Taking the Pulse of Polling: 
Public Opinion Analysis as a Dependent Variable

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Abstract: Taking the Pulse Of Polling: Public Opinion Analysis as a Dependent Variable

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Much has been written about the problems of interpreting public opinion polls and the ways in which poll results should be understood and reported. Less thought has gone into understanding the process of polling itself. The decision to assess public opinion through a poll is itself an important political activity. The motivations and biases of pollsters are reflected not only in how they ask questions but also in the very process of choosing to ask questions. The choice of pollsters to ask questions is consequential as the foundation for our ability to assess public opinion. This is true both in the absolute sense that without asking questions public opinion cannot be concretely known; but also in the more subtle sense that the different events and policy discussions that are taking place at the time when polls are conducted can fundamentally affect their character and outcome.

In this paper, I look directly at the process whereby polling is conducted. I treat poll-taking as a dependent variable and explore the ways in which polling is motivated by particular kinds of events. Looking at the case of polling concerning the war in Bosnia between 1992 and 1996 I show that there are distinctive patterns in the polling process that reveal the underlying proclivities of the media elites who mediate public opinion both by their reporting of it, and by their determination of when and how polls should be conducted. In particular, the evidence shows that while the media frequently framed the conflict in Bosnia in moral terms, the more important goad for the assessment of public opinion was the material question of committing American troops.
The end of the Cold War marked the beginning of a decade of turmoil that once again put the Balkans at the forefront of international attention. The United States, with its substantial military and political status, has been a critical actor in that unfolding crisis. The domestic political environment has significantly impacted the role that the United States has been able to play in the Balkans. It is notable, then, that the last question pollsters had asked the American public about that region before the breakup of Yugoslavia came in April 1988 when as part of a general assessment of geographic knowledge the Gallup Poll asked a representative sample of Americans to identify Yugoslavia on a map. At that time, a mere 14 percent of the population could make that identification correctly.

Throughout the ongoing Balkan crises there has been an intense concern about the nature and impact of public opinion on American policies. More generally, public attitudes are critical to the American use of force abroad. Presidents have to be concerned about how high-profile foreign policies will impact both future elections and their ability to govern on a day-to-day basis. Congressional actors, particularly in the House of Representatives with its two-year election cycle, have to stay abreast of public opinion. Even the military has shown an increasing concern about the relationship between their role abroad and the breadth of public support at home.

Assessing public opinion on a question as complex and remote as the imbroglio in the Balkans is not a straightforward process. The most direct indicator is public opinion polling. Much has been written about the problems of interpreting public opinion polls and the ways in which poll results should be understood and reported, but less thought has gone into understanding the process of polling itself. The decision to assess public opinion through a poll is itself an important and consequential political

1 All polling data used in this paper is from the POLL database at the Roper Center, Univ. of Connecticut. Question identification: USGALLUP.88GEOG.R57H
3 The importance of strong domestic support for the use of the military abroad was formalized in the Weinberger and then Powell doctrines. See, for example, Weinberger’s comments in DoD News Release 609-84. Powell in “U.S. Force: Challenges Ahead” 1992.
activity. The activity of polling reflects a set of beliefs about what issues are appropriate for public assessment. The motivations and biases of the pollsters are reflected, then, not only in how they ask questions but also in the very process of choosing to ask questions. If questions are not asked, the character of public opinion will remain opaque. The choice of pollsters to ask questions is the foundation for our ability to assess public opinion. This is true both in the absolute sense that without asking questions public opinion cannot be concretely known; but also in the more subtle sense that the different events and policy discussions that are taking place at the time when polls are conducted can fundamentally affect their character and outcome.⁵

In this paper, I look directly at the process whereby polling is conducted. I treat poll-taking as a dependent variable and seek to show the ways in which it is motivated by particular kinds of events. Looking at the case of polling concerning the war in Bosnia between 1992 and 1996 I will argue that there are clear patterns in the polling process that reveal the underlying proclivities of the media and the pollsters. In particular, the evidence shows that while the media frequently framed the conflict in Bosnia in moral terms, the more important goad for the assessment of public opinion was the question of committing American ground troops.

In this regard, this study also speaks to the concern about the relative importance of moral and material factors in American public attitudes. The reporting on Bosnia continually evoked the moral dimension of the conflict. Journalists played a critical role in bringing the war to Western attention. As Christopher Bennett notes, reporters were often strong advocates of international intervention who worked to keep it on the international agenda even when diplomats would have preferred to leave the Balkans to its own fate.⁶ However, I will show here that it was the possibility of sending troops abroad rather than the concern with the moral outrages being perpetrated in the Bosnian war that had the greater impact on the media’s decisions to assess public opinion.

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The most common and visible polling is journalistic in nature. While journalistic polling is used for many purposes, its main objective is to fill in the news and even to generate independent stories. These polls are a visible part of the public record. They are the primary basis for impressions of public attitudes during ongoing public policy debates. My focus in this paper will be on journalistic polls. I will argue that their journalistic purpose makes them reactive to the developing news agenda.

The logical starting point for this analysis, then, is to look at the news events that generate political polling. For these purposes, the war in Bosnia serves as an excellent case study. It was a sustained conflict over time that generated a high volume of both news and opinion analysis.

The Bosnia Imbroglio

Deciding where to cut into the history of the conflict in Bosnia is no easy matter – this is a conflict with centuries-old roots. But, for our purposes, the declaration of independence by Bosnia-Herzegovina at the end of February, 1992 is a convenient starting point. At that same time, the Bosnian Serbs declared their own separate state. By April of 1992, the Europeans and the United States had recognized Bosnian independence, and the Bosnian Serbs had effectively surrounded Sarajevo and begun the siege that would go on until the Dayton agreement at the end of 1995. Throughout this four-year period there was a high level of conflict on the ground and a high level of interest and involvement by other governments and international organizations.

There are many different ways that one could describe the historical development of the conflict in Bosnia. Others have written detailed narrative accounts. Since my primary interest here is in the overall tempo of the conflict and the dramatic events that have inspired news coverage and opinion

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7 Two other kinds of polling are private political polls and academic polls. Private political polls are very important to policymaking, but do not directly affect the public discussion of public attitudes. Academic polls tend to be more ad hoc and are less likely to cover the breaking issues of the day.

8 One might argue that the ultimate purpose is commercial – to sell newspapers or television advertising – but within the polling organizations, the goal of generating and supplementing news content is probably an adequate representation of interests. A more sociological study of polling activity might be interesting for these purposes.

polling, I will provide a broader visual overview of the critical points in the conflict.

We can begin with the overall level of conflict in the region. A quantitative assessment of this measure exists in the Kansas Events Data System (KEDS).\textsuperscript{10} This is a machine-generated content analysis of the degree of conflict or cooperation represented in relevant stories from the Reuters News Service between January 1992 and December 1995. In Figure One I plot conflict levels over time.\textsuperscript{11} In the KEDS database, hostile actions are measured in terms of both their intensity and direction. Figure One breaks out three different measures of conflict. The thick solid line on the top sums up the average conflict level for all of the actors involved in the Bosnian conflict. The thin solid line is a measure of the intensity of conflict involving an international actor. The dashed line is a measure of the intensity of conflict involving just Bosnia and Serbia.

\textbf{Figure One – Conflict Levels in the Balkans}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{conflict_levels.png}
\caption{Conflict Levels in the Balkans}
\end{figure}

\begin{itemize}
\item KEDS Conflict
\item Serbia-Bosnia Component
\item Int'l Component
\end{itemize}

\begin{itemize}
\item Jan-92
\item Apr-92
\item Jul-92
\item Oct-92
\item Jan-93
\item Apr-93
\item Jul-93
\item Oct-93
\item Jan-94
\item Apr-94
\item Jul-94
\item Oct-94
\item Jan-95
\item Apr-95
\item Jul-95
\item Oct-95
\item Jan-96
\end{itemize}

\begin{itemize}
\item Goldstein and Pevehouse “Reciprocity, Bullying and International Cooperation,” 1997. For a general introduction to the KEDS data see \url{http://www.ukans.edu/~keds/intro.html} [visited January, 2001].
\item The KEDS data normally uses positive numbers for cooperative events and negative numbers for conflict events. I have inverted that scheme to make the chart more readable given that the data is almost always in the net-conflict zone.
\end{itemize}
Figure One displays several noteworthy elements in the dynamics of this conflict. Open conflict between Bosnian Muslims and Serbs broke out in the spring of 1992. The level of conflict held at a relatively constant level for the first year. Starting in the spring of 1993, conflict escalated to a generally more intense level that persisted until January 1995 when a shaky four-month cease-fire negotiated by former President Jimmy Carter was put into place. The cease-fire ended in April 1995 when the Croatians became more directly involved in the Bosnian conflict. The Serbs began shelling Goradze – a UN declared “safe zone” which prompted NATO bombing of Serbian positions. The Serbs responded with a round of hostage-taking and direct attacks on UN peacekeepers. This escalation finally prompted decisive NATO intervention. The NATO action, combined with Bosnian and Croatian advances on the ground, changed the negotiating environment and eventually brought about the Dayton Accord, which was implemented in December 1995.

The Timing of Public Opinion Polls

An assessment of polling behavior requires appropriate data on polling activity. Fortunately, the Roper Center for Public Opinion Research at the University of Connecticut maintains an extensive archive of polling data from the major survey organizations in the United States.12 I extracted from the POLL database every question that included the terms ‘Yugoslavia’ ‘Serb’ ‘Croat’ or ‘Bosnia’ between 1945 and 1997. This yielded 911 items. Seventy-four questions were asked between 1945 and 1988. There were just 13 questions during the Croatian phase of the wars in the former Yugoslavia. The first questions about Bosnia appear in August 1992, six months after the Bosnians voted for independence on the last day of February 1992 and three months after the Bosnian Serbs began shelling Sarajevo in May 1992.

This delay in even asking Americans about the events in Bosnia should raise some questions about the connections between polling and the events on the ground. Nonetheless, the obvious starting point for predicting that polling

will be conducted is the level of conflict in a critical area such as the Balkans. If polling is a direct assessment of Americans’ attitudes toward major foreign policy issues, we would expect to see a straightforward connection between the severity of international conflicts and polling activity. But when we look at the conflict levels as measured by the KEDS project, the relationship between conflict levels and polling activity looks less certain. Figure Two plots jointly the KEDS conflict measure and the number of polling questions asked per month. In this broad chart, polling appears to take place during some of the periods of rapidly increasing conflict, but to be absent from some important periods of sustained and even increasing conflict. For example, there is a notable lull in polling activity between May 1994 and May 1995, despite significant ongoing conflict on the ground.

**Figure Two: Polling and Conflict Levels**

It is important to remember that the Reuters data that serves as the raw material for the KEDs dataset does not necessarily reflect the news that the American people are ultimately getting.\(^\text{13}\) Indeed, American media coverage

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shows a pattern that although clearly related to the KEDS conflict measure, demonstrates some distinctive dynamics.

To consider more carefully the American media, I collected data on media coverage from the Melvyl database at the University of California, which tracks articles in the *New York Times* (including the Book Review and the Magazine), the *Washington Post*, the *Los Angeles Times*, the *Christian Science Monitor*, and the *Wall Street Journal*. The data includes headlines, brief descriptions of the subject matter, and column inches. I extracted all of the articles that included the word “Bosnia” in the headline or description. Between 1986 and 1997 these six major American papers ran 7,757 such articles. 6702 (86 percent) of those articles came in the period between January 1992 and January 1996. Figure Three overlays the total number of column inches in these journals by month over the KEDS conflict index.

**Figure Three: Total Column Inches of Media Coverage.**
Figure Three shows three waves of editorial coverage with a few additional spikes. The big waves are from December 1992 to September 1993, February to May 1994, and June 1995 to January 1996. There are additional spikes in August 1992, (following the intensified shelling of Sarajevo and the first stories using the term ‘ethnic cleansing’); and in December 1994 (when the Bosnian Serbs began threatening U.N. Peacekeepers and there was a surge of talk about sending in NATO troops for a rescue mission). The first two waves in May 1993 and May 1995 correspond to the most significant periods of increased violence. The final wave reflects both the increased violence leading up to the Dayton talks – including the intense NATO bombings of operation “Deliberate Force” – and the news generated by the Dayton Agreement and the decision to send U.S. ground troops as part of the peacekeeping force. News coverage follows the level of conflict relatively closely until the end of 1995 when coverage of American peacekeeping operations continued despite a significant reduction in the level of conflict. Coverage then largely decayed throughout 1996.

Figure Four jointly plots American media coverage and polling activity. When we look at the density of public opinion polling in the context of the media coverage of the war in Bosnia, we see clearly the general relationship between opinion polling and journalism. The conduct of polls roughly follows the overall media coverage. All of the major spikes in poll questions come in the month immediately following a significant increase in news stories.

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14 This threat was averted when former President Jimmy Carter negotiated a cease-fire that also generated a brief flurry media coverage.
Despite the general coherence of media coverage and polling activity, some important anomalies remain. The dramatic increase in news coverage in late 1994, for example, is accompanied by only a small increase in polling activity. The factors that influence the timing of polls can be specified even more finely if we look at the timing of polls relative to some specific kinds of media coverage. In order to do this, I extracted two categories of stories from the database of American media coverage. These categories are: atrocity stories, and stories involving U.S. troops. Atrocity stories were selected based on the appearance of any of six key words or phrases in either the headline or the article description: ‘torture,’ ‘rape,’ ‘ethnic cleansing,’ ‘shelling,’ ‘war crimes,’ and ‘massacre.’ This selector identified 399 stories. The U.S. Troops category was based on stories that included the word “troops” and either of the words ‘U.S.’ or ‘American’ in their headline or description. This isolated 315 stories.

In Figure Five, atrocity stories are indicated by the dashed line. U.S. troops stories are indicated by the solid line. Much of the time these two categories move together and are clearly connected to the larger media waves identified in Figure Three. There are some important distinctions. The beginning of the period is dominated by the atrocity stories. Discussion of the possible use of
American troops does not really start until February 1993. The dual crises of February and May 1994 motivated more stories about atrocities than about the use of American troops. From May 1994 until May 1995 there is a relatively steady diet of atrocity stories, but there is little talk of the use of U.S. troops until the crisis came to a head in the fall of 1995.

With the onset of the Dayton negotiations and the subsequent agreement that required the commitment of American troops as peacekeepers, the discussion of the use of American troops hit a very high point. Atrocity stories also rose at the beginning of this period. If the data were to extended out through 1996 we would see a relatively steady decline in media interest in the plight of U.S. troops serving as peacekeepers in Bosnia, but several months of continuing atrocity stories dealing with war criminals and reflecting on earlier events.

**Figure Five – Column Inches of Atrocity and Troops Stories by Month**

These two categories of stories – atrocities and American troops – correspond roughly to a distinction between a focus on the moral and the material interests in the Bosnian conflict. Figures Six and Seven, respectively, plot the density of polling activity jointly with the column inches of atrocity stories and troop stories.
Figure Six: Poll Questions and Atrocity Stories

![Chart showing poll questions and atrocity stories with corresponding data points.]

Figure Seven: Poll Questions and Troops Stories

![Chart showing poll questions and troops stories with corresponding data points.]
Visually, there is some correspondence between both the atrocity and troops stories and the density of polling. This is not surprising, given that all of these stories connect to the same real world events. Nonetheless the stories about U.S. troops present the strongest visual correspondence to the density of polling. The strength of the relationship between troop stories and polling activity can be confirmed statistically. Controlling for the general level of conflict and the overall level of media coverage, an increase in stories involving U.S. troops has about three times the impact on poll questions as a similar increase in atrocity stories.15

Just as breaking news coverage down into a few broad categories can illuminate the process whereby polling activity is generated, the significance of these effects can be further illustrated by looking at some specific kinds of poll questions. In particular, it is useful to look at the incidence of questions about public approval of presidential policy in the Balkans.

Assessing Approval of Presidential Policy

The general policy approval question gets at the overall level of satisfaction and dissatisfaction with American policy in the Balkans. This item is useful to look at because it is one of the few questions has been asked in roughly the same form repeatedly throughout the Bosnia crisis. With only relatively minor variations, the wording of the approval question was as follows:16

“Do you approve or disapprove of the way (Bill) Clinton/George Bush is handling the situation in Bosnia?”

The approval question was asked a total of 55 times, all of which came between August 1992 and February 1996. Given its general nature, one might expect to see this question throughout the Bosnia crisis. In fact, the distribution of the question over this period is quite irregular. While the approval question was asked 54 times between January 1992 and January 1996,

15 See statistical appendix for analysis.
16 The variations include occasionally identifying Bosnia as part of the former Yugoslavia, or asking about Bosnia and Serbia. Bill Clinton is usually just identified as “Clinton” but sometimes as “President Clinton.” On several occasions, the question is preceded with the phrase “overall…” or “In general…” or the phrase “Now thinking about some issues …” Another kind of variance that is more difficult to assess for the purposes of this study is the kind of other questions being asked in the survey, and thus the context in which the specific approval question was framed.
it was asked in only twenty of the 49 months during that period.\textsuperscript{17} Not surprisingly, the approval question is asked most often during the three waves of media coverage and opinion polling more generally. The clearest relationship, however, again runs with the news stories about the use of American troops. Figure Eight plots the frequency of the approval question and the column inches of stories about U.S. troops.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{troops_stories_and_approval_questions}
\caption{Troops Stories and Presidential Approval Questions}
\end{figure}

The approval question was posed three times in August 1992. The next seven months went by without a single instance. Between April 1993 when NATO began combat patrols over Bosnia and October 1993 the question was posed twelve times – five times just in May 1993. The next wave came between February and July 1994 when the approval question was asked eleven times. There followed an eleven-month period when the question was asked only a single time, in December 1994. Any attempt to construct an ongoing sense of this dimension of public attitudes will be hindered by the nearly year-long interval when there was almost no assessment of public approval. A final

\textsuperscript{17} The approval question was asked one last time in February 1996. It was not asked again through the end of 1997 when I stopped collecting the data.
wave came between June 1995 and February 1996, when the approval question was posed 28 times.

The strong relationship between troop stories and the approval question can be seen more clearly in Table One. This is a simple two by two table that shows the relationship between the months when there were stories about troops and when the approval question was asked.

Table One: Months with Troops Stories and Approval Questions

<table>
<thead>
<tr>
<th>Troop Stories Present</th>
<th>Approval Question Asked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes: 18, No: 8</td>
</tr>
<tr>
<td>No</td>
<td>Yes: 2, No: 21</td>
</tr>
</tbody>
</table>

Polling decision makers were not prompted to measure general approval of presidential policy on Bosnia simply by the existence of significant conflict in Bosnia. Similarly, as in the overall trend data, writing stories about atrocities also failed to motivate a desire to assay public attitudes. Table Two shows that there was a consistent presence of atrocity stories, but that it bears little correlation with the presence of the general approval questions. These data reinforce the argument that the pollsters were most interested in assessing
attitudes when the question of sending American troops abroad was on the table.

**Table Two: Months with Atrocity Stories and Approval Questions**

<table>
<thead>
<tr>
<th>Approval Question Asked</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

**Conclusions**

Ultimately, of course, we should not be surprised to discover that polling is generated by real world events. It would be the rare journalist who would have been seized with the desire to find out what people were thinking about the possibility of intervention in the Balkans in 1983. Nor would the measured attitudes of the public about such a remote issue have any real meaning when most people did not even know where the Balkans were, let alone what kinds of issues might lead to an interest in intervention there.

However, the data from the Bosnia case study suggest that it is not just any important event that generates public opinion polling. While in this case the broad shape of poll-taking follows the trends of media coverage, it was most intense on those occasions when there was the most discussion of sending American troops into harm’s way. This more material interest played a
greater role than the moral interest in the kinds of atrocities that were such an integral part of the Bosnia media coverage.

Richard Sobel has argued that the *a priori* focus of media elites on the ‘Vietnam Syndrome’ led to biased reporting on the results of public opinion polls about Bosnia. News stories tended to emphasize public opposition to the use of American military force in Bosnia, even when polls showed a plurality of support for intervention along with the allies. My findings in this analysis suggest that such biases were also present when media elites made the decision to conduct an opinion survey in the first place. As a result, we have, for example, no general assessment of approval of presidential policy on Bosnia from those periods in which the use of U.S. troops was not an active item of public discussion.

Media elites not only control the process of reporting poll results, but they also control the process when and whereby polls are conducted. During the Bosnia crisis between 1992 and 1996, these decision-makers appear to have been most strongly interested in public attitudes when the use of ground troops has been high on the national agenda. In other times and on other issues there may be different underlying interests that motivate polling behavior. The results in this case that I report here suggest that further work to explore the causes and effects of poll timing are likely to be fruitful. The central point of my argument is the importance of paying attention to these underlying interests and their effects on when and why opinion polls are conducted. Given the increasing importance of polling to political life in modern democracies, enhancing our understanding of the polling process itself is imperative.

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Statistical Appendix

The relationship between troop stories and polling density can be roughly confirmed with a poisson regression, which is the appropriate technique for a dependent variable that is a non-negative event count. Some manipulation of the data is required since the measure of troops stories evinces some serial correlation. This problem can be controlled by looking at the monthly change in troops stories instead of the absolute level. Once differenced in this way, the troops stories data series no longer shows serial correlation. None of the other variables exhibit problematic underlying trends (based on Dickey-Fuller tests with MacKinnon critical values at the .01 level).

The unit of observation is the month, so each of the variables is aggregated over a month. This gives a total of 49 observations between January 1992 and January 1996 inclusive. The first two observations are lost in the lagging and differencing process, leaving 47 observations. The dependent variable is the number of poll questions per month. The independent variables are the total column inches of stories, the column inches of atrocity stories, the change in column inches of troop stories, and the KEDS measure of conflict. Each of the independent variables is lagged one month. Overall, the regression is highly significant with a pseudo R\(^2\) of 0.56.

The estimated Poisson equation is:

\[
\ln(\text{questions}) = 0.9277 + 0.0018(\text{conflict}) + 0.0004(\text{total inches}) + 0.0005(\text{atrocity}) + 0.0016(\text{troops})
\]

All of the coefficients except for the atrocity stories coefficient are significant at the .0001 level. There is some multicollinearity, which probably contributes to the weak showing of the atrocity measure, since it is has a 0.53 correlation with the measure of total column inches. None of the other correlations is greater than 0.3. Running the regression without the total column inches variable allows the atrocity measure to achieve significance, but its effect on the number of questions remains about 30% below the effect of troops.
Bibliography


