events of the day cause Americans in large numbers to rally around the president in times of crisis or to distance themselves from him when events are negative. Here, we see something very different. Public opinion stands today virtually where it was fifty years ago, with just over half the population supporting the death penalty, just as in the beginning of the series. According to our combined index, opinion in 1953 was 59 percent pro–death penalty; in 2006 this number was 57 percent.[10] At first glance, looking at pro–death penalty sentiment, for example, there appears to be little action here. For the first twenty years of our series, opinions were sporadically surveyed but appear to have fluctuated little.[11] Opinion slowly drifted downward from the beginning of the series until the late 1960s. After the *Furman* decision of 1972, when executions became unconstitutional, opinion started driving in the other direction, in a slow drift toward greater support for the death penalty that lasted for more than twenty years. (Stimson found the same in his more general survey of the public mood: As government became more liberal, opinion became more conservative.) Shifts in public opinion were not massive, even during these times; the index ranges from about 60, down to just above 50, then up to the high 60s, not very substantial movement in an absolute sense.

This highly inertial and seemingly permanent level of support is consistent with our understanding of individual-level attitudes on moral issues. Issues that touch readily on core values onto which people hold fast are not expected to change in response to each item in the news, and here we see this phenomenon very clearly. Theory tells us that when attitudes are tied to core values, no amount of new information should produce attitude change (Alvarez and Brehm 1995, 1997, 1998, 2002) unless respondents are ambivalent (see also Zaller 1992). This suggests that in the aggregate we should see only very small amounts of change.

The upward drift in opinion regarding the death penalty shifted again, however, in the mid-1990s, reversing a trend toward greater acceptance that had lasted for a generation. Support for the death penalty began to fall in 1996 on the cascade of legal action based on DNA evidence and concerns about the possible innocence of death row inmates and the fallibility of the system. At the very end of our series, we see public support for the death penalty continuing to decline, slowly but steadily.

Figure 6.3 presents pro–death penalty opinion separately from anti– simply to demonstrate that, calculated as percentages of the total number of pro or anti responses, the two series mirror each other exactly. The third series in the figure is net support, or the difference between the two series. Positive values indicate a net pro–death penalty advantage in public opinion, and negative values indicate stronger numbers for the anti–death penalty series. The net support series reached a peak in 1990 with a value of 33 percent then declined by more than fifteen points in the last ten years of the series, the period of the innocence debate. We will use this

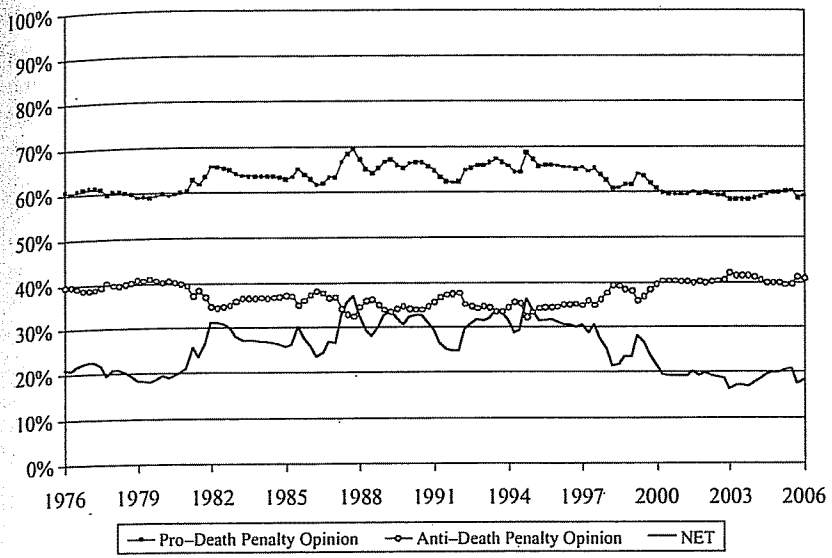

Figure 6.4. Public opinion indices, quarterly from 1976q1 to 2006q1. Support and opposition indices were created by running raw death penalty survey data through the Wcalc algorithm written by James Stimson and using the optional smoothing function. The net support index is simply the difference between these two indices (support minus opposition).

net support series as the simplest and most straightforward indicator of public opinion toward the death penalty.

Because our index is based on so many surveys, we can measure public opinion on a quarterly basis for the past forty years, not only on an annual basis as we have shown so far. This more fine-grained analysis will allow us to make a much more detailed assessment of movement in public opinion over this period. Only a few surveys were conducted in the early years of our series, so we have considerably more confidence in our analysis of the later part of the series than in the early part. Figure 6.4 presents this series.

Figure 6.4 shows the same general patterns as the annual series presented in Figure 6.3, but also more nuanced movements that reflect important shifts in media frames that often occur without warning, bursting onto the scene. We begin looking at the quarterly series in 1976 (the point at which quarterly homicide data become available), when public support for the death penalty hovered around 60 percent, according to our index. The net support series is positive throughout this period, ranging between values in the mid-20s and 30s in the 1980s and 1990s before declining quickly after 1999. During the first seven years of the new century, net support has averaged just over 18 percent – marking a dramatic reduction

in public support for the death penalty. The quarterly series is less smooth than the annual series partly because the annual series is based on more observations per year, and so the random fluctuations due to sampling error are spread out more. But it also varies because there are true signals in the data, fluctuations in public opinion in response to particular events that may come to light at one point in time but may not have a lasting impact or may be cancelled out by other events occurring later in the same year. So although moving to the quarterly analysis requires that we accept a little more measurement error, it also allows us to study movement in public opinion in greater detail. As we are interested in the impact of the new innocence frame, the availability of a greater density of survey information for the recent historical period is particularly welcome. In our statistical treatment that follows, we use the quarterly data series because these allow us to track shifts in public opinion most closely. The reader can see from Figures 6.3 and 6.4 that both series tell a similar story – remember that Figure 6.3 begins in 1953, whereas Figure 6.4 begins much later, in 1976. This parallel movement makes sense, of course, as the yearly and quarterly indices are ultimately based on the same underlying surveys.

Both annual and quarterly time series are informative for our purposes. The first gives us a broad look at trends in public opinion on the death penalty, helping us to put the more recent movements in public opinion in historical perspective. The second provides a detailed look at the recent post-moratorium period and, in particular, at the effects of the innocence frame in a time in which attitudes have undergone unprecedented amounts of change in a short time period. We use the latter data to test our hypothesis that media framing influences public opinion on the death penalty. We turn to this task next.

ANALYZING PUBLIC OPINION

Public opinion on the death penalty, as we have shown, is highly stable over the long run; public opinion today looks a lot like it did yesterday. The inertial quality of aggregate public opinion means that we simply cannot expect dramatic shifts in public opinion on this topic in short periods of time. Unlike public opinion toward the president, which responds quickly to current events, aggregate sentiment on this topic is much more stable. There are two reasons for the slow, drifting quality of public opinion in this area. First is that the issue has limited salience. That is, every member of the public is not necessarily paying attention when events occur in relation to the death penalty. In contrast, say, to presidential decisions to take the nation to war, aggregate public opinion on the death penalty moves slowly partly because many Americans are not paying much attention. In

Chapter 4 we review *New York Times* coverage of the issue, and we make clear that there was, indeed, substantial coverage on the death penalty, especially during certain periods, such as those surrounding the 1972 to 1976 moratorium and when the innocence frame first "broke" in 2000, when there were 235 articles published on the topic. As we noted, 235 articles a year translates into several articles a week. But let us put this in some context – not to say that Americans do not know or care much about the death penalty, but simply to note the difference between an issue such as this and a more salient topic of discussion. Although the death penalty is familiar, it is not constantly in the news so much that members of the general public (in contrast, say, to readers of this book or to those who follow the death penalty debate with any particular interest) would continually be bombarded with news, events, and opinions on the topic to such an extent that their views might shift rapidly. One simple point of comparison is how often the issue appears on the front pages of the nation's newspapers. As we see in Chapter 4, since 1960, 254 death penalty stories have appeared on the front page of the *New York Times*. Although there is some upward trend there as we demonstrated, the total number of stories averages out to fewer than six per year, or one front-page article every two months. In stark contrast, Figure 6.5 shows front-page *New York Times* coverage of the U.S. war on terror.

Since September 2001, the war on terror has dominated the nation's headlines in a way that abortion, the death penalty, and other issues never have nor ever will. Everyone has reactions to this issue, and millions of Americans are directly affected by it, both by having family members serving overseas and by personally experiencing various commemorations and inconveniences associated with increased security. More than 35 percent of all the front-page stories in the *Times* for the past six years have been on the war. Since September 11, 2001, this number has rarely dropped below 25 percent in any given month, and in the first months of the U.S. invasion of Iraq, the war consumed more than 60 percent of front-page attention. By contrast, the death penalty, which is by no means obscure, generates nothing remotely close to this level of coverage – the series differ by orders of magnitude. So one reason public opinion moves only very slowly with respect to the death penalty is that, like most issues, it simply is not in the news very often and does not directly affect the lives of most Americans. It is easy to think that many people are or should be interested in issues such as the death penalty, especially if, like the readers of this book, one takes some particular interest in it. But the issue is remote for most Americans. People's views on the president or on issues such as the war in Iraq or the war on terror may be more volatile because people are much better informed about events that are, after all, much more dramatic than the typical courtroom drama associated with criminal appeals.

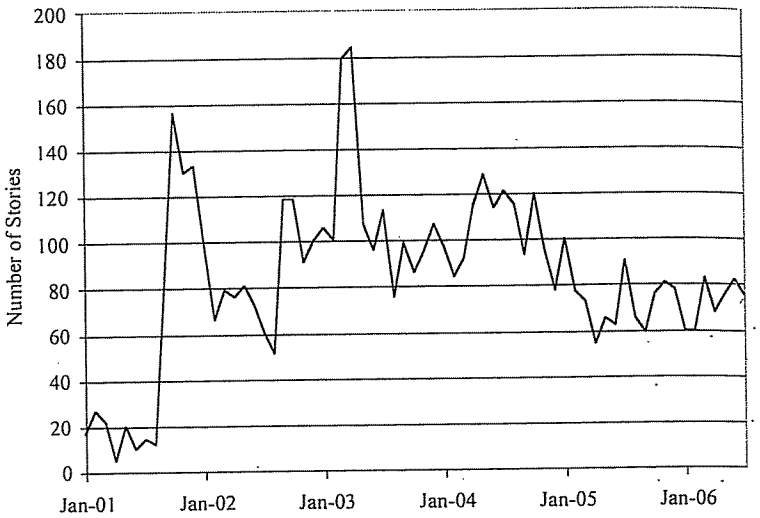

Figure 6.5. Front-page *New York Times* coverage of the war on terror, monthly from 2001 (January) to 2006 (December). The figure shows the number of articles appearing on the front page of the *New York Times* containing the words *terror*, *Iraq*, *Afghanistan*, or *al-Qaeda* anywhere in their text. Articles were collected from the Lexis-Nexis Academic Universe archives. During this period, the total number of front-page stories averaged 263 and ranged from a low of 218 to a high of 315. One hundred stories, therefore, represents about 40 percent of the total.

The second reason for the slowly evolving nature of public opinion on the death penalty is that, as we have discussed, most Americans' views on the death penalty are closely linked to their moral or religious sentiments. For any given individual, these attitudes do not change much over time. This notion rings especially true when we consider the ways in which public opinion is measured. The vast bulk of the 292 death penalty survey questions we employ have an abstract or a theoretical character. One could easily support the death penalty in the abstract, and say so in response to a survey question, even if one had strong qualms about the possibility of errors in particular cases. Because the impact of the innocence movement is partially dependent on pushing individuals to move away from the abstract and toward the specific case – questioning whether we can be sure that each specific court procedure was flawless – this shift may not be fully reflected in public opinion surveys. Yet despite these caveats, we do see movement in U.S. public opinion on the death penalty, and there is nothing that requires that public opinion remain within any particular bounds. Rather, opinion clearly moves in response to events (and interpretations of those events).

Now we move to a systematic analysis of what causes opinion to move and of the role of media framing as compared with other factors. A simple correlation between net tone, our media framing variable, and net support for the death penalty suggests that the two are related (the correlation is $r = 0.57$ over the period of our analysis). But simple correlations may be misleading. To test the hypothesis that media framing influences opinion on the death penalty, we estimate multivariate time series regression models of opinion. Although the effects of media frames are central to the analysis ahead, we test the additional hypothesis that attitudes toward the death penalty will respond to violent crime. Consistent with the literature that comes before us, we hypothesize that violent crime rates and support for the death penalty should be positively related.[12] As crime rates go up, citizens prefer a law and order approach to crime. Descriptive data indicate that support for harsher punishments in general increases when crime goes up, and support for the death penalty can be seen as part of this same get-tough-on-crime reaction (see Rankin 1979). Our indicator of violent crime is the number of homicides as reported in the FBI Uniform Crime Reports.[13]

In addition to homicide rates, we want to examine the effects of extraordinary events that focus public attention on the death penalty. By including extraordinary events in our analysis, we allow events to influence opinion beyond the effect of the news coverage that they generate and similarly also ensure that any measured effects of media framing are not simply picking up events, but reflect media coverage of them. The inclusion of major events is common in the literature on presidential approval, and the techniques of doing so are quite simple: One identifies the events that might be hypothesized to affect public opinion (i.e., any potentially substantial event) and includes a variable in the model that takes a value of 0 for all time periods except for when an event occurred, in which case the variable takes a value of 1. In our case, we complicate this slightly because we have some events that would be expected to increase support for the death penalty and some that would work in the other direction. So our events series consists of values of 0, +1, and −1. We considered six events: The bombing of the federal building in Oklahoma City on April 19, 1995 (+1); the January 30, 2000, declaration by Illinois governor George Ryan of a moratorium on executions in Illinois (−1); the September 11, 2001, terrorist acts (+1); the 100th exoneration of a death row prisoner on April 8, 2002 (−1); the beginning of the killing spree of the so-called D.C. snipers on September 9, 2002 (+1); and the January 11, 2003, blanket grant of clemency given all death row prisoners in Illinois (−1). The result is a single time series composed of 1s, −1s, and 0s. The estimated effect of this variable will tell us the average effect for any pro–death penalty event (with the effect of an anti–death penalty event

being the inverse of this number). Although any selection of extraordinary events is somewhat arbitrary, these are clearly important events in the history of public attention to the issue. In addition, we also separately considered the effect of each of the six events individually, as we discuss below.

Armed with our time series of death penalty sentiment (net support), the net tone of media coverage from Chapter 4, homicide levels, and events, we begin our analysis. The analysis covers the period from 1976 to the first quarter of 2006, and the analysis is not annual but quarterly. So for each quarter, we want to know if we can predict public opinion on the basis of the other variables mentioned and the relative importance of each of the variables in explaining opinion. The historical window we cover is limited by the availability of homicide data, unavailable quarterly before 1976.

The general story we wish to test empirically is that public opinion on the death penalty is tied to violent crime rates and the tenor of media coverage. Given the slowly evolving nature of attitudes on the death penalty, we have expectations about the nature of the dynamic relationships we will find in the data. In particular, we expect most of the effects of homicides and media coverage to be met with initial resistance in the short run and to work their way slowly through the system, exerting their full influence on public opinion in the long run, as time passes. In statistical models, long-run effects are found in the equilibrium relationships of *levels* of homicides and net tone with *levels* of opinion. So we expect that high numbers of murders and pro–death penalty stories will be linked to more pro–death penalty opinions, whereas lower numbers of murders and anti–death penalty stories will be tied to more anti–death penalty sentiment. If this hypothesis is correct, opinion should move in tandem with levels of violent crime and the tone of media coverage as time passes. In contrast, we would not expect to see, for example, large proportions of the public opposed to the death penalty in the face of high murder rates and a barrage of media coverage supportive of capital punishment.

Short-run effects can be found in statistical models in the responsiveness of public opinion – *changes* in public opinion – to *changes* in the values of homicides and net tone. Given the solidifying role of tightly held moral values in determining death penalty opinion, we expect that short-term increases or decreases in murder rates and changes in the tone of media coverage will have little or no effect on short-term movements in opinion. Importantly, though, short-term changes in homicides and media coverage also disturb the long-run link with opinion so that opinion needs to move, or adjust, to stay linked with the harbingers of death penalty sentiment in the long run. We expect that adjustment will be slow, as opinion is highly inertial, but we expect it nonetheless to occur if indeed opinion is linked to violent crime and the tenor of media coverage in the long run.

To capture these dynamic relationships and test for their existence, we estimate an error correction model, a regression model in which *changes* in opinion are regressed on *changes* in both the number of homicides and media tone (assessing the short-run effects), and a term capturing how far out of synch the *level* of opinion is with the *level* of homicides and media tone based on their values in the previous period (assessing the long-run effects).[14]

Analysis

We present our analysis of death penalty sentiment in Table 6.1. We focus here on explaining net support, or the difference between the percentages of support for and opposition to the death penalty. This is the solid black line in Figure 6.4. (The appendix to this chapter shows the same analysis for support and opposition separately; the reader can see that the results are highly consistent with those for net support, so we focus on just one series here.)

The results from our model are presented in two columns in Table 6.1. The first column reports the long-run equilibrium relationship of levels of opinion with levels of homicides and net tone.[15] These results show that levels of opinion are positively related to levels of homicides and pro–death penalty media coverage. More specifically, each entry in column 1 tells how much net support increases for each additional 1,000 homicides or single media story. So, for example, for every 1,000 homicides in the country, the level of opinion in equilibrium goes up by an average of 3.4 percentage points. Similarly, for every ten additional net pro–death penalty stories, we expect the level of opinion to move 1.5 percentage points in the pro–death penalty direction. These are long-run effects, the amount that public opinion changes as time passes. The numbers in parentheses are standard errors; these show the level of confidence we have, statistically, in each of these coefficients. If the standard error is very small compared with the regression coefficient, this means we have a great deal of confidence in the results. If the numbers are similar in size to each other, then we have less confidence. Footnotes to the table indicate the precise degree of confidence we have in each coefficient.

Column 2 tells us how opinion moves in the short run in response to a) deviations from the long-run equilibrium relationship, b) changes in homicides and net tone, and c) the experience of major death penalty–related events. We consider these in order.

When the long-run link among levels of homicides, media coverage, and public opinion demonstrated in column 1 is disturbed, this means that public opinion is too high or too low relative to homicides and media coverage in the previous period and cannot be maintained. The "deviation from long-run equilibrium" coefficient presented in column 2 assesses

Table 6.1. *Explaining public opinion on the death penalty, quarterly from 1976q1 to 2006q1*

	Long-run (equilibrium) opinion	Short-run (change in) opinion
Net tone$_{t-1}$	0.149[a]	
	(0.049)	
Homicides$_{t-1}$ (in thousands)	3.412[b]	
	(0.753)	
Constant	8.949[b]	−0.025
	(3.865)	(0.168)
Deviation from long-run equilibrium$_{t-1}$		−0.173[b]
		(0.045)
Change in net tone$_t$		0.032
		(0.020)
Change in homicides$_t$		−2.206
		(1.883)
Death penalty events$_t$		0.809
		(0.750)
N	120	119
R-squared	0.446	0.126
RMSE	4.063	1.831
StDev	5.44	1.924

Note: Data are quarterly from the first quarter of 1976 to the second quarter of 2006. Entries are regression coefficients (standard errors in parentheses). The dependent variable is the net support series from Figure 6.4.

[a] $p < 0.05$.
[b] $p < 0.001$.

the quickness with which public opinion adjusts to correct this type of disequilibrium. The coefficient, −0.17, tells us two things. First, the negative sign tells us that the direction of change in opinion will counter the disequilibrium; when levels of public opinion are too strongly pro–death penalty for homicide levels and media coverage, public opinion will move in an anti–death penalty direction. And when public opinion is too strongly opposed, it must move in a pro–death penalty direction, so the system has a built-in self-correcting mechanism. Second, the coefficient tells us how quickly public opinion adjusts to return to equilibrium. Specifically, about 17 percent of the disequilibrium is corrected in each quarter. This is relatively slow; the system may be relatively far from its long-run equilibrium for quite some time, a finding consistent with the character of public opinion on the death penalty as we know it. Consistent with our understanding of opinions on entrenched moral issues such

as this, the public is willing to maintain levels of support out of synch with homicides and media coverage for some number of quarters – five or more years' worth – before fully correcting the disequilibrium. Put differently, over 80 percent of the equilibrium error in public opinion levels is tolerated in each subsequent quarter after the long-run relationship is disturbed. Public support for the death penalty is highly resilient, even in the face of new and contradictory information as to its appropriateness. It is not completely unchanging with respect to new information, but it adjusts only slowly.

In addition to this error-correction effect, we assess the short-run effects of changing numbers of homicides and changing numbers of toned media stories. We find that quarter-to-quarter changes in these variables exert no independent effect on changes in opinion. The standard errors on these estimated coefficients in column 2 are so large that we cannot dismiss the possibility that the coefficients are only different from zero by chance. Once we account for the effects of any disequilibrium in the level of opinion as it is related to media coverage and homicides, changes in media coverage and numbers of homicides have no short-run effect. Given the inertial character of public opinion, we expect short-term changes to have limited influence on its short-run dynamics, and in fact we find no evidence of any effects. But given that the effects of media coverage and homicides work their way through the long-run equilibrium, the effect of net tone and homicides on public opinion is nonetheless very real (as we see in column 1).

Finally, we mention briefly our findings with regard to highly visible events such as the Oklahoma City bombing, the Washington sniper shootings, and significant events associated with the innocence movement. Considered jointly, the effect of major events is insignificant, but when we consider the separate effects of pro– and anti–death penalty events (not reported), we see that anti–death penalty events exerted a marginally significant depressant effect on net support, reducing support for the death penalty by an average of nearly two percentage points per event. When each event was entered into the model separately (again, not reported here) only Governor Ryan's grant of clemency to all death row prisoners in the first quarter of 2003, just before leaving office, is significant ($p = 0.09$). The governor's temporary moratorium on the death penalty in 2000 also increased opposition, but the effects were not significant ($p = 0.27$). None of the events that we might expect to increase support for the death penalty – the Oklahoma City bombing, the D.C. sniper attacks, and the September 11 terrorist attacks – exerted a significant effect on sentiment. We should remember, though, that these events are themselves covered by the media and may have an indirect effect through net tone. In the case of all events we considered, there was newspaper