3): 181-212.
- Walker, D.M., and J.D. Jackson. 1998. New goods and economic growth: Evidence from legalized gambling. *Review of Regional Studies* 28(2): 47-69.
- Walker, D.M., and J.D. Jackson. 2007. Do casinos cause economic growth? American Journal of Economics and Sociology 66(3): 593-607.

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- Walker, D.M., and J.D. Jackson. 2008a. Do U.S. gambling industries cannibalize each other? *Public Finance Review* 36 (forthcoming).
- Walker, D.M, and J.D. Jackson. 2008b. Katrina and the Gulf States Casino Industry. Journal of Business Valuation and Economic Loss Analysis (forthcoming).

Whitehouse, M. 2007. Bad Odds. Wall Street Journal. 11 June.

Yarbrough, B. 2006. Casinos increase crime. Hesperia Star. 6 June. Link.

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