

Distorted importance: Dramatic events and policy agendas

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ABSTRACT

The policy process literature frequently highlights the importance of focusing events in driving policy change. A major mechanism for this relationship is the effect of focusing events on policy agendas. The level of attention from key policy makers is an important variable in the policy process. Focusing events attract attention to an issue, thus moving the issue onto the agenda for potential action. The macropolitical system has finite attention, which we might hope would be rationally distributed among important issues. In a footnote in their paper on “Guns, Hollywood, and School Safety” Lawrence and Birkland note that dramatic focusing events may distort the relative importance of issues. Rather than being related to the actual prevalence of the underlying issue, agenda space might become a function of the presence of dramatic focusing events. A dramatic event may thus move a relatively rare issue to an overly prominent place on the macropolitical agenda. This paper provides an initial exploration of the potential distorting effect of dramatic focusing events, following Lawrence and Birkland in examining focusing events in the context of school violence. I find that macropolitical attention is not related to secular trends in school violence. When adding an indicator of dramatic focusing events (school shootings), I find mixed evidence that school shootings aid prediction of attention. Studies with larger samples may more consistently find that focusing events are significantly related to macropolitical attention over and above the actual prevalence of the underlying issue.

Human beings have limited attention and limited resources, which we must allocate according to ingrained schema. Judgments regarding attention and resources are beset by distractions that may result in less than optimal allocation to issues that are less common or otherwise less concerning than immediately apparent. For example, which is more important: a phenomenon that harms one person twice a month, on the average, or one that harms 40 people every other year? Social psychology and theories of the policy process that describe focusing events converge to predict that people will pay more attention to the rarer but more dramatic event. Does this apply to key policy makers as well? When it comes to attention at the top levels of government, is “one anecdote...worth a thousand numbers” (Brehm & Kassin, 1990, p. 120)? While focusing events are an important driver of policy, the level of drama surrounding focusing events may result in misallocation of attention. Attention may be more a function of drama than of the actual frequency of the underlying issue.

Agenda, attention, and focusing events

Work in the tradition of both the Advocacy Coalition Framework (ACF) and Punctuated Equilibrium (PE) theories of the policy process cite “the importance of sudden, attention-grabbing events, known as focusing events, in advancing issues on the agenda and as potential triggers for policy change” (Birkland, 1998, p. 53). In contrast to on-going efforts by interested parties to change policy in an area, such focusing events can lead to dramatic changes in attention by key actors, enhanced mobilization of interest groups and expansion into previously uninterested groups, and shifts in favored problem and solution definitions (Baumgartner & Jones, 1993; Birkland, 1998; Lowry, 2006; Wood, 2006a, b). Dramatic events attract the eye of key policy makers. The level of “drama”, then, is a key factor in the relationship between the actual prevalence of an event and the attention of these key actors.

Shocking events may inspire re-evaluation of closely held beliefs about value priorities, the role of government, the seriousness of different issues, and causal paths (Sabatier & Weible, 2007; Wood, 2006b). The very language used to describe and debate such events may affect constructions of potential causes and target populations and thus affect perceptions of future events (Ingram, Schneider, & deLeon, 2007; Kasperson & Kasperson, 1996; Stone, 1989). “Forces that seemed benign, under control, or nonexistent appear to be malicious, unchecked, and omnipresent in the aftermath of such dramatic events” (Stallings, 1990, p. 81). For example, an oil spill may expand discussion of oil transportation safety and result in increased clamor for regulation of the industry.

Dramatic events may have both a direct and an indirect effect on the attention of key policy makers. In this era of multiple and frequent news coverage, a dramatic focusing event “is known to policy makers and the public virtually simultaneously” (Birkland, 1998, p. 54). Dramatic events thus expand the population of individuals and groups paying attention to a particular type of issue (Stallings, 1990), and this mobilization itself attracts additional attention from policy makers (Baumgartner & Jones, 1993; Birkland, 1998; Lowry, 2006; Wood, 2006b). These focusing events do not cause policy change on their own, but may rally forces and provide for a tipping point leading to change (Baumgartner & Jones, 1993; Wood, 2006b) in part through changes in agenda space.

Much of the policy process literature focuses on issues of agenda and attention because key actors can only pay attention to a finite number of issues and facts at any one time. Attention is scarce, and thus an important factor in the policy process is agenda space: whether an issue can

carve out a place on the agenda of decision-makers. The PE and Multiple Streams frameworks incorporate an information processing concept that differentiates between serial processing and parallel processing. Governments are in effect viewed as organisms. Since a single organism is generally capable of considering only one or a small number of issues at one time, a government splits up the items it must consider and delegates them to various agencies, panels, or other entities in policy subsystems, so that multiple items can be processed in parallel. Issues that move back up to the agenda of the macropolitical arena—the head of the organism—are considered for serial processing and decision-making. Attention is thus a necessary but not sufficient condition for policy change.

Because the macropolitical system only has limited amounts of attention, we might wish that attention be allocated in a rational manner. More important issues, however defined, should get more agenda space. For example, we might not want Congress and the President to spend great amounts of time attending to rare events of limited scope, particularly events that are not readily attributed to nation-wide, systematic causes. Broadly impacting events that are more common should take up more space on the macropolitical agenda. When events become less common, attention should turn elsewhere.

In a footnote in their paper on “Guns, Hollywood, and School Safety” Lawrence and Birkland (2004, p. 1205) note

that the intense attention generated by dramatic news events may distort the relative importance of public problems. The string of school shootings across the country since the mid 1990s may have distorted public perceptions of the nature and scope of youth violence and obscured the statistical reality that acts of violence in schools have declined since the early 1990s.

This is an example of two related phenomena in social psychology: the availability heuristic and the base-rate fallacy. The former is a perceptual bias that leads us to assume that easily imagined items, such as those that are more distinctive or for which we have been primed (reminded of recently) are more important and more frequent. The latter is the tendency to ignore information about actual prevalences or probabilities in favor of dramatic anecdotes or what we already believe (Brehm & Kassir, 1990).

Lawrence and Birkland’s (2004) footnote noted that dramatic events may distort the perceptions of the public regarding risks. The macropolitical system, representatives of the people, may be similarly subject to such distortions and may pay more attention to and thus act based more on dramatic anecdotes than the statistics describing a phenomenon. Such sub-optimal “event-driven policy is characterized by stop-gap measures and reflexive reactions to the immediate event” (Birkland, 1998, p. 67) rather than “comprehensive, rational, decision making” (Baumgartner & Jones, 1993, p. 236).

School violence is fertile ground to study the distorting effect of dramatic events on macropolitical attention. This paper will examine the concordance, or lack thereof, between actual prevalence of and macropolitical attention to school violence in the U.S. By examining associations over time between prevalence and macropolitical attention, in the context of the existence of dramatic events (i.e. school shootings), I will show that Congress and the President have historically been more swayed by drama than actual risk. As a preliminary analysis of Lawrence and Birkland’s prediction of the distorting power of dramatic events, the paper will not consider issues of media attention, policy changes, policy subsystems, causal stories, etc., but in

the interest of simplicity will focus on three sets of variables: macropolitical attention, national indicators of actual levels of school violence, and descriptors of the presence and drama of school shootings.

Data sources and definitions

The focus in the current paper is on violence usually perpetrated by students against other students or school faculty or staff. While statistics on school violence generally cover elementary or secondary schools, discussions of school shootings tend to conflate shootings in grammar schools, middle schools, or high school with those that take place in post-secondary education and training institutions. Subsequent discussions of influences on young people and campus safety tend to cover all educational institutions. School shootings are therefore defined as incidents in which guns are fired at school or at school events, including primary, secondary, and post-secondary institutions, by current or recent (within the last year) students, thus excluding events such as the shooting at the Amish school in Nickel Mines PA. Specifically, the study relies on consensus about notable school shootings as captured in Wikipedia, which has an extensive list of U.S. (and international) school shootings (included shootings are presented in Appendix A). School violence indicators were gathered from the sources listed in Table 1, which summarizes data sources and search terms. Some national indicators of school violence are published in terms of calendar years, while some are published in terms of school years, and are available on a consistent basis only since the early 1990s. This study thus covers the period from 1992 to 2008.

Congress and the President have limited time to pay attention to an overwhelming number of issues on a daily basis. One more hearing, press conference, or speech on school violence means one fewer on another compelling topic. The outcome or dependent variable in the current study is comprised of the number of Congressional hearings or presidential statements concerned with school violence, school shootings, or school safety. Hearings were gathered from the Congressional Information Service via LexisNexis Congressional. The search produced 104 hits for congressional hearings, many of which were not actually about school violence. Specifically, hearings about the Safe and Drug Free Schools program that appeared to only be about drugs, the Schools Safely Acquiring Faculty Excellence Act of 2003 about only teacher background checks, and the Safe and Affordable Schools Act concerned only with tax implications, were all excluded. In addition, appropriations hearings were not coded. Coded hearings are listed in Appendix B. Birkland (1998) defends the use of congressional attention as an indicator of issue importance, noting both strengths and weaknesses. Addressing one of the potential weaknesses, Birkland notes that there should be no effect of party control of Congress on hearing counts because both Democrats and Republicans have something to say about school shootings.

Presidential statements were gathered and coded from the American Presidency Project, searching all documents (thus broadly defining presidential statements to include all officially sanctioned administration statements). The search produced 90 hits, which included Digests of Other White House Announcements and mentions initiated by the press, which were excluded. To clarify, situations in which school violence was mentioned only in response to a question, not as a planned statement or discussion, were not counted. This eliminated 15 statements, most of which were press briefings (see Appendix C). The range of years covered includes three different presidential administrations and multiple Congresses.

Table 1: Data sources

Conceptual area	Variable	Data source	Search terms
School violence	Percent of students who reported carrying a weapon (gun, knife, club, etc.) on school property	U.S. National Center for Education Statistics and U.S. Bureau of Justice Statistics, Indicators of School Crime and Safety	
	Rate of nonfatal serious violent crime against students ages 12–18 at school and away from school per 1,000 students (includes rape, sexual assault, robbery, and aggravated assault)	U.S. Department of Justice, Bureau of Justice Statistics, School Crime Supplement (SCS) to the National Crime Victimization Survey (NCVS)	
	Total student, staff, and nonstudent school-associated violent deaths Homicides of youth ages 5-19 at school	CDC School-Associated Violent Deaths Surveillance Study	
School shootings	Number in a year, number killed in a year (Appendix A)	Wikipedia http://en.wikipedia.org/wiki/School_shooting	school shooting
Macropolitical attention	Congressional hearings (Appendix B)	CIS (LexisNexis Congressional); search all fields except full text	school w/5 violen! OR safe! OR (school w/7 shoot! OR massacre OR assault) NOT shoot! w/3 postproduction OR film
	Presidential statements (Appendix C)	American Presidency Project, all documents, including from Press Secretary http://www.presidency.ucsb.edu/	school shoot OR school violence

All data were converted and coded into both calendar years and school years, such that the unit of analysis is years, with each variable indicating the appropriate number or rate for that year. Thus, I present results and analyses by year, for either the school year (ending 30 June) or calendar year. In order to allow for macropolitical attention, particularly congressional hearings, to react to current events and school violence statistics, I implement a three month lag. Hearings or statements occurring between 1 October 1999 and 30 September 2000 are thus counted as being during the 2000 school year, while macropolitical attention occurring between 1 April 2000 and 31 March 2001 is counted under calendar year 2000. Previous analyses with a one month lag produced comparable results, while future replications should investigate longer lags.

Results

Lawrence and Birkland’s (2004) optimistic observation that school violence had generally decreased appeared valid as they were writing, as shown in Figures 1 and 2. Unfortunately, the total school-associated violent deaths and youth homicides at school (which is a subset of the first indicator) indicate an increase since 2001, as seen in Figure 1. The calendar year-based indicators of (nonfatal) violence in Figure 2 clearly show a downward trend. Note that the proportion of students reporting that they had carried a weapon is available only in alternate years, and thus for only 8 years. For calendar year, therefore, the analyses are conducted solely with the rate of nonfatal serious violent crime against students, while analyses on school year data include only the more expansive total school-associated violent deaths.

Figure 1: School year violence indicators and macropolitical attention measures

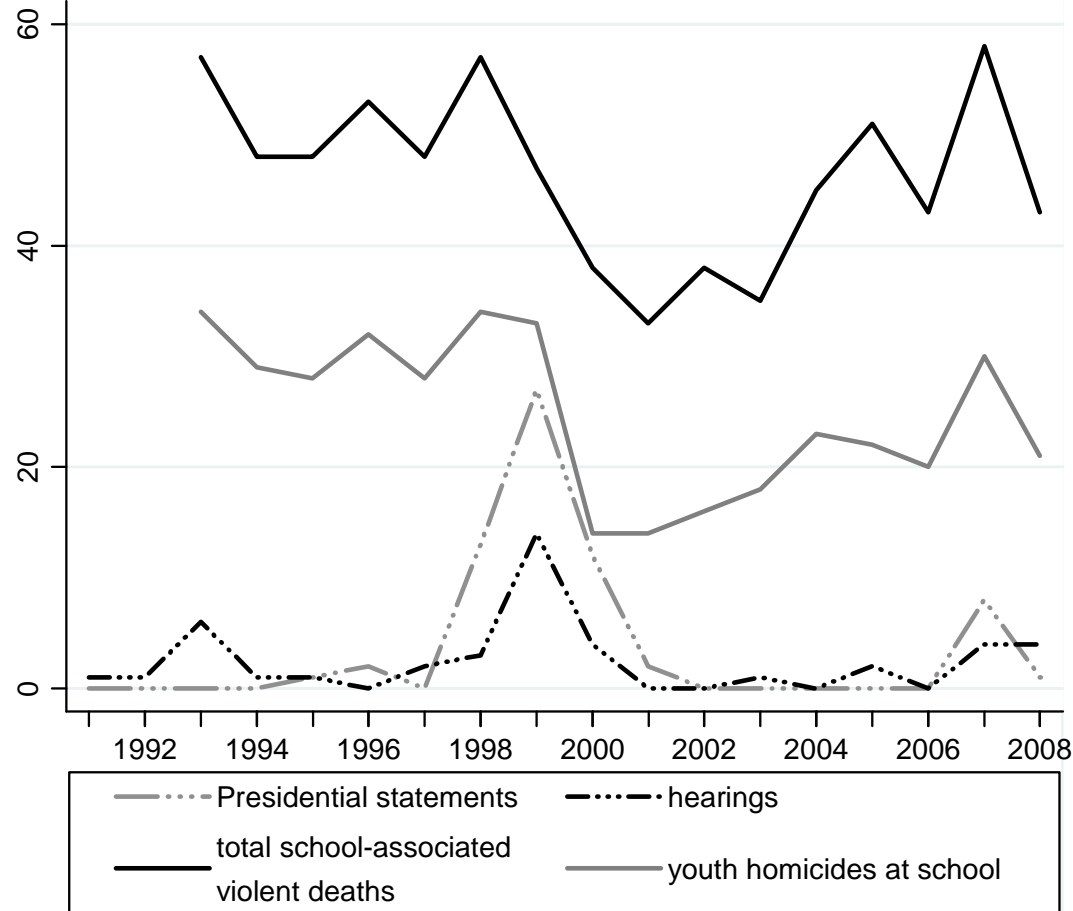
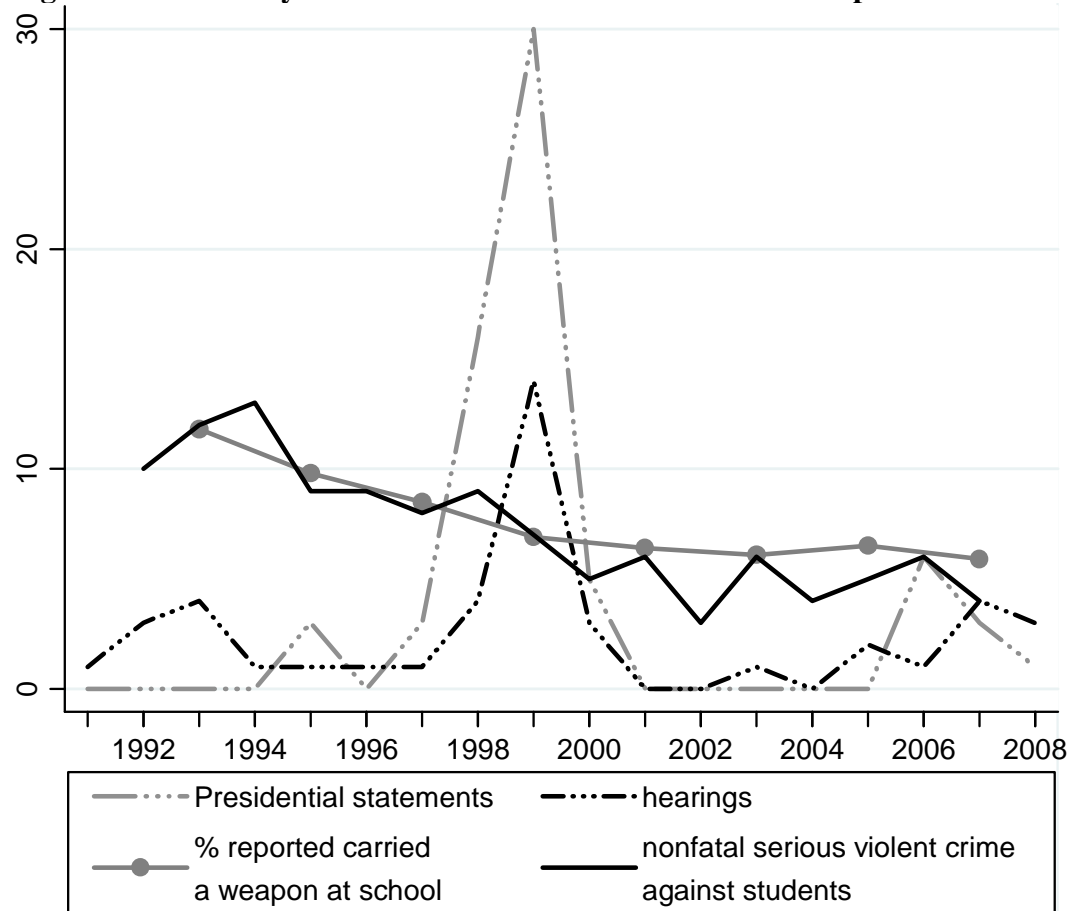
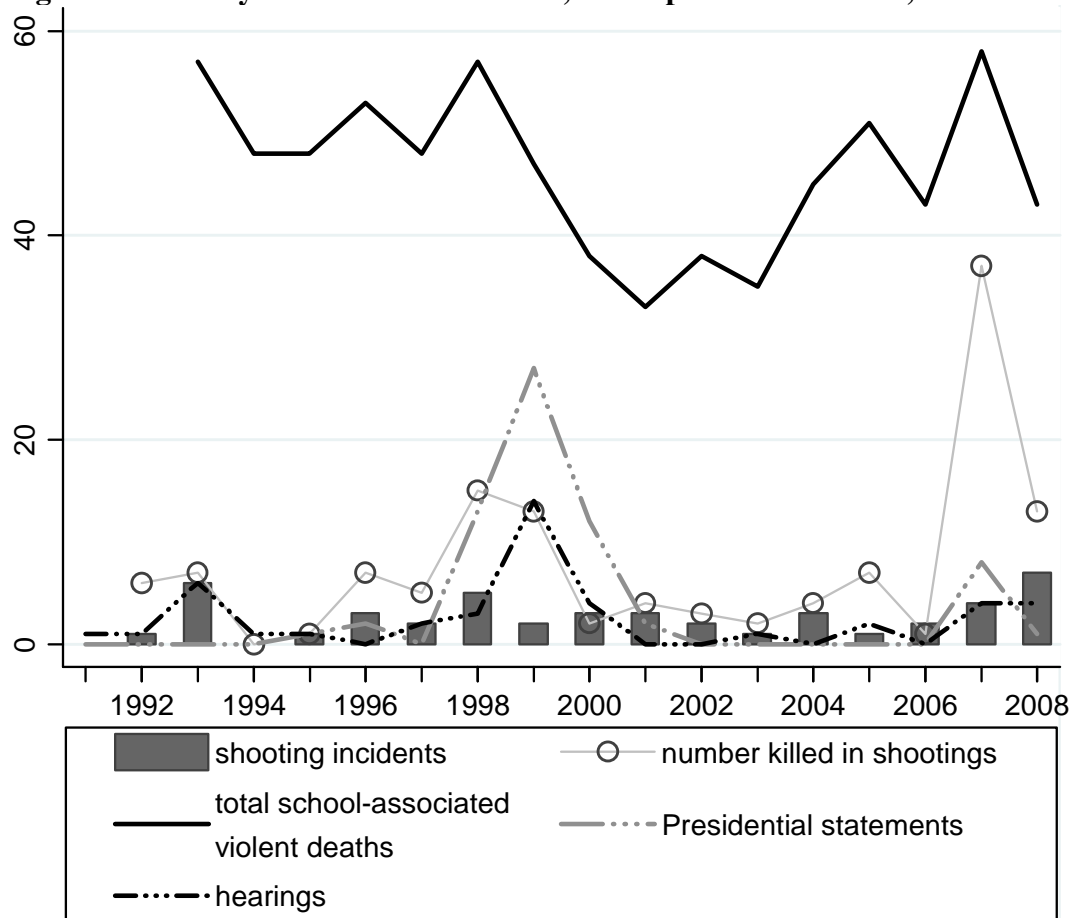


Figure 2: Calendar year school violence indicators and macropolitical attention measures

Figures 1 and 2 also present the indicators of macropolitical attention. The pattern of attention shows little correspondence with the violence indicators, although Figure 1 does display high levels of attention during years with relatively high levels of violence indicators—but not *the* highest levels. In addition, Figure 1 displays smaller bumps in attention that appear to correspond with bumps in the violence indicators in 1993 and 2005.

Note that the levels of macropolitical attention appear to be unusually high in 1999. While the reason for this is likely obvious to most readers, it demonstrates the weak relationship between indicators of general school violence and macropolitical attention to school violence. What else might explain the levels of attention, particularly the peaks in attention? The proposition being investigated here is that the presence of one or more dramatic focusing events may explain the lack of relationship between secular school violence trends and macropolitical attention. This is demonstrated graphically in Figures 3 and 4. Higher levels of macropolitical attention correspond to the presence of notable school shootings, as seen, for example, for congressional hearings with the 6 shootings in school year 1993 and with the 4 shootings in 2007 (including Virginia Tech) for both congressional and presidential attention (Figure 3). Similarly, in Figure 4, higher levels of congressional attention are seen in calendar years with multiple school shootings, such as 1992-1993 and 2007-2008, while presidential attention seems more random. The most notable correspondence, of course, occurs for 1998 and 1999. One measure of drama is the number killed during a focusing event, and 1998 (including shootings in Jonesboro

Figure 3: School year violence indicators, macropolitical attention, and school shootings

AR and Springfield OR) and 1999 (including Littleton CO, i.e. Columbine High School) were among the more dramatic years for school shootings. Note the peak in the number killed in school shootings in 1998-1999 (along with 2007 and 2008). The late 1990s also demonstrate the highest levels of macropolitical attention to the issue of school violence.

While any school shooting can be considered dramatic, many of the school shootings captured in the figures resulted in few if any deaths (for example, eight of the shootings recorded resulted in 0 deaths, including a shooting in Conyers GA on the one month anniversary of Columbine), and it may be that macropolitical attention is drawn only by more dramatic shootings. Indeed, over the course of revising this paper, a number of school shootings were added to the list on Wikipedia, many of which resulted in one or no deaths. Thus, I investigate below the presence of school shootings in which more than two people were killed as an alternate definition of dramatic focusing events. Similarly, most years had fewer than 6 deaths in all school shootings, while it may be that a certain threshold of drama, here defined as number killed, must be exceeded to boost attention. The median number killed in school years was 4.5 (4 in calendar years), and 7 of the 16 school years and 6 of the 16 calendar years used in the regression analyses had 5 or fewer school shooting deaths. Another alternative definition of the presence of dramatic focusing events will be whether a year saw more than 5 people killed in school shootings. I present descriptive statistics for the variables used in the regressions in Table 2.

Figure 4: Calendar year violence indicator, macropolitical attention, and school shootings

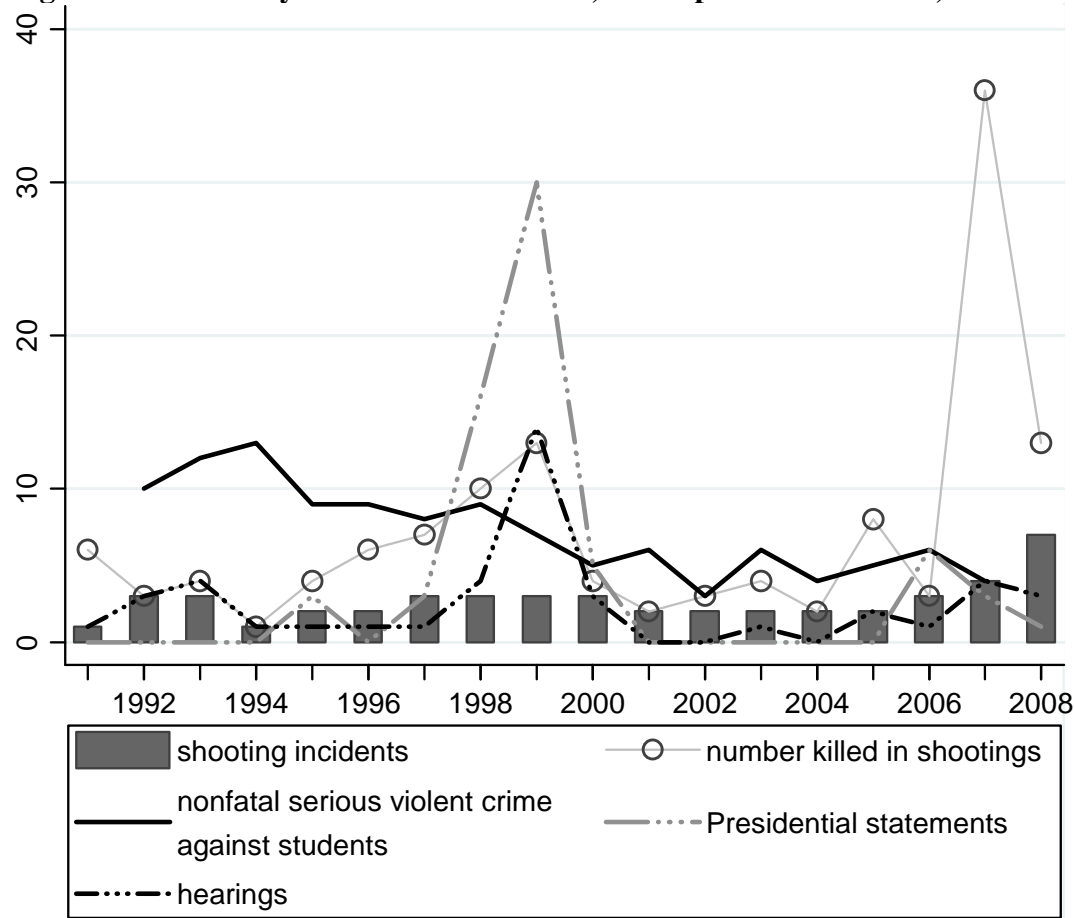


Table 2: Descriptive statistics for years analyzed in regression analyses

Year type	Variable	Mean	Median	SD
School year	Presidential statements	4.1	0.5	7.5
	Congressional hearings	2.6	1.5	3.6
	Total school-associated violent deaths	24.8	25.5	7.1
	School shootings	2.8	2.5	1.9
	Number killed in school shootings	7.6	4.5	9.1
	School shootings with 3+ killed	0.7	0.5	0.9
	More than 5 killed in all school shootings	0.4		
Calendar year	Presidential statements	4.1	0	8.0
	Congressional hearings	2.5	1.0	3.4
	Nonfatal serious violent crime against students, per 1000	7.3	6.5	2.9
	School shootings	2.5	2.5	0.7
	Number killed in school shootings	6.9	4.0	8.4
	School shootings with 3+ killed	0.6	0	0.7
	More than 5 killed in all school shootings	0.4		

This paper employs negative binomial regression as a simple, preliminary investigation of potential predictors of macropolitical attention, as defined by counts of presidential statements and congressional hearings. Specifically, to investigate the proposition that dramatic focusing events may mediate any relationship between macropolitical attention and indicators of general school violence, five sets of regression models are estimated. The tested model specifications of attention (Y) as a function of predictor variable(s) (\mathbf{x}) appear in Table 3. The baseline model (Model 1) in each estimates the expected count of the outcome variable conditional on a single indicator of general school violence (V), either total school-associated violent deaths or nonfatal serious violent crime. Then, an indicator of dramatic focusing events is added to this model, to investigate whether the latter adds to the prediction of the outcome variable. Four alternative indicators of focusing events are assessed: the number of school shootings in a year (SS , Model 2), the number killed in school shootings in a year (K , Model 3), the number of shooting events with more than two deaths in a year (DS , Model 4), and whether more than 5 people were killed in all shootings in a year (MK , Model 5).

Table 3: Model specifications

Model	Specification
1: School violence only	$E(Y \mathbf{x}) = \exp(\beta_0 + \beta_1 V + \varepsilon)$
2: Add number of shootings to Model 1	$E(Y \mathbf{x}) = \exp(\beta_0 + \beta_1 V + \beta_2 SS + \varepsilon)$
3: Add number killed in shootings to Model 1	$E(Y \mathbf{x}) = \exp(\beta_0 + \beta_1 V + \beta_3 K + \varepsilon)$
4: Add number of dramatic shootings to Model 1	$E(Y \mathbf{x}) = \exp(\beta_0 + \beta_1 V + \beta_4 DS + \varepsilon)$
5: Add indicator of high number killed in shootings to Model 1	$E(Y \mathbf{x}) = \exp(\beta_0 + \beta_1 V + \beta_5 MK + \varepsilon)$

The regression results are in Table 4 for the school year data (total school-associated violent deaths) and Table 5 for the calendar year data (nonfatal serious violent crime). As illustrated in the time series graphs, macropolitical attention shows little if any relationship with indicators of general school violence. In no base model is the attention variable significantly related to the indicator of general school violence. Compare the model Akaike Information Criterion (AIC), a measure of model fit that corrects for adding predictors, against the AIC of the appropriate null model with only a constant term, listed at the top of the table: For all four instances of Model 1, the AIC is higher than the null AIC, indicating that any added predictability from including the school violence indicator is outweighed by the AIC penalty for model complexity. In other words, according to AIC, we would be better off predicting yearly attention with the mean of attention across all 16 years.

Adding the number of school shootings (Model 2) does not significantly aid prediction of macropolitical attention in the school year data, but does significantly predict both congressional and presidential attention in the calendar year data over and above the effect of the school violence indicator (nonfatal serious violent crime against students). Note that AIC increases when moving from Model 1 to Model 2 in the school year data, but decreases when moving to Model 2 in the calendar year data, confirming the significant relationship between attention and

Table 4: Negative binomial regression results for school year data, by outcome

outcome:	Presidential statements (null AIC = 71.6)					Hearings (null AIC = 70.1)				
total school associated violent deaths	0.036 [0.070]	0.027 [0.079]	-0.092 [0.093]	-0.041 [0.093]	-0.112 [0.102]	0.055 [0.045]	0.046 [0.047]	0.021 [0.048]	0.046 [0.045]	-0.026 [0.047]
school shooting incidents		0.140 [0.482]					0.108 [0.167]			
number killed in school shootings			0.183 [0.118]					0.061 [0.049]		
school shootings incidents with 3+ killed				0.961 [1.016]					0.282 [0.412]	
more than 5 killed in school shootings					3.004+ [1.744]					1.801* [0.700]
AIC	73.4	75.3	72.7	74.3	72.4	70.7	72.3	71.0	72.2	67.0

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

Note: Constants included in models but not shown for simplicity. Standard errors in brackets. See text for data sources.

Table 5: Negative binomial regression results for calendar year data, by outcome

outcome:	Presidential statements (null AIC = 70.1)						Hearings (null AIC = 68.9)			
nonfatal serious violent crime against students	-0.003 [0.382]	0.258 [0.305]	-0.042 [0.312]	-0.198 [0.317]	-0.145 [0.276]	0.054 [0.110]	0.123 [0.100]	0.162 [0.107]	0.076 [0.106]	0.113 [0.097]
school shooting incidents		2.772** [1.024]					1.130** [0.392]			
number killed in school shootings			0.180 [0.133]					0.085* [0.040]		
school shootings incidents with 3+ killed				1.207 [0.829]					0.541 [0.432]	
more than 5 killed in school shootings					1.958+ [1.037]					1.284* [0.518]
AIC	72.1	67.7	72.0	72.1	71.0	70.7	64.6	67.0	71.0	67.0

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

Note: Constants included in models but not shown for simplicity. Standard errors in brackets. See text for data sources.

the number of school shootings in a year. The expected number of presidential statements increases by a factor of $e^{2.772} = 15.991$ and the expected number of hearings increases by a factor of $e^{1.130} = 3.096$ for each additional school shooting in a given calendar year, holding the overall school violence indicator constant. In Table 6 I present expected counts for this and other models for which the AIC was lower than the relevant null AIC. The counts are calculated for low and high levels of the secular school violence indicator and for low and high values of the dramatic focusing event (school shooting) indicator, where low and high are defined as the 10th and 90th percentiles observed in the data (or 0 and 1 for the dummy variable of whether there was a total of more than 5 people killed in school shootings that year).

Replacing the number of school shootings with the number killed in school shootings for the year (Model 3) produces a significant relationship with the expected count only of hearings in the calendar year data (Table 5). In two of the other three cases, the AIC is lower than in Model 1, indicating greater prediction of attention, but the AIC is greater than the null AIC. One additional person killed in a school shooting in a given calendar year is associated with 1.089 times as many congressional hearings related to school violence, holding the overall school violence indicator constant.

Raising the bar for what is considered dramatic school shootings (i.e., 3 or more killed; Model 4) does not produce significant prediction of attention in any of the four analyses. Attention appears to be related to any school shooting. In Model 5, incorporating a dichotomous indicator of whether more than five people were killed in all school shootings in a particular year, a significant relationship is found between this indicator and hearings net of either general school violence indicator (i.e. both school year and calendar year). The relationship between the school shooting indicator and presidential statements is significant within both year types at the $\alpha < 0.10$ level. Holding total school-associated violent deaths constant, years in which more than five people are killed in all school shootings have 20.166 times as many presidential statements and 6.056 times as many congressional hearings about school violence as years that do not. Holding constant the rate of nonfatal serious violent crime, years that achieve the threshold of six or more people killed in school shootings see 7.085 times as many presidential statements and 3.611 times as many congressional hearings on school violence as years that do not.

Table 6: Predicted counts for low and high levels of general school violence and school shootings indicator

	general school violence level		school shootings indicator	
	low	high	low	high
hearings = f(total school-associated violent deaths, >5 killed in school shootings)	1.2	7.2	0.7	4.1
hearings = f(nonfatal serious violent crime, number of school shootings)	0.7	2.2	1.9	6.0
hearings = f(nonfatal serious violent crime, number killed in school shootings)	0.8	2.0	2.9	7.5
hearings = f(nonfatal serious violent crime, >5 killed in school shootings)	0.9	3.2	2.2	7.8
presidential statements = f(nonfatal serious violent crime, number of school shootings)	0.2	3.0	1.5	24.0

Discussion

In “Guns, Hollywood, and School Safety,” Lawrence and Birkland (2004) predicted that dramatic focusing events may distort attention to issues of which the focusing event is but one example. In this initial investigation of this phenomenon, following Lawrence and Birkland in examining school violence and school shootings, a general but incomplete pattern of support for that hypothesis appears. The count of either presidential statements or congressional hearings is not related to the actual overall level of school violence whether the latter is measured by violent deaths or by nonfatal serious violent crimes. In fact, the mean count of statements or hearings is a better predictor of attention in a particular year. Selecting only those models that predict attention better than this mean, as selected by AIC, we see significant prediction of attention by an indicator of the presence of dramatic focusing events over and above either general school violence indicator. More consistent results are found for predicting congressional hearings net of the level of nonfatal serious violent crime. The strongest relationship is for the calendar year models including the number of school shootings in addition to the overall school violence indicator. Congress and the President appear to pay more attention to dramatic events than to the actual secular trends of school violence. As summarized in Table 6, these models show a consistent pattern of much higher predicted counts with high levels of the dramatic focusing event indicator, even if the actual level of school violence is low. In only one set of predicted counts in Table 6 (for calendar year Model 3 with hearings) was the predicted count for low actual levels of school violence but high level of drama lower than the predicted count for high actual school violence but low drama.

As with any preliminary investigation, the current analysis has a number of weaknesses. A different definition of “dramatic” shootings may similarly produce different results, and others may wish to specifically include media attention in future analyses. While the implementation of negative binomial regression is a simple exploratory methodology that is consistent with contagion processes (Long, 1997) such as attention spillovers from year to year, a true time series analysis that could better account for lag—such as hearings or statements on the anniversary of Columbine—may produce different results. More detailed analysis could also address the possibility of reversed causality—that decreases in secular school violence were influenced by previous macropolitical attention. Furthermore, the analysis here may give too much weight to 1999, the year of Columbine. Having only 16 observations available, however, is not conducive to leaving out any outlying observation or implementing more sophisticated techniques. Gathering more indicators of school violence to create an index, rather than relying on single indicators, might improve both sets of analyses by including a broader picture of secular trends in school violence.

There appears to be some differential in predictability. Stronger prediction is found for congressional hearings than for presidential statements. Presidential attention appears to be more variable and, as seen in Figures 1 and 2, have more instances of zero counts. On the other hand, with more opportunities to have counted responses to school violence, the number of presidential statements was higher than the number of hearings for a number of years. That is, this analysis counts only formal hearings in Congress but any recorded statement—press conferences, speeches, town halls, etc.—by the President. Some may argue that a measure of macropolitical attention should include Congressional floor debate. More data would also allow for implementing a mixture model such as zero-inflated negative binomial, particularly for the

presidential statement data, which has 0 counts in 9 of the 16 years analyzed. Furthermore, there is evidence in the current analysis of a threshold effect that warrants more investigation.

Finally, it should be noted that this analysis ignores other distracting events that may have moved other topics to the forefront of the macropolitical agenda and thus affected the relationship between actual levels of school violence and issue attention. The most obvious of these is the terrorist attacks of 9/11. There were no presidential statements regarding school violence and only one congressional hearing between 5 March 2001 (the day of the Santana HS shooting in California) and 22 March 2005 (the day after the Red Lake HS shooting in Minnesota; there were, however, seven other school shootings between these two, one of which killed more than two people). Attention was elsewhere. This critique, however, can be seen as supporting the underlying proposition of this analysis: Macropolitical attention appears to be susceptible to distortion due to the presence of dramatic focusing events. In the current analysis, the best predictor of attention appears to be the number of school shootings in a year, with more shootings bringing more attention regardless of the overall level of school violence. The years with the most congressional hearings related to school violence (1993, 1998-1999, and 2007) had higher numbers of school shootings but, except for 1993, relatively low levels of nonfatal serious violent crime against students. Congress and the President appear to fall victim to the availability heuristic and the base-rate fallacy, at least in regards to school violence. Similar distortions may occur with other dramatic events, such as fatal airline accidents (vis-à-vis airline safety and automobile accidents) or sensational urban crimes. While serial processing in general means often rapid shifts in attention and thus agenda, the potential distorting effect of dramatic focusing events may result in policy making even less rational.

There are periods during which some problems gain disproportionate attention from many policy venues, in particular from national leaders. It is easy to complain of a system where high-level attention seems to lurch quickly from issue to issue, with little regard to the seriousness of the emerging issues (Baumgartner & Jones, 1993, p. 250).

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Appendix A: Included school shootings, 1991 to 2008

School	Post-secondary?	Date	Number killed
University of Iowa	yes	11/1/1991	6
Palo Duro HS		9/11/1992	0
Edward Tilden HS		11/20/1992	1
Simon's Rock of Bard College	yes	12/14/1992	2
East Carter HS		1/18/1993	2
Amityville HS		2/1/1993	1
Reseda HS		2/22/1993	1
Grimsley HS		10/12/1994	1
Blackville-Hilda HS		10/12/1995	2
Richland HS		11/15/1995	2
Frontier JHS		2/2/1996	3
San Diego State University	yes	8/15/1996	3
Bethel Regional HS		2/19/1997	2
Pearl HS		10/1/1997	2
Heath HS		12/1/1997	3
Westside Middle School		3/24/1998	5
Parker Middle School		4/24/1998	1
Thurston HS		5/21/1998	4
Columbine HS		4/20/1999	13
Heritage HS		5/20/1999	0
Fort Gibson Middle School		12/6/1999	0
Buell Elementary School		2/29/2000	1
Lake Worth Middle School		5/26/2000	1
University of Arkansas	yes	8/28/2000	2
Santana HS		3/5/2001	2
Granite Hills HS		3/22/2001	0
Martin Luther King, Jr. HS		1/15/2002	0
Appalachian School of Law	yes	1/16/2002	3
Red Lion Area JHS		4/24/2003	2
Rocori HS		9/24/2003	2
Columbia HS		2/9/2004	0
Fairleigh Dickinson University	yes	4/24/2004	2
Red Lake HS		3/21/2005	7
Campbell County HS		11/8/2005	1
Pine Middle School		3/14/2006	0
Platte Canyon HS		9/27/2006	2
Weston HS		9/29/2006	1
Henry Foss HS		1/3/2007	1
Virginia Tech	yes	4/16/2007	33
Delaware State	yes	9/21/2007	1
SuccessTech Academy		10/10/2007	1
Louisiana Technical College	yes	02/08/08	3
Mitchell HS		02/11/08	0
E.O. Green School		02/12/08	1

Northern Illinois University	yes	02/14/08	6
Davidson HS		03/06/08	1
Central HS		08/21/08	1
Dillard HS		11/12/08	1

Appendix B: Coded congressional hearings

title and CIS #	Date
Selected Crime Issues: Prevention and Punishment, CIS-NO: 92-H521-10	17-Jul-91
Field Hearing on Violence in Our Nation's Schools, CIS-NO: 92-H341-74	4-May-92
Children Carrying Weapons: Why the Recent Increase, CIS-NO: 93-S521-8	1-Oct-92
Hearing on the Reauthorization of the Drug Free Schools and Communities Act, CIS-NO: 93-H341-41	31-Mar-93
Youth Violence: A Community Response, CIS-NO: 94-S521-4	2-Jun-93
Children and Gun Violence, CIS-NO: 94-S521-6	9-Jun-93
Hearing on H.R. 6, School Safety, CIS-NO: 94-H341-34	22-Jun-93
Recess from Violence: Making Our Schools Safe, CIS-NO: 94-S541-2	23-Sep-93
Hearing on School Violence, CIS-NO: 95-H341-18	20-Jul-94
Reauthorization of the IDEA: Discipline Issues, CIS-NO: 95-S541-64	11-Jul-95
Hearing on Juvenile Justice and Delinquency Prevention Act, CIS-NO: 97-H341-6	20-Feb-97
Hearing on Education at a Crossroads: "What Works? What's Wasted in Federal Drug Violence Prevention Programs?", CIS-NO: 98-H341-5	24-Jun-97
Understanding Violent Children, CIS-NO: 99-H341-36	28-Apr-98
Labels and Lyrics: Do Parental Advisory Labels Inform Consumers and Parents, CIS-NO: 2000-S261-20	16-Jun-98
Fixing a Broken System: Preventing Crime Through Intervention, CIS-NO: 99-S521-42	1-Sep-98
School Violence: Protecting Our Children, CIS-NO: 99-H341-71	11-Mar-99
Marketing Violence to Children, CIS-NO: 2001-S261-13	4-May-99
School Safety, CIS-NO: 99-S431-34	6-May-99
Youth Culture and Violence, CIS-NO: 2000-H521-46	13-May-99
School Violence: Views of Students and the Community, CIS-NO: 99-H341-115	18-May-99
School Violence: What Is Being Done To Combat School Violence? What Should Be Done, CIS-NO: 2000-H401-96	20-May-99
Pending Firearms Legislation and the Administration's Enforcement of Current Gun Laws, CIS-NO: 2000-H521-111	27-May-99
Elementary and Secondary Education Act, CIS-NO: 2000-H341-12	21-Jun-99
ESEA: Drug-Free Schools, CIS-NO: 99-S431-43	7-Jul-99
Drug Abuse Prevention: Protecting Our Students, CIS-NO: 2000-H341-3	3-Aug-99
School Safety, Discipline, and IDEA, CIS-NO: 2000-H341-5	13-Aug-99
Field Hearing on Effective School Safety and Drug Prevention Efforts in Our Schools and Communities, CIS-NO: 2000-H341-16	1-Sep-99
Programs Focused on Improving Academic Achievement, Producing Quality Teachers, and Promoting School Safety, CIS-NO: 2000-H341-17	2-Sep-99
Challenges and Innovations in Elementary and Secondary Education, CIS-NO: 2000-H341-18	8-Sep-99

Impact of Interactive Violence on Children, CIS-NO: 2003-S261-11	21-Mar-00
Project Exile: The Safe Streets and Neighborhoods Act of 2000, CIS-NO: 2001-H521-27	6-Apr-00
School Crime Prevention Programs, CIS-NO: 2001-S521-43	15-May-00
Marketing Violence to Children, CIS-NO: 2004-S261-17	13-Sep-00
Keeping Schools Safe -- The Implementation of No Child Left Behind's Persistently Dangerous Schools Provision, CIS-NO: 2004-H341-8	29-Sep-03
Declaration of Education: Toward a Culture of Achievement in D.C. Public Schools, CIS-NO: 2005-H401-124	20-May-05
London Bombings: Protecting Civilian Targets from Terrorist Attacks, Part I and II, CIS-NO: 2007-H411-17	7-Sep-05
Mentoring and Community-Based Solutions to Delinquency and Youth Violence in Philadelphia, CIS-NO: 2007-S521-41	19-Feb-07
NCLB: Preventing Dropouts and Enhancing School Safety, CIS-NO: 2008-H341-31	23-Apr-07
Protecting Our Schools: Federal Efforts To Strengthen Community Preparedness and Response, CIS-NO: 2009-H411-51	15-May-07
Best Practices for Making College Campuses Safe, CIS-NO: 2008-H341-1	15-May-07
Jena 6 and the Role of Federal Intervention in Hate Crimes and Race-Related Violence in Public Schools, CIS-NO: 2009-H521-122	16-Oct-07
Elder Justice Act, the Elder Abuse Victims Act of 2008, the School Safety Enhancements Act of 2007, and the A Child Is Missing Alert and Recovery Center Act, CIS-NO: 2009-H521-29	17-Apr-08
Markup of H.R. 5030, a Private Bill for the Relief of Corina de Chalup Turcinovic; H.R. 4080, To Amend the Immigration and Nationality Act To Establish a Separate Non-Immigrant Classification for Fashion Models; H.R. 1485, a Private Bill for the Relief of Esther Karinge; H.R. 3480, the "Let Our Veterans Rest in Peace Act of 2007"; H.R. 5938, the "Former Vice President Protection Act of 2008"; H.R. 5464, the "A Child Is Missing Alert and Recovery Center Act"; H.R. 2352, the "School Safety Enhancements Act of 2007"; H.R. 1783, the "Elder Justice Act"; H.R. 5352, the "Elder Abuse Victims Act of 2008"; and H.R. 5057, the "Debbie Smith Reauthorization Act of 2008", CIS-NO: 2009-H521-118	14-May-08
Markup of H.R. 5057, the "Debbie Smith Reauthorization Act of 2008"; H.R. 2352, the "School Safety Enhancements Act of 2007"; H.R. 1783, the "Elder Justice Act"; H.R. 5352, the "Elder Abuse Victims Act of 2008"; and H.R. 4044, the "National Guard and Reservist Debt Relief Act of 2008", CIS-NO: 2009-H521-127	11-Jun-08

Appendix C: Coded presidential statements

Title of statement or event	Unplanned*	Date
Remarks to the California Democratic Party in Sacramento		8-Apr-95
Memorandum on the School Uniforms Manual		24-Feb-96
Remarks in a Roundtable Discussion at the White House Leadership Conference on Youth, Drug Use, and Violence in Greenbelt		7-Mar-96
The President's Radio Address		6-Dec-97
Remarks on the Safe Schools Initiative		19-Mar-98
The President's Radio Address		28-Mar-98
Press Briefing by Mike McCurry	yes	24-Apr-98
Press Briefing by Mike McCurry	yes	21-May-98
Press Briefing by Mike McCurry	yes	22-May-98
Press Briefing by Council of Environmental Quality Katie Mcginty, Assistant Secretary of Commerce Terry Garcia and Deputy Press Secretary Joe Lockhart	yes	12-Jun-98
The President's Radio Address		13-Jun-98
Remarks at Thurston High School in Springfield, Oregon		13-Jun-98
Remarks at a Democratic National Committee Dinner in Beverly Hills, California		13-Jun-98
Press Briefing by Mike McCurry	yes	15-Jun-98
Press Briefing by Mike McCurry	yes	16-Jun-98
Satellite Remarks and a Question-and-Answer Session With the U.S. Conference of Mayors		19-Jun-98
Excerpt of Remarks During the Family Re-Union VII Conference in Nashville		22-Jun-98
Press Briefing by Bruce Reed, Senior Domestic Policy Advisor		8-Jul-98
Remarks to the 75th Annual Convention of the American Federation of Teachers in New Orleans, Louisiana		20-Jul-98
Press Briefing by Deputy Press Secretary Barry Toiv		25-Aug-98
Remarks Announcing Safe Schools and Police Corps Initiatives in Worcester, Massachusetts		27-Aug-98
Remarks During a Roundtable Discussion on Education in Herndon		31-Aug-98
Remarks at Forest Knolls Elementary School in Silver Spring		13-Oct-98
Press Briefing by Secretary of Education Dick Riley and Associate Attorney General Ray Fisher		14-Oct-98
Remarks at the White House Conference on School Safety		15-Oct-98
Remarks on the Budget Agreement and an Exchange With Reporters		15-Oct-98

<u>Remarks on the Budget Agreement</u>		16-Oct-98
<u>Address Before a Joint Session of the Congress on the State of the Union</u>		19-Jan-99
<u>Remarks on the Attack at Columbine High School in Littleton, Colorado, and an Exchange With Reporters</u>		20-Apr-99
<u>Press Briefing by Joe Lockhart</u>		21-Apr-99
<u>Remarks in a Roundtable Discussion With Students on Violence in Schools at T.C. Williams High School in Alexandria, Virginia</u>		22-Apr-99
<u>Remarks Announcing Proposed Gun Control Legislation</u>		27-Apr-99
<u>Press Briefing by Deputy Attorney General Eric Holder, Under Secretary of Treasury for Enforcement Jim Johnson, and Assistant to the President for Domestic Policy Bruce Reed</u>	yes	27-Apr-99
<u>Remarks Announcing Measure to Address School Violence</u>		30-Apr-99
<u>Remarks on Departure for Houston, Texas, and an Exchange With Reporters</u>		7-May-99
<u>Remarks at a Democratic National Committee Dinner in Portola Valley, California</u>		14-May-99
<u>Remarks at a Democratic National Committee Luncheon in New York City</u>		19-May-99
<u>Remarks to the Community of Columbine High School in Littleton, Colorado</u>		20-May-99
<u>Press Briefing by Joe Lockhart</u>		21-May-99
<u>Commencement Address at Grambling State University in Grambling, Louisiana</u>		23-May-99
<u>Remarks Announcing a Study on Youth Violence and Media Marketing</u>		1-Jun-99
<u>Interview With Charles Gibson, Diane Sawyer, and a Discussion With Students on "Good Morning America"</u>		4-Jun-99
<u>Remarks on Gun Control Legislation</u>		15-Jun-99
<u>The President's Radio Address</u>		19-Jun-99
<u>Remarks to the Presidential Scholars</u>		25-Jun-99
<u>Press Briefing by Barry Toiv and David Leavy</u>		13-Aug-99
<u>Remarks at the Unveiling Ceremony for Public Service Announcements on School Violence</u>		17-Aug-99
<u>The President's Radio Address</u>		11-Sep-99
<u>Remarks at the Congressional Black Caucus Foundation Dinner</u>		18-Sep-99
<u>Remarks at a Breakfast With Religious Leaders</u>		28-Sep-99

<u>Remarks at an Empire State Pride Gala in New York City</u>		7-Oct-99
<u>Remarks at a New Jersey Democratic Assembly Dinner in Elizabeth, New Jersey</u>		18-Oct-99
<u>Remarks to the Voices Against Violence Conference</u>		19-Oct-99
<u>Remarks Honoring the National Association of Police Organizations' "Top Cops"</u>		21-Oct-99
<u>Remarks in an On-Line Townhall Meeting</u>	yes	8-Nov-99
<u>Remarks at a "Stop the Violence" Benefit in Beverly Hills, California</u>		30-Nov-99
<u>Remarks at the Presentation of the Eleanor Roosevelt Award for Human Rights</u>		6-Dec-99
<u>Press Briefing by Joe Lockhart</u>	yes	6-Dec-99
<u>Remarks to the Community in Cleveland</u>		13-Mar-00
<u>Remarks at a Rally for Gun Safety Legislation</u>		15-Mar-00
<u>Remarks at an American Ireland Fund Dinner</u>		16-Mar-00
<u>Interview With Dan Rather of the "CBS Evening News"</u>	yes	6-Apr-00
<u>Proclamation 7291 - National D.A.R.E. Day, 2000</u>		12-Apr-00
<u>Remarks at the White House Conference on Raising Teenagers and Resourceful Youth</u>		2-May-00
<u>Webside Chat With Tracy Smith of Channel One in St. Paul</u>	yes	4-May-00
<u>Remarks in an Interview and Townhall Meeting on ABC's "Good Morning America"</u>		12-May-00
<u>Interview With Jann Wenner of Rolling Stone Magazine</u>	yes	2-Nov-00
<u>Remarks on Submitting the Education Reform Plan to the Congress</u>		23-Jan-01
<u>Remarks Prior to a Meeting With Congressional Leaders and an Exchange With Reporters</u>		5-Mar-01
<u>Press Gaggle by Scott McClellan</u>	yes	22-Mar-05
<u>Remarks at George W. Bush Elementary School in Stockton</u>		3-Oct-06
<u>Press Gaggle by Dana Perino</u>	yes	4-Oct-06
<u>Press Briefing by Tony Snow</u>	yes	5-Oct-06
<u>Press Briefing by Dana Perino</u>		6-Oct-06
<u>Statement by the Press Secretary: Conference on School Safety</u>		9-Oct-06
<u>Biographies of Panelists in a Conference on School Safety</u>		9-Oct-06
<u>Fact Sheet: School Safety Resources for Parents, Schools, Law Enforcement Officials, and Communities</u>		10-Oct-06
<u>Fact Sheet: Conference on School Safety</u>		10-Oct-06
<u>Press Briefing by Dana Perino</u>		16-Apr-07

[Press Briefing by Dana Perino](#)

18-Apr-07

[Guest List for the First Lady's Box at the 2008 State of the Union](#)

28-Jan-08

* Unplanned comments, solely initiated by press, Town Hall participant, etc.