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Tracing the Time Lag in Agenda-Setting

Analysis of Charlotte and Syracuse data suggests it takes two to six months for topic to be registered among first few by public.

► Agenda-setting asserts that the mass media influence public opinion, if not by affecting actual decisions, at least by influencing which topics will be registered on the public roster of salient, debatable issues. This media function, however, raises a knotty question which is the primary focus here: How long does it take before an issue receives public recognition?

Knowing the time required for the mass media to bring a topic to the public's attention is important from both a substantive and methodological standpoint. Locating the interval in which the media agenda has maximum cumulative impact on the public agenda has far reaching implications for the broad framework of communications theory.

Communications theorists learned early that message effects were neither compulsory nor immediate. Hovland called the delay between source presentation and receiver acceptance a "sleeper effect."[1] Key noted a difference between short and long-term effects of mass communications and speculated that day-after-day repetition may have especially noticeable effects on attitudes.[2] Lang and Lang write of the mass media's structuring of issues and personalities in elections, not overnight but gradually over a period of time.[3]

> All news that bears on political activity and beliefs—and not only campaign speeches and campaign propaganda—is somehow relevant to the vote. Not only during the campaign but also in the periods between, the mass media provide perspectives, shape images of candidates and parties, help highlight issues around which a campaign will develop, and define the unique atmosphere and areas of sensitivity which mark any particular campaign.

Especially in the case of agenda-setting influence by the press, the questions of time lag and cumulative impact are highly salient, both for the descriptive precision of the theory and for methodological decisions about what time span the researcher should use in mass media content analysis.

It cannot be assumed that a neat pattern will be established in any single specific week during which the content of the news media will yield the same, or a highly similar, pattern of salient issues corresponding to the public agenda. Instead the hypothesis to be tested here suggests that a cumulative time span will be found by combining several weeks of news content—or even several months—when the menu of topic presentation in the media most closely resembles the emerging public agenda.

In short, this is a report on a series of secondary analyses and content analyses designed to identify the period in time during which the media set the public agenda.

Methodology

The original studies used to obtain pub-

[1] Carl Hovland, A.A. Lumsdaine and F.D. Sheffield, *Experiments in Mass Communication* (Princeton: Princeton University Press, 1949), pp. 273-74.

[2] V.O. Key, Jr., *Public Opinion and American Democracy* (New York: Alfred A. Knopf, 1961), pp. 402-03.

[3] Kurt Lang and Gladys Engel Lang, "The Mass Media and Voting," in Eugene Burdic and A.J. Brodbeck, eds., *American Voting Behavior* (Glencoe: The Free Press, 1959), p. 226.

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lic agenda issues were the Charlotte Voter Study on the 1972 Presidential Election and the Syracuse Sophomore Study in October, 1973. The Charlotte design is detailed elsewhere[4] but can be briefly described as a panel study of a random sample of registered voters in Charlotte, N.C. The Sophomore survey was designed as a methodological study with respondents limited to sophomore male students who resided in dormitories on the Syracuse University campus during the fall semester, 1973. A total of 302 respondents completed the interview during a time when Watergate, the Yom Kippur Egypt-Israeli War and several other domestic issues were paramount, but there was no national election.

The two surveys are quite dissimilar then, with the June interview wave of the Charlotte study some six months prior to a national election, the October Charlotte wave at the peak of a national election and the Sophomore study interviews conducted in a non-election year but during a time when national and international events were at fever pitch.

The media agenda to match these survey dates was obtained by a content analysis of two national news magazines: *Time* and *Newsweek*. Coders counted the number of stories included on each public interest topic and the total number of column inches devoted, whether it was printed matter, graphs or photographs. Intercoder reliability for the content analysis was +.92. The total number of column inches per issue of the magazines provided not only the rank-order, but an acceptable interval scale of agenda topics for every week. (It is interesting to note in passing that a simple count of stories would be sufficient for measuring the media agenda. Comparison of the number of stories and number of column inches devoted to the topics on the agendas yielded an r of +.90 across all topics.)

Content analysis of the national news magazines was made for six months prior to, and three months following the time interviewers for the studies were in the field, (June 1972 and October 1972 for the Charlotte study and October 1973 for the Syracuse study). Interval scales were thus established for the number of respondents in Charlotte and Syracuse who mentioned topics as being most important (*i.e.*, three measures of the public's agenda), and the raw column inches on these topics in the national magazines for the time frames surrounding the three survey periods (*i.e.*, the media agenda).

Justification for using news magazine content to represent the media agenda is both pragmatic and empirical. First, the necessity of analyzing content over long spans of time virtually dictated use of condensed media sources. The logistics of handling the voluminous daily content of newspapers or even TV simply were not feasible. Second, McCombs and Shaw[5] found substantial correlations between the content of news magazines and other news media.

Findings

When the media content was combined in systematic monthly increments with the Syracuse sophomores' public agenda, a striking pattern of stability results in the Pearson correlations between media and public agendas. In Table 1, Column 1, the correlations increase monotonically as the time span cumulates backward in time from the interview period. There is a rapid rise in the correlation coefficients from the interview period (at +.45) to a time two months prior to the interviews (cumulative interview through 2nd month prior at +.67). After that, the correlations continue to increase, but at a much diminished rate.

In all, the maximum time frame during which the media agenda matches the public agenda is a four-month period extending from at least six months prior to two months prior to the interview period. Since the content analysis data go back only six months prior to the interview period, the earliest limit is largely a function of the study's cutoff date for coding.

The pattern of correlation also demon-

[4] The Charlotte Voter Study is the data base used for the analyses reported in Donald L. Shaw and Maxwell E. McCombs, *et. al.*, *The Emergence of American Political Issues: The Agenda-Setting Function of the Press* (St. Paul: West Publishing, 1976).

[5] Maxwell E. McCombs and Donald L. Shaw, "The Agenda-Setting Function of Mass Media," *Public Opinion Quarterly*, 37:176-187 (Summer 1972).

TABLE I

Correlations Between Media Agenda and Sample Respondents' Agenda by Months Before and After Survey Interviewing

	Syracuse Sophomore Survey Data	Charlotte Survey's June Wave	Charlotte Survey's October Wave
Cumulative Periods Before			
Interview through:			
1st month prior	+.45	+.05	+.13
2nd month prior	+.67	+.24	+.09
3rd month prior	+.85	+.13	+.13
4th month prior	+.88	+.27	+.16
5th month prior	+.87	+.33	+.21
First month prior through:			
2nd month prior	+.67	+.38	−.01
3rd month prior	+.78	+.21	+.08
4th month prior	+.79	+.36	+.12
5th month prior	+.80	+.40	+.19
Second month prior through:			
3rd month prior	+.78	+.20	+.13
4th month prior	+.78	+.38	+.17
5th month prior	+.80	+.42	+.25
Third month prior through:			
4th month prior	+.77	+.26	+.28
5th month prior	+.80	+.36	+.36
Single Months			
3rd month before interviews	+.77	−.41	+.24
2nd month before interviews	+.72	+.55	+.01
1st month before interviews	+.24	+.15	−.03
Interview period	+.44	−.09	+.34
3rd month after interviews	+.05	−.45	+.91
Cumulative Periods After			
Interview through 1st month after	+.67	−.20	+.17
First month through 2nd month after	+.47	−.35	−.55 +.55

strates that more than the cumulative impact of mass communication is involved. There definitely is also a time lag in the movement of issues salience from the media agenda to the public agenda. The cumulative three-month impact of media (from two months prior to the interviewing period, through the interviewing period of about a month's duration) yields an r of +.67. The correlation based on the media content from the second month alone—no cumulation—is +.72, essentially the same. Going back four months (from the end of the interviewing period through the third month prior), the cumulative r is +.85, and the isolated r for the third month prior to the interviewing period is +.77, again highly similar. However, given a two-to-three-month lag, other patterns in the table's first column also demonstrate the cumulative effects of mass communication across time.

As further corroboration of the agenda-setting effect of mass communication, there is a rapidly declining correlation series following the interview period as measurements are taken at more distant time intervals. When the magazine agenda is matched with the public agenda for the third month after interviews, there is a near-zero correlation between the two agendas.

Had the proof of the hypothesis rested on the Sophomore data alone, we would

TABLE 2

Percent of First Responses to Agenda Questions in the Charlotte Study's Waves

	National Policy	Non-National Policy Issues
June (n = 358)	59%	41%
October (n ◘ 269)	75	25

Salient Topics in Syracuse Survey, 1973. Watergate, Middle East War, Agnew Vice Presidency, Rising Prices, Energy Environment.

Salient Topics in Charlotte Survey, 1972. Vietnam, American relationships with Russia and Red China, Watergate, Environment, The Economy, Drugs, School Busing.

accept a period of from at least six months to two months before the interview period as the optimal agenda-setting period. But the Charlotte data modify his finding.

Data based on the June wave of the Charlotte study, presented in the table's second column, show patterns moderately similar to those of the Syracuse study. Generally, correlations are higher for the earlier time frames before the interview period. In fact, the correlation of +.42 for the period from five months to two months before the interviews is the single highest correlation. But the smooth, monotonic pattern of the Syracuse study is absent.

Data based on the October wave, presented in the table's third column, also show some inconsistencies. The first set of cumulative data (interview period through fifth month prior) correlations shows no evidence of a cumulative time trend. There is a cumulative, monotonic trend in the next three sets in column three. The strength of the correlations is similar to the Charlotte June wave, but much weaker than for the Syracuse Sophomore Study.

Most likely, the key to the differences in these patterns, especially the differences in the strengths of the correlations, lies in the social context. First, the sophomore group has the advantage of proximity. Selected for its homogeneity, the group consists of persons with mutual interests and with maximum interaction potential. It seems realistic to attribute the sophomores' pattern of stability to an abnormal degree of interpersonal communication, due to the contrived lifestyle of the college campus. It is not difficult to envision a group of males who live in dormitories, eat in the same dining halls and attend many of the same classes as constantly engaging in "repetitive" conversations where the output of one session becomes the input for the next. This repetition of salient issues would diminish the possibility of divergent attitudes being held by individuals within such a tighlty-knit group and would contribute to the sizeable correlations between personal and media agendas.

The Charlotte data are taken from a time when politics is highly salient to the media if not to all the electorate. In contrast, the Syracuse survey focused chiefly on two political issues: the Middle East War, the kind of event that moves rapidly onto everyone's agenda, and Watergate, an issue with which the media had labored for over a year to place on the national agenda.

In short, we are comparing a period when the political field was largely left to the media, with an election period when both numerous other forces are at work on voters' agendas and when the high salience of politics for the media generally outweighs its salience among the electorate.

A closer look at shifts in voter agendas during the presidential campaign revealed the Pearson product-moment correlation between the *voter* agendas for June and October in Charlotte is +.85. There is a decline of more than a third in the number of respondents who mentioned topics other than those measured as the five most salient issues. We see in Table 2 that public agendas become oriented toward a small number of national issues as the Presidential election approaches.

From these findings it may be hypothesized that a Presidential election has a "nationalizing" effect on the population which reduces variation in issues considered important and creates a more unified topic base of interest in the electorate. This hypothesis does not imply that everyone begins to think in a singular way, but that more people begin to think about the same

public issues as the election draws nearer. Still, and this is most important, the Presidential election cannot be considered a really salient public issue even as election day approaches. Herein lies the secret of the inconsistencies found in the Charlotte data.

As the election nears, media attention to it increases. By June the election issue is already at second place among the media agenda topics, and by October it is a hands-down first place topic for media coverage. But the public places no such salience on the election issue. In June the topic is last of a five-item public agenda list, and by October the election has only risen to fourth place on the slate (no table presented). It is the election issue which makes the Charlotte data inconsistent with the Sophomore study findings and makes it difficult to isolate an optimal agenda-setting time. When the election issue is dropped from both agendas for the October wave (no table presented), all correlations rise above +.77 (most are at +.96) from their low levels seen in Table 1, columns 2 and 3. Of course, differentiation is lost among the remaining four, highly related topics.

Despite the difficulties of comparative analysis on the time lag involved in the agenda-setting process, these two data sets, in sum, suggest an approximate two-to-six month period for the translation of mass media agenda to the public agenda.

The suggestion is taken guardedly, however, as the study deals only with a limited number of public agenda issues at two points in time. The findings should be viewed more as a justification that time lag studies be continued in the hope that a specific period will be isolated for varying types of issues.

A Note of Caution

It is necessary to devote some attention to what this study has, and has not, shown. The study has indicated that it *might* take from two-to-six months for an *average* national interest topic to be registered among the first few such topics on peoples' minds. The two studies from which this tentative conclusion is drawn have the disadvantages of being local rather than national, based on small samples, and designed originally for purposes other than the one to which they are being put in this secondary analysis. Hence, any conclusions are little more than assumptions needing replication in larger studies designed for that specific purpose.

In addition, the present findings only relate to an "average" national interest topic, if there is such a topic. The authors have stated their belief that Presidential elections are anomalies because the mass media attention devoted to them is much greater than the public's interest in them. And other irregularities also exist: The 1973 Middle East War was second on the agenda of Syracuse sophomores, although it had occurred only two weeks prior to the survey's fieldwork. So both of these issues would belie the conclusion that the optimal agenda-setting period for all topics is between two and six months.

The present study also has not provided much of a clue about the process actually taking place. We don't know if it takes several months of media coverage before an issue sinks in, or if the process is one of redundancy—the continued hammering of media messages. The contribution of interpersonal communication is noted in the study, but not fully explored. Hence, among its other shortcomings, this investigation identifies but does not evaluate the effects of intervening variables such as the type of national interest topic and the media redundancy-interpersonal communication process.

The study is methodologically valuable in its suggestion that agenda-setting researchers look a few months prior to their survey fieldwork for the best match between the media agenda and the public's agenda. But, the present findings are too tentative to suggest that the Atomic Energy Commission or the Heart Association should begin their media campaigns four months prior to an anticipated public action.