Online Appendix
Does Movie Violence Increase Violent Crime?

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1 Online Appendix

In this Online Appendix we report additional results relating to the Empirical Results and Interpretation and Additional Evidence sections of our paper. We also summarize in more detail the experimental laboratory evidence on the effect of movie violence on aggression.

Alternative Instruments, Specifications, and Samples (Online Appendix Table 1). In Online Appendix Table 1, we first document the robustness of our findings to the use of a different instrument. The benchmark instruments form a predictor of the audience in week $w(t)$ using the information on the audience in week $w(t)+1$ and allowing for different weekly decay rates for different types of movies (see Appendix B). A coarser, but simpler approach is to use as instruments the audience in week $w(t)+1$ of all movies in a category (strongly, mildly, and non-violent). The results (column 2) are very similar to the results with the benchmark instrument (reproduced in column 1), though the standard errors are 10 to 20 percent higher, reflecting some loss in precision due to the neglect of movie-type specific decay rates.

To clarify the identifying variation behind the benchmark results, we use the standard instrument, but include the audience only for movies in their first week of release (column 3). We get similar point estimates (somewhat lower in the night hours) and comparable standard errors, indicating that new releases contribute substantially to identification.

We next explore the role of the controls. One may worry the model is over-specified by the inclusion of 365 indicators for each day-of-year. In column 4, we replace these controls with indicators for the 52 weeks of the year, leaving all other controls in place. The results are similar, indicating that the benchmark model does not appear to be over-specified.

Next, we consider alternative dependent variables and present the results separately for the three components of the violent crime definition: aggravated assaults (column 5), simple assaults (column 6), and intimidation (column 7). The results are less precisely estimated

(especially for aggravated assault and intimidation), but the general pattern is similar.

Finally, in column 8 we present the results for the subsample of agencies that consistently report crime data throughout the entire time period. The results are similar though more noisily estimated, since the number of reporting agencies is smaller.

Individual Movie Violence Level (Online Appendix Figure 1). We also present more disaggregated evidence on the effect of movies using different violence categories. We estimate the regression

$$\ln V_t = \sum_{k=0}^{10} \beta^k A_t^k + \Gamma X_t + \varepsilon_t,$$

using the same sample, control variables, and IV approach as in the benchmark specification. That is, we estimate separately the effect on assaults of exposure to movies of violence level k, with $k = 0, 1, ..., 10$. In Online Appendix Figure 1, we plot the coefficients β^k for evening assaults and for nighttime assaults. Over the evening hours (6PM-12AM), the decrease in assaults is fairly monotonic in the violence level of the movie. The impact of movie exposure on violent crime is close to zero for non-violent movies, becomes more negative for more violent movies, and peaks at movie violence 9. Over the night hours (12AM-6AM), the effect of exposure to movie violence becomes more negative with violence until violence level 5, and then remains about flat. In both time periods, no single violence group appears to be driving the results.

One-Hour Time Blocks (Online Appendix Figure 2). To provide additional evidence on the timing of the effect of violent movies, we re-run the main specification separately by one-hour time blocks (Online Appendix Figure 2). The time recorded in NIBRS is supposed to indicate the time of the assault, but it might also reflect the time of the police report. As such, the crime is likely to have occurred in the indicated time block or in the previous one-hour block. We plot the coefficients for strongly violent, mildly violent, and non-violent movies. The size of the points is inversely proportional to the estimated variance of the coefficient estimates. The horizontal lines within each 6-hour time block are the weighted average of the estimated coefficients within a violence category, where the weights are the inverse of the estimated variances.

In the morning hours (6AM-12PM), we find some negative impact of exposure to violent movies, especially for the early hours, though the estimates are noisy due to the small number of crimes in the morning. This negative impact likely reflects a carry-over from exposure in the previous night. In the afternoon hours (12PM-6PM) we find no impact on assaults. In the evening hours (6PM-12AM), the impact of movie exposure is negative from 7PM on, and more so for violent movies. The timing of these effects lines up with the timing of movie attendance. In the nighttime hours (12AM-6AM), we find even stronger negative impacts, especially for the hours of 4AM and 5AM; however, these coefficients are very imprecisely estimated.

Alternative Movie Violence Measure (Online Appendix Table 2). We next cross-validate our results using an alternative measure of movie violence. In addition to rating movies ("R", "PG", etc.), the *MPAA* summarizes in one sentence the reason for the rating, including the violence of the movie. We characterize as mildly violent movies those for which the *MPAA* rating contains the word "Violence" or "Violent", with two exceptions. If the reference to violence is qualified by "Brief", "Mild", or "Some", we classify the movie as non-violent. If the word violence is qualified as either "Bloody", "Brutal", "Disturbing", "Graphic", "Grisly", "Gruesome", or "Strong", we classify the movie as strongly violent. We then construct a daily measure of mild and strong movie violence along similar lines to the procedure used for the benchmark measures.[1] The *MPAA*-based mild violence measure averages 2.19 million in audience, compared to 2.43 million for the *kids-in-mind*-based mild violence measure (Table 1 in the text), with a correlation of 0.68 between the two measures. The *MPAA*-based measure of strong violence is more restrictive than the *kids-in-mind*-based measure, averaging an audience of 0.48 million, compared to 0.87 million. The correlation between these two measures is 0.66.[2] The correlation is also apparent in Appendix Table 1, which lists the *MPAA* violence rating for blockbuster movies.

In columns 1-2 of Online Appendix Table 2 we replicate the regressions of Table 5 using the *MPAA*-based measure of movie violence, and find similar results. In both the evening (6PM-12PM) and in the night (12AM-6AM), exposure to movie violence lowers the incidence of violent crime, with similar magnitudes. When we include both measures of violence (columns 3-4), however, we find that the effects on assaults load almost exclusively on the *kids-in-mind* measures. Overall, while the *MPAA* measure of movie violence produces comparable results to the *kids-in-mind* measure, the latter measure appears to be more accurate. This is not surprising given that the *kids-in-mind* raters refine the *MPAA* rating into a 0-10 scale.

In column 5 we document the selection of young people into movies with varying *MPAA* ratings of violence using the *CEX* diaries. Young respondents are somewhat more likely to sort into mildly violent movies, and much more likely to sort into strongly violent movies—a sorting pattern consistent with the negative impact of violent movies on crime (columns 1 and 2). When we include in the sorting specification both the *MPAA* and the *kids-in-mind* measures of violence (column 6), the *kids-in-mind* violence variables are strongly predictive of attendance by young households, while the *MPAA* measures are not any more (if anything predicting sorting the other way). These patterns are strikingly in line with the finding that, when we include both sets of movie violence measures, only exposure to the *kids-in-mind* measures lowers the incidence of violence (columns 3 and 4).

[1] In the first weeks of 1995, the *MPAA* rating is missing for a number of movies; we set the *MPAA* violence measure missing for the 10 weeks in which the rating is available for less than 70 percent of the movie audience.

[2] These are the correlations of the residuals from OLS regressions on the standard set of control variables appearing in column (6) of Table 2, excluding the movie violence measures.

The results for the *MPAA* violence measure and for the *IMDB* measures reported in the text underscore the importance of selection. Exposure to movies that attract more violent groups (along observable lines) is associated with lower rates of violent crime.

Sobriety (Online Appendix Table 3). In the paper we provided evidence on the role of a reduction in alcohol consumption as a function of movie attendance. In Online Appendix Table 3 we report additional evidence on the role of sobriety.

We examine whether the displacement of violent crimes is larger for assaults in bars and night clubs, where consumption of alcohol is very likely (Columns 1 and 2). We find large displacement in the night hours, although these estimates are imprecise given the relative rarity of these assaults. Additionally, in column 3 we estimate the impact of violent movies on arrests for drunkenness (i.e., arrests for drunk and disorderly conduct or intoxication). We find a large negative, and marginally significant, effect for strongly violent movies, but no effect for mild and non-violent movies. Although not shown, we find no effect for driving under the influence arrests. We also note the arrest data does not contain information on time of day, and hence does not allowed for as precise a test.

Types of Crimes (Online Appendix Table 4) To further evaluate the channels of the substitution effect, we estimate the impact for different types of crimes in Online Appendix Table 4. We find a larger impact for assaults with no injury than for assaults with injury (columns 1 and 2), although the pattern of the results is similar for this latter group. We find qualitatively similar results to the benchmark results for assaults occurring at home and away from home (columns 3 and 4) and for crimes involving a weapon (column 5). We find larger effects for assaults against a known person, as opposed to against a stranger (columns 6 and 7). We find small negative but statistically insignificant effects for property crimes (burglary, theft, motor vehicle theft, and vandalism—column 8).

Demographic Decomposition (Online Appendix Table 5). In Online Appendix Table 5 we present estimates by gender and age of the offender. The impact of exposure to violent movies is larger (i.e., more negative) for male offenders than for female offenders, especially in the night hours when the difference is very large (Panel A). Since male offenders also commit a higher share of the assaults at night than in the evening hours (Table 1), this contributes to explaining the larger impact of exposure to violent movies at night compared to the impact in the evening hours. When we separate the offenders by age group, we find a relatively monotonic decrease of the effect sizes by age, with the exception of the 45-54 age group (Panel B). This compositional pattern also contributes to explaining the findings, since the younger age group also contributes disproportionately to assaults (Table 1 in the paper).

Psychology Evidence Summary (Online Appendix Table 6). Online Appendix Table 6 summarizes the results of representative experiments. The first experiments (Lovaas, 1961; Bandura, Ross, and Ross, 1963), dating to the 1960s, were run mostly on small samples of children, while the more recent studies (Bushman, 1995; Josephson, 1997) are run with

larger samples and on more varied populations. The treatment usually consists of exposure to a 5 to 15 minute video of violent scenes from a violent movie. The control group usually watches a video of comparable length with non-violent scenes. The measures of violence vary from aggressive play with dolls for the children (Lovaas, 1961; Bandura, Ross, and Ross, 1963) to the imposition of electric shocks or noxious noises on other subjects (Geen and O'Neill, 1969; Bushman, 1995), and to aggressive play during a hockey game (Josephson, 1987). In all cases except for Leyens (1975), the violence proxies are measured within an hour of the treatment. The effect of the exposure to movie violence is large. In four out of first five experiments of Online Appendix Table 6, exposure to the violent movie doubles the incidence of violence. This summary masks some heterogeneity. In the Geen and O'Neal (1969) study, for example, the effect of the violent movie is significant only for the group that was exposed to a frustration manipulation (2 minutes of loud white noise). (In fact, most of the experiments embed a frustration manipulation.)

Leyens et al. (1975) stands out because it studies aggression and violence in a more realistic context. Young people in a juvenile detention facility in Belgium are exposed to 5 consecutive days of commercial violent movies (the treatment) or commercial non-violent movies (the control). Therefore, unlike in the other experiments, subjects are exposed to full-length movies. The violence measure is a record of the percent of subjects that engage in acts of physical aggression in a monitoring period. Interestingly, exposure to violent movies significantly increases aggression in the evening, right after the movies are shown, but not at noon, after a night's sleep. The effects of media violence, though large, appear to be short-lived.

A second set of evidence in Psychology comes from cross-sectional or longitudinal surveys. In these studies, self-reported measures of media exposure are correlated with measures of aggressiveness and violence. Johnson et al. (2002), for example, finds that the share of people committing assaults that can cause injury at age 16-22 is four times larger for people that (at age 14) watched at least 3 hours of television a day, as opposed to less than an hour. These studies, which generally imply very large effects of the media, are plagued by problems of endogeneity and reverse causation.

References

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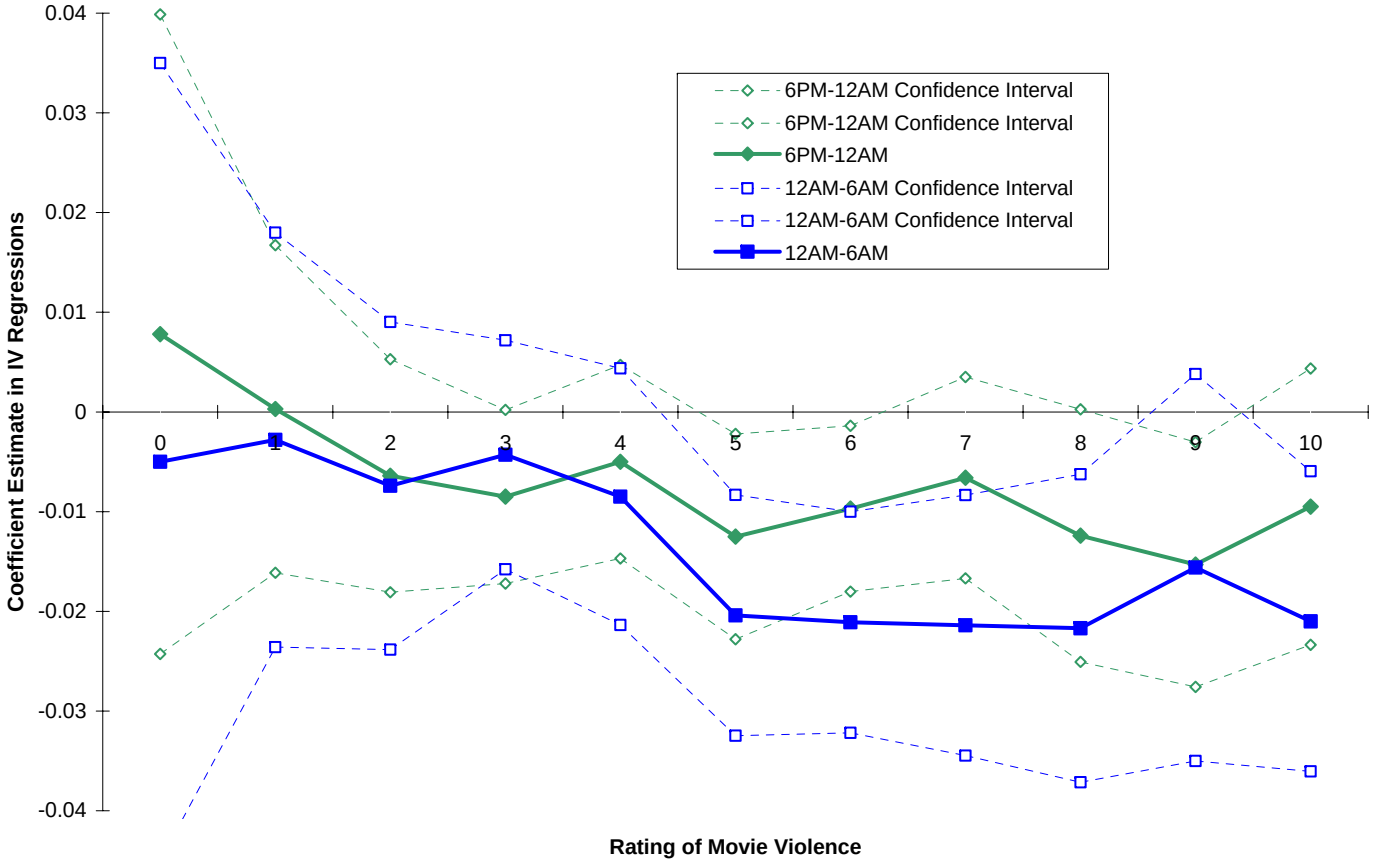
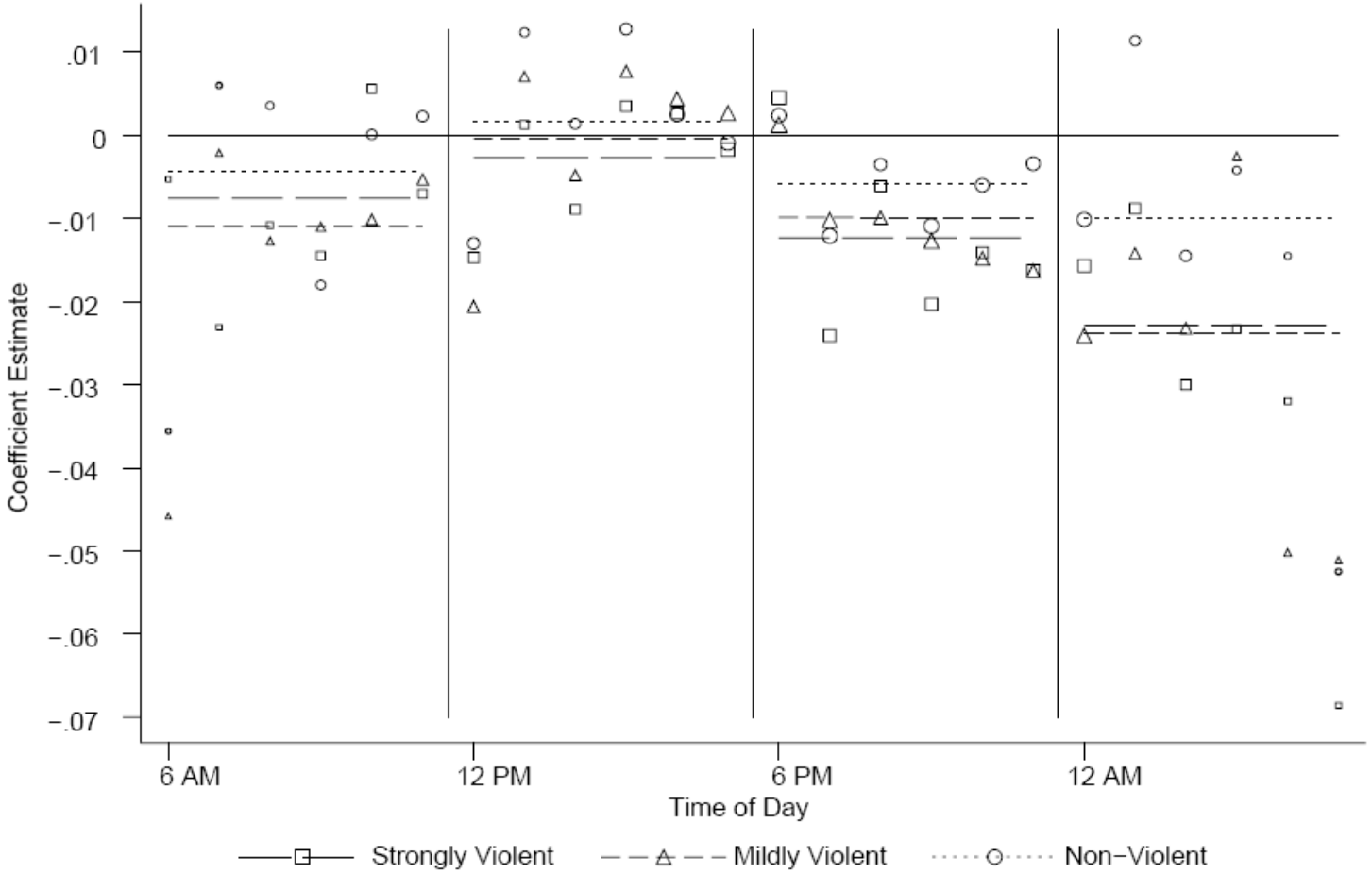
Online Appendix Figure 1. Effect on Assaults by 0-10 Movie Violence



Notes: Empirical estimates of the effect of exposure to movies of violence v=0,…,10 on assaults. Online Figure 1 plots the coefficients and 95% confidence intervals from IV regression of log (assaults) on 11 variables for the daily audience for movies rated with violence level *v=0,1,…,10*. Separate regressions are run for assaults in the 6PM-12AM and 12AM-6AM time periods. The coefficients can be interpreted as the percent change in assaults for an increase of one million in the audience for movies of violence *v*.

Online Appendix Figure 2. Effect of Movie Violence by One-Hour Time Blocks



Notes: Plot of coefficients from 24 separate IV regressions of log(assaults) on the audience size of strongly, mildly, and non-violent movies using the baseline specification. The size of each point is inversely proportional to the estimated variance of the coefficient estimate. The horizontal lines within each 6-hour time block are the weighted average of the estimated coefficients within a violence category, where the weights are the inverse of the estimated variances. The violence rating of movies is from *kids-in-mind.com*. The audience data is obtained from box office sales (from *the-numbers.com*) deflated by the average price of a ticket.

Online Appendix Table 1. Additional Robustness Checks

Specification:	**Instrumental Variables Regressions**							
Dep. Var.:	**Log (Number of Violent Crimes in Day t in Time Window)**							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Effects in Morning and Afternoon (6AM-6PM)								
Audience Of Strongly Violent Movies	-0.0037	-0.003	-0.0048	-0.0044	-0.012	-0.001	-0.0049	-0.0017
(in millions of people in day t)	(0.0046)	(0.0048)	(0.0043)	(0.0043)	(0.0093)	(0.0054)	(0.0087)	(0.0059)
Audience Of Mildly Violent Movies	-0.003	-0.0022	-0.003	-0.0063	-0.0057	-0.0003	-0.0106	-0.003
(in millions of people in day t)	(0.0041)	(0.0043)	(0.0030)	(0.0037)*	(0.0081)	(0.0051)	(0.0073)	(0.0055)
Audience Of Non-Violent Movies	0.0003	-0.0004	0.0008	-0.0029	-0.0053	0.0044	-0.0079	0.0041
(in millions of people in day t)	(0.0041)	(0.0044)	(0.0036)	(0.0037)	(0.0089)	(0.0050)	(0.0077)	(0.0052)
Panel B. Effects in The Evening (6PM-12AM)								
Audience Of Strongly Violent Movies	-0.013	-0.0131	-0.0141	-0.0115	-0.008	-0.0151	-0.0083	-0.0093
(in millions of people in day t)	(0.0049)***	(0.0054)**	(0.0050)***	(0.0046)**	(0.0090)	(0.0053)***	(0.0100)	(0.0056)*
Audience Of Mildly Violent Movies	-0.0109	-0.009	-0.0074	-0.0121	-0.0053	-0.0143	0.0037	-0.0109
(in millions of people in day t)	(0.0040)***	(0.0047)*	(0.0035)**	(0.0037)***	(0.0077)	(0.0045)***	(0.0091)	(0.0049)**
Audience Of Non-Violent Movies	-0.0063	-0.0049	-0.0041	-0.0076	-0.0001	-0.0081	-0.0031	-0.0077
(in millions of people in day t)	(0.0043)	(0.0050)	(0.0036)	(0.0039)**	(0.0081)	(0.0048)*	(0.0090)	(0.0052)
Panel C. Effects in The Night (12AM-6AM)								
Audience Of Strongly Violent Movies	-0.0192	-0.0239	-0.0124	-0.0155	-0.0229	-0.0136	-0.0448	-0.0168
(in millions of people in day t)	(0.0060)***	(0.0066)***	(0.0064)*	(0.0055)***	(0.0102)**	(0.0071)*	(0.0143)***	(0.0079)**
Audience Of Mildly Violent Movies	-0.0205	-0.0207	-0.0123	-0.0167	-0.0212	-0.017	-0.0322	-0.0254
(in millions of people in day t)	(0.0052)***	(0.0060)***	(0.0043)***	(0.0046)***	(0.0094)**	(0.0060)***	(0.0122)***	(0.0064)***
Audience Of Non-Violent Movies	-0.006	-0.0076	-0.0039	-0.0047	-0.0079	-0.0021	-0.0211	-0.0092
(in millions of people in day t)	(0.0054)	(0.0067)	(0.0050)	(0.0049)	(0.0096)	(0.0063)	(0.0134)	(0.0071)
Robustness Specification	Benchmark IV Specification	IV: Instrument Next Week's Audience	Benchmark + Revenue From First Week of Release Only	Benchmark + Control For Week-Of-Year (No Day-Of-Year)	Benchmark + Dep. Variable is All Aggravated Assaults	Benchmark + Dep. Variable is All Simple Assaults	Benchmark + Dep. Variable is All Intimidation	Benchmark + Constant Sample of Agencies
Control Variables:								
Full Set of Controls	X	X	X		X	X	X	X
Audience Instrumented With Predicted Audience Using Following Week's	X		X	X	X	X	X	X
N	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563

Notes: This Table presents a series of robustness checks to the results in Table 3, reproduced in Column 1. Column 2 reports the estimates using, as an instrument for audience in week w(t), the weekend audience in week w(t)+1 for the same movies. Column 3 uses only the audience from movies in the first week of release. Column 4 does not use the 365 day-of-year indicators and uses instead 52 week-of-year indicators. Columns 5-7 shows the results separately for the three types of violent crimes that constitute the benchmark measure. Column 8 uses only the agencies that are reporting crime data throughout the sample. See also notes to Table 2. The number of observations in Panel C is one fewer than in Panels A and B because we are missing the assault data for January 1, 2006 for the hours between 12AM and 6AM.

* significant at 10%; ** significant at 5%; *** significant at 1%

Online Appendix Table 2. Alternative MPAA-Based Measure of Movie Violence

Specification:	Instrumental Variable Regressions				OLS Reg. (CEX Data)	
Dep. Var.:	Log (Number of Assaults in Day t in Time Window)				Share 18-29 Year Old at Movie Theater	
	(1)	(2)	(3)	(4)	(5)	(6)
Audience Of Strongly Violent Movies - MPAA Meas.	-0.0139	-0.0252	0.0005	-0.0091	3.5074	-0.6748
(millions of people in day t) (shares for Col. (5)-(6))	(0.0063)**	(0.0068)***	(0.0064)	(0.0084)	(1.0986)***	(0.9869)
Audience Of Mildly Violent Movies - MPAA Meas.	-0.0109	-0.0187	-0.0003	-0.0026	1.3357	-0.2593
(millions of people in day t) (shares for Col. (5)-(6))	(0.0039)***	(0.0050)***	(0.0027)	(0.0037)	(0.4308)***	(0.4235)
Audience Of Non-Violent Movies - MPAA Meas.	-0.008	-0.0104			1.1594	
(millions of people in day t) (shares for Col. (5)-(6))	(0.0042)*	(0.0053)*			(0.4544)**	
Audience Of Strongly Violent Movies - Stand. Meas.			-0.0138	-0.0149		2.5821
(millions of people in day t) (shares for Col. (5)-(6))			(0.0058)**	(0.0078)*		(0.8728)***
Audience Of Mildly Violent Movies - Stand. Meas.			-0.0109	-0.0187		1.6948
(millions of people in day t) (shares for Col. (5)-(6))			(0.0046)**	(0.0061)***		(0.5604)***
Theater Audience Of Non-Violent Movies - Stand. Meas.			-0.0062	-0.0067		1.1249
(millions of people in day t) (shares for Col. (5)-(6))			(0.0044)	(0.0055)		(0.4809)**
Time of Day	6PM-12AM	12AM-6AM next day	6PM-12AM	12AM-6AM next day	All day	All day
Control Variables:						
Full Set of Controls	X	X	X	X	X	X
Audience Instrumented With Predicted Audience Using Next Week's Audience	X	X	X	X		
N	N = 1539	N = 1538	N = 1539	N = 1538	N = 1534	N = 1534

Notes: The MPAA ratings are obtained using the one-line MPAA summary of the movie . We characterize as mildly violent movies those for which the MPAA rating contains the word "Violence" or "Violent", with two exceptions: (i) If the reference is qualified by "Brief", "Mild", or "Some", we classify the movie as non-violent; (ii) If the word violence is qualified by either "Bloody", "Brutal", "Disturbing", "Graphic", "Grisly", "Gruesome", or "Strong", we classify the movie as strongly violent. The standard ratings of violent movies are from www.kids-in-mind.com. In Columns 5-6 the dependent variable is the share of households with head aged 18-29 in the diary CEX sample that reported spending on atteding a movie at the movie theater on day t. Attendance by young males is a proxy for attendance by violent sub-groups of the population. See also Tables 2 and 7.

* significant at 10%; ** significant at 5%; *** significant at 1%

Online Appendix Table 3. Sobriety: Further Tests

Specification:	**Instrumental Variable Regressions**		
Dep. Var.:	**Log (Number of Assaults of a Type in Day t in Time Window)**		**Log (Arrests for Drunkenness in Day t)**
	(1)	(2)	(3)
Audience Of Strongly Violent Movies (millions of people in day t)	-0.0157 (0.0320)	-0.0471 (0.0275)*	-0.0178 (0.0096)*
Audience Of Mildly Violent Movies (millions of people in day t)	-0.0042 (0.0292)	-0.0313 (0.0252)	-0.0029 (0.0092)
Audience Of Non-Violent Movies (millions of people in day t)	0.0077 (0.0297)	-0.0229 (0.0250)	-0.002 (0.0092)
Type of Crime	Assaults At A Bar Involving Alc. or Drugs		Arrests for Drunkenness
Time of Day	6PM-12AM	12AM-6AM next day	All day
Control Variables:			
Full Set of Controls	X	X	X
Audience Instrumented With Predicted Audience Using Next	X	X	X
N	N = 1563	N = 1560	N = 1563

Notes: The specifications in are IV regressions for specific types of assaults using NIBRS data in columns 1-2. The arrest data in column 3 is not available by time of day, and also comes from NIBRS. See also notes to Table 2.

* significant at 10%; ** significant at 5%; *** significant at 1%

Online Appendix Table 4. Effect of Movie Violence on Different Types of Crimes

Specification:	**Instrumental Variables Regressions**							
Dep. Var.:	**Log (Number of Crimes in Day t in Time Window)**							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Effects in Morning and Afternoon (6AM-6PM)								
Audience Of Strongly Violent Movies	-0.0037	-0.0004	-0.0058	-0.0007	-0.01	0.0001	0.0052	-0.004
(in millions of people in day t)	(0.0065)	(0.0060)	(0.0052)	(0.0080)	(0.0097)	(0.0076)	(0.0133)	(0.0028)
Audience Of Mildly Violent Movies	-0.0031	0.0001	-0.0055	-0.0012	-0.0082	0.0018	-0.0016	-0.0031
(in millions of people in day t)	(0.0060)	(0.0054)	(0.0045)	(0.0073)	(0.0085)	(0.0075)	(0.0125)	(0.0026)
Audience Of Non-Violent Movies	0.0031	0.002	-0.0037	0.0029	-0.0068	0.003	-0.0086	-0.0036
(in millions of people in day t)	(0.0061)	(0.0053)	(0.0046)	(0.0076)	(0.0089)	(0.0079)	(0.0120)	(0.0027)
Panel B. Effects in The Evening (6PM-12AM)								
Audience Of Strongly Violent Movies	-0.0195	-0.0105	-0.0125	-0.0104	-0.0214	-0.0153	-0.0228	-0.0031
(in millions of people in day t)	(0.0069)***	(0.0059)*	(0.0053)**	(0.0074)	(0.0095)**	(0.0074)**	(0.0129)*	(0.0038)
Audience Of Mildly Violent Movies	-0.0175	-0.009	-0.0084	-0.0132	-0.0164	-0.0133	-0.0099	-0.002
(in millions of people in day t)	(0.0058)***	(0.0056)	(0.0045)*	(0.0065)**	(0.0083)**	(0.0059)**	(0.0116)	(0.0033)
Audience Of Non-Violent Movies	-0.0114	-0.0029	-0.0055	-0.0046	-0.012	-0.0069	-0.0011	-0.0038
(in millions of people in day t)	(0.0060)*	(0.0057)	(0.0047)	(0.0066)	(0.0091)	(0.0062)	(0.0105)	(0.0035)
Panel C. Effects in The Night (12AM-6AM)								
Audience Of Strongly Violent Movies	-0.0223	-0.0145	-0.0186	-0.0184	-0.0107	-0.0339	-0.0117	-0.0086
(in millions of people in day t)	(0.0088)**	(0.0072)**	(0.0068)***	(0.0085)**	(0.0112)	(0.0106)***	(0.0142)	(0.0062)
Audience Of Mildly Violent Movies	-0.0223	-0.0165	-0.0213	-0.0189	-0.0148	-0.0372	-0.0112	-0.005
(in millions of people in day t)	(0.0076)***	(0.0062)***	(0.0060)***	(0.0074)**	(0.0094)	(0.0100)***	(0.0132)	(0.0043)
Audience Of Non-Violent Movies	-0.0087	-0.0007	-0.006	-0.0055	0.0012	-0.0149	0.0087	-0.0053
(in millions of people in day t)	(0.0082)	(0.0065)	(0.0062)	(0.0077)	(0.0100)	(0.0109)	(0.0128)	(0.0046)
Robustness Specification	Benchmark + Dep. Variable is Assaults with No Injury	Benchmark + Dep. Variable is Assaults with Injury	Benchmark + Dep. Variable is Assaults At Home	Benchmark + Dep. Variable is Assaults Away From Home	Benchmark + Dep. Variable is Crimes Involving Weapon	Benchmark + Dep. Variable is Assaults Of Known Person	Benchmark + Dep. Variable is Assaults Of Stranger	Benchmark + Dep. Variable is Property Crimes
Control Variables:								
Full Set of Controls	X	X	X	X	X	X	X	X
Audience Instrumented With Predicted Audience Using Following Week's	X	X	X	X	X	X	X	X
N	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563	N = 1563

Notes: This Table presents a series of robustness checks to the results in Table 3 for different types of crimes. In columns 1 and 2 we separate the assaults into assaults with and without injury. In columns 3 and 4 we separate assaults committed at home and assaults committed away from home. In column 5 we report the impact on crimes involving the use fo a weapon. In columns 6 and 7 we separate the assaults into assault of known person and assaults of a stranger. In column 8, we define property crimes as the sum of burglary, theft, motor vehicle theft, and vandalism. See also notes to Table 2. The number of observations in Panel C is one fewer than i Panels A and B because we are missing the assault data for January 1, 2006 for the hours between 12AM and 6AM.

* significant at 10%; ** significant at 5%; *** significant at 1%

Online Appendix Table 5. Demographic Decomposition Of The Effect of Movie Violence

Specification:	**Instrumental Variable Regressions**							
Dep. Var.:	**Log (Number of Assaults in Day t in Time Window)**							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A. Effects by Gender of Offender								
Audience Of Strongly Violent Movies (in millions of people in day t)	-0.0153 (0.0074)**	-0.0339 (0.0106)***	-0.0165 (0.0085)*	-0.0142 (0.0103)				
Audience Of Mildly Violent Movies (in millions of people in day t)	-0.0133 (0.0059)**	-0.0372 (0.0100)***	-0.0086 (0.0070)	-0.0193 (0.0089)**				
Audience Of Non-Violent Movies (in millions of people in day t)	-0.0069 (0.0062)	-0.0149 (0.0109)	-0.0063 (0.0073)	-0.0046 (0.0094)				
Gender of Offender	Male	Male	Female	Female				
N	N = 1563	N = 1562	N = 1563	N = 1562				
Panel B. Effects by Age of Offender								
Audience Of Strongly Violent Movies (in millions of people in day t)	-0.017 (0.0069)**	-0.0204 (0.0077)***	-0.0067 (0.0065)	-0.0163 (0.0090)*	-0.0211 (0.0106)**	-0.0588 (0.0179)***	-0.0026 (0.0206)	-0.0077 (0.0267)
Audience Of Mildly Violent Movies (in millions of people in day t)	-0.0123 (0.0058)**	-0.0207 (0.0070)***	-0.0032 (0.0057)	-0.0165 (0.0071)**	-0.0115 (0.0096)	-0.0416 (0.0189)**	-0.0182 (0.0186)	-0.0086 (0.0260)
Audience Of Non-Violent Movies (in millions of people in day t)	-0.0057 (0.0061)	-0.0092 (0.0076)	-0.0022 (0.0058)	-0.0029 (0.0073)	-0.0122 (0.0102)	-0.0220 (0.0181)	-0.0142 (0.0170)	-0.0269 (0.0254)
Age Group of Offender	18-29	18-29	30-44	30-44	45-54	45-54	55+	55+
Time of Day	6PM-12AM	12AM-6AM next day	6PM-12AM	12AM-6AM next day	6PM-12AM	12AM-6AM next day	6PM-12AM	12AM-6AM next day
Control Variables:								
Full Set of Controls	X	X	X	X	X	X	X	X
Predicted Audience Using Next Week's Audience	X	X	X	X	X	X	X	X
N	N = 1563	N = 1562	N = 1563	N = 1562	N = 1563	N = 1546	N = 1546	N = 1434

Notes: See notes to Table 2. The specifications are separate IV regressions each of the specified age and gender groups.

* significant at 10%; ** significant at 5%; *** significant at 1%

Online Appendix Table 6. Examples of Studies of Media Effects on Violence in Psychology

Paper	Exposure to violence (Type of movie)	Control Group	Subjects	Location	Sample Size	Measure of Violence *t*	Treatment Group t_T	Control Group t_C
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Laboratory Experiments								
Lovaas (1961)	5-min. Extract from "Rassling Match" -- cartoon violence	5-min. Non-Violent Clip from "Bear Facts"	Children of Nursery School	Playroom	10 + 10	Time Spent Playing with Aggressive Doll (hits other doll)	98.2	58.6
Bandura, Ross, and Ross (1963)	10-min. Scenes of Aggression of Doll	No Movie	Children of Nursery School	Playroom	24 + 24	Aggression toward Doll	91.5	54.3
Geen and O'Neal (1969)	7-min. Prizefight Scene from "Champion" + 2 min. White Noise	7-min. Scenes on Non-violent Sport + 2 min. White Noise	College Students	Laboratory	12 + 12	Intensity Electric Shock Inflicted on Other Subject	22.2	10.3
	7-min. Prizefight Scene from "Champion"	7-min. Scenes on Non-violent Sport					12.7	14.7
Bushman (1995)	15-min. Violent Scenes from "Karate Kid III"	15-min. non-violent scenes from "Gorillas in The Mist"	College Students	Laboratory	738	Level of Noise Inflicted On Other Subject For Slow Answer	4.6	3.9
Josephson (1987)	14-min. Scenes of Killing of Police Officer and SWAT team in Action	14-min. Scenes of Motorcross Bike-Racing Team	Grades 2-3, Boys	School	396	Aggression in 9 Min. of Floor Hockey Game	6.6	3.6
Leyens et al. (1975)	Showing of 5 Violent Movies On 5 Consecutive Days	Showing of 5 Non-Violent Movies On 5 Consecutive Days	Juveniles in Belgium	Detention Facility	85	% Committing Phys. Aggression In Evening After Movie	4.0%	.2%
						% Committing Phys. Aggression At Noon Day After Movie	2.1%	1.5%
Surveys								
Johnson et al. (2002)	High (Self-reported) Television Viewing at Age 14 (>=3 hrs./day)	Low (Self-reported) Television Viewing at Age 14 (<1 hrs./day)	Random Sample	NY State	707	% Committing Assaults Causing Injury, at Age 16-22	25.3%	5.7%

Notes: Calculations of effects on violence are by the authors based on data from the papers cited. Columns (7) and (8) report the level of violence in the Treatment and Control group. The difference is always significant at the 5% level, except for the second comparison in the Geen and O"Neal (1969) paper and the second comparison in Leyens et al. (1975).