News Literacy Assessment

Prepared by Christopher Weber, 6/26/2012

Overview

The report is divided into several sections: (1) Methods, (2) Media Consumption, (3) Media Perceptions and Trust, (4) Political Interest, Trust, and Knowledge, and (5) Information Experiments.

*Relative to the control group, the news literacy group was more likely to consume an array of media. However, this effect wanes one year after the course.

*Relative to the control group, news literacy students were more likely to demonstrate enhanced political engagement and knowledge across the three waves.

*The six information experiments demonstrate somewhat mixed findings. In several cases, news literacy students demonstrated a superior ability to deconstruct news stories. In other instances, news literacy students were as adept at story deconstruction relative to the control group.

After a description of the methods and these results, we present a detailed summary and future steps.

Methods

To examine the effects of the News Literacy curriculum, a three-wave panel was designed to assess the impact of the class on media consumption, civic engagement, and news literacy skills. Survey respondents were Stony Brook University students who were either enrolled in the news literacy course or were in the control group. The control group consisted of non class-taking students enrolled at Stony Brook University. The survey was administered by the Stony Brook University Center for Survey Research. It was administered three times; once at the beginning of the fall 2010 semester, again at the end of the fall 2010 semester, and one year later, at the end of the fall 2011 semester. A total of 1,002 participants completed the study in the first wave. Five-hundred-and-seven of these participants (51%) completed only the wave I survey, 303 (30%) completed both the wave I and wave II survey, and 192 completed the wave I, II, and III surveys (20%). Thus, there was substantial attrition in the survey, which is expected given the fact that this survey was conducted over the course of a full year. Only people who completed the survey at wave I were asked to take the survey during wave II. Likewise, there were no cases of a participant completing the wave I and wave III survey, yet missing wave II.

Sample

Control versus News Literacy Participants. The survey was administered to a control group of 389 participants (39%) and 613 participants enrolled in the news literacy course (61%). The Center for Survey Research obtained a control group by sampling from the Stony Brook University Registrar's file after students enrolled in the course were removed from the file. Selection was based on three characteristics: gender (male or female), class standing (freshmen or other) and college (College of Arts and Sciences or other).

Of the 389 participants in the control group, 67% completed only the wave I survey, 16% completed the wave I and wave II survey, and 17% completed the survey at all three waves. Of the 613 news literacy students, 40% completed only the wave I survey, 39% completed the wave I and wave II surveys, and 21% completed the the survey at all three waves. There is thus a somewhat higher rate of attrition among the control group relative to the news literacy group (χ^2 (2)=82.92, p<0.01).

Since we are primarily concerned with changes over the course of the three waves, I only analyze the 192 participants who completed the survey on all three occasions (control *n=*65; treatment *n=*127). This sample was relatively diverse. Thirty-two percent identified as Asian-American, 5% as African-American, 15% as Latino, 47% as white, and the rest identified as another ethnic category. There were non-significant differences between news literacy and control conditions with respect to ethnic identification (χ^2(9)=6.72, p=.66). Forty-nine percent of the sample identified as female, 51% as male, again with non-significant differences between news literacy and control conditions (χ^2(1)=1.36, p=.24). The vast majority -- 87% -- of respondents were in their first academic year when they completed the survey (at wave I). There were slight differences in in academic year across control and news literacy conditions (χ^2 (1)=7.27, p<0.06), with relatively more news literacy participants completing the survey in subsequent waves.

Measures

The survey consisted of several tests to differentiate reliable information from unreliable information; the survey also included a battery of questions on media consumption, citizenship and civic engagement. *Media Consumption* was measured with several question inquiring about traditional and new media consumption. Each question employed a similar prompt, "On how

many days in the past week did you...," followed with *watch news, late night comedy, local news, cable news, late night news, radio news, read the paper, and collect information online.*" These questions were asked on an eight-point scale from "Not at all" to "7 days."

Media Trust was measured using responses to three questions, "How often do you trust news stories and reports published in online or print NEWSPAPERS?"; "How often do you trust news stories and reports that are posted on INTERNET news sites?"; "How often do you trust news stories and reports that appear on network and cable TELEVISION?"

Participants also completed several questions on the role of media in democracy. Media as a *watchdog* was ascertained from a single question, "Do you think that by closely examining leaders, news organizations keep political leaders from doing their job?" Whether the media protects democracy was measured from a single question, "In general, do you think the media protects or hurts democracy?" Finally, media accuracy was ascertained from two questions, *Bias,* "In presenting political and social issues, do you think the media deals fairly with all sides or tends to favor one side over another?" In the analysis, this variable was recoded as 0 or 1, where 1 indicates the media is fair and unbiased. *Ideological bias* was approximated from: "Do you think that news organizations favor conservative over liberal views, liberal over conservative views, or treat liberal and conservative views much the same." This variable was recoded as 0 or 1, where 1 indicates the media is ideologically neutral. *Influence* was measured with "Do you think the news media has too much, too little, or about the right amount of power and influence on what happens in government and public affairs?" This variable was recoded as 0 or 1, where 1 indicates the media has the right amount of power and influence.

Knowledge. Political knowledge was measured with four factual civics and current affairs questions, "What party controls the U.S. House of Representatives?" "What job or political office does John Roberts hold?" "What job or political office does Joseph Biden hold?" Who is the current governor of New York State?" Answers were scored as correct or incorrect, and the average number of correct answers was calculated for each participant.

Political Interest. A scale of political interest was generated by averaging scores on two items, "How much have you been paying attention to the actions of the Obama administration?" and "How well would you say you understand the important issues currently facing the nation? *Trust*

in government was measured from reactions to a single item. "How much of the time do you think you can trust the government in Washington to do what is right?"

Results

News Literacy and Media Consumption

Table 1 presents the means for individuals in the control and news literacy group in the three waves.

	Control, Wave I	Control, Wave II	Control, Wave III	Class, Wave I	Class, Wave II	Class, Wave III
News	2.35	2.18	2.66	3.15	3.36	2.53
Late Night Comedy	0.78	0.50	1.1	0.64	1.06	1.25
Late Night	0.55	0.97	0.97	1.13	1.17	1.17
Local News	0.85	0.92	0.83	1.59	1.66	1.16
Cable News	1.33	1.25	1.29	1.70	1.75	1.36
Radio News	0.59	0.84	1.22	0.40	0.46	0.64
Newspaper	1.83	1.17	1.17	1.73	1.96	1.63
Internet	3.60	3.80	3.64	3.82	4.81	3.80

Table 1: Media consumption behavior. Scores represent the average number of days per week each media type was consumed.

Several interesting trends are evident in this table. First, comparing waves I and II for the control group, there does not appear to be large differences across a host of media consumption behaviors. Indeed, general news consumption decreases from wave I to wave II, as does late night comedy consumption, cable news consumption, and newspaper consumption. For four of the eight dimensions, news media consumption declines. However, comparing waves I and II for the news literacy condition, there is an increase in media consumption. News consumption increases from 3.15 days/week to 3.36 days/week; internet news consumption increases from 3.82 to 4.81 days/week. For all eight of the news media habits, consumption increases.

Second, there is a half-life associated with the increase in news media consumption among news literacy folks. There is a decrease from waves II to III in the news literacy group for the majority

of media consumption behaviors. Notwithstanding, for six of the eight behaviors, news media consumption is higher among the news literacy group.

In sum, the News Literacy course generated more attention to the media relative to the control condition, and while this attention waned over the course of the following year, it still out rivals attention among the control condition.

Trust and Media Perceptions

Trust in media was measured with responses to three questions, *trust in newspapers, trust in internet news sites,* and *trust in network and cable television news.* These items were combined into a single scale that varies from 0 to 1, where high scores denote more trust in the media (alpha[wave I]=0.81; alpha[wave II]=0.80; alpha[wave III]=0.78)

Table 2 illustrates there is little effect of the course regarding general trust in the media. Participants in the control group are approximately as likely to trust the media as participants in the news literacy group, and this effect is relatively stable across the three waves. The News Literacy course does lead to much more favorable perceptions of news media.

The entries for *Watchdog, Protect Democracy, Unbiased, Ideologically Neutral* and *News Influence,* demonstrates more positive evaluations of the media, an effect that does not completely disappear over the one year period between waves II and III. For instance, the proportion of people in the control group who believe the media play a watchdog role increases from 60% to 66% between waves I and II; this effect decreases to 59% one year later. On the other hand, the news literacy class leads to an increase from 69% to 84%, and one year later, some of the effect remains (79%). This trend was observed for every item among the news literacy group. Moreover, some of this effect remains one year later, as the wave III scores are always higher than the wave I scores in the news literacy group. The news literacy course leads to a greater belief that the media protect democracy, on average, media are non-biased, and wield an appropriate amount of influence in governmental affairs.

	Control Wave I	Control Wave II	Control Wave III	Class Wave I	Class Wave II	Class Wave III
Trust	0.61	0.65	0.59	0.66	0.67	0.65
Watchdog	0.60	0.66	0.62	0.69	0.84	0.79
Protect Democracy	0.65	0.60	0.66	0.72	0.93	0.85
Unbiased	0.31	0.32	0.31	0.31	0.56	0.39
Ideologically Neutral	0.13	0.09	0.23	0.13	0.42	0.28
News Influence	0.29	0.28	0.28	0.32	0.56	0.42

Table 2: Trust and Media Perceptions. Trust represents the average score on a zero to one scale, the remaining entries are proportions that agree with the item. For instance, "Ideologically Neutral" represents the proportion of participants who feel the media is ideologically neural by leaning to neither the left or right.

Political Knowledge and Civic Engagement

Table 3 presents the consequences of the course, relative to the control condition, for political knowledge, political interest and trust in government. Political knowledge is the proportion of items correct on a four item political knowledge quiz. Political interest was constructed from two items that were averaged into a general political interest scale, which varies from 0 (minimum interest) to 1 (maximum interest) (alpha[wave I]=0.76; alpha[wave II]=0.72; alpha[wave III]=0.72). Finally, trust in government was measured from reactions to a single item. "How much of the time do you think you can trust the government in Washington to do what is right?" The table presents the proportion of participants who chose "Just about all the time," or "Most of the time."

Political knowledge was quite high for both control and News Literacy groups, and it does increase by a small amount (2%) among the news literacy students, contrasting waves I and II. However, the gain is lost one year later, with political knowledge decreasing to 71% correct. On the other hand, there was a decrease of 7% contrasting waves I and II among the control group. Likewise, contrasting waves I and II, political interest increases by small amount (0.02 points) in the news literacy group, while decreasing in the control condition. Finally, trust in the government to "do what is right" decreases in both the control and news literacy groups across the three waves.

	Control Wave I	Control Wave II	Control Wave III	Class Wave I	Class Wave II	Class Wave III
Knowledge	0.71	0.64	0.65	0.73	0.75	0.71
Political Interest	0.64	0.56	0.56	0.50	0.52	0.52
Trust in Government	0.30	0.26	0.27	0.34	0.32	0.28

Table 3: Knowledge, interest, and trust in government. Knowledge is the proportion of correct items on a political knowledge quiz. Political interest is a scale of political interest that ranges from 0 to 1, with high scores denoting more interest. Trust is the proportion of people who trust the government.

The Quality of Information: Six Experiments

The goal of the news literacy program is to train consumers to differentiate high from low quality information. To ascertain whether news literacy students are better equipped to perform this task, relative to the control condition, six experiments were generated. In the first experiment, *The Needle Exchange,* we randomly assign participants to a condition where the story cites a reliable versus less reliable source. In the *Social Media* experiment, participants are randomly assigned to a story about a fictitious researcher who offers a personal opinion or relies on scientific research. In the third experiment, *The Bank Merger* experiment, we vary whether a source does or does not have a vested interest in a fictitious merger between Citibank and Citizens Bank. In the *Blog* experiment, we include or exclude links that would allow the respondent to fact check. The *Opinion* experiment varies whether information is presented in a standard news piece versus an opinion column. In the final experiment, *The Broadcast Media* experiment, we do not randomly assign participants to a print news story, but instead, participants judged whether the conclusions from a broadcast news story were fair and accurate.

Across these experiments, we anticipate a common theme: Participants in the news literacy should be better able to evaluate the quality of sources. Accordingly, the differences between the low and high quality source should be greater in the news literacy condition, relative to the control condition. Moreover, these differences should be greater in the wave II and wave III surveys, relative to the first wave interview.

The Needle Exchange

Participants were asked to read a news story about a needle exchange program in Maine. Each individual was randomly assigned to one of two stories. The only thing that varied was the expertise of the source. Thus, in one version, the story cites a reliable source (Rebecca Haag from the School of Public Health) or a less reliable source (Rebecca Haag, a concerned citizen). For example,

"In previous research, we found that student exposure to neighborhood risks is not significantly influenced by distance. Rather, urban foot traffic pattern analysis shows that even at distances of a half-mile needle exposure can be high if the exchange center or an active drug area is located between the school and the child's home," said Rebecca Haag, a researcher at the School of Public Health at the University of Maine.

Versus,

"Distances don't matter," said Rebecca Haag, a concerned and active citizen. "Even a half mile away, if the exchange center or an active drug area is on the child's way home, needle exposure can be high."

To simplify the analysis, we explore whether participants believed the evidence substantiated the conclusion in the article *and* if the source consulted in the article was judged to be reliable. To do this, two scales were constructed, one for whether the appropriate conclusion was reached and a second based on the perceived fairness and accuracy of the source. An *Evidence* scale was created by averaging responses to four items (alpha[wave I]=0.74; alpha[wave II]=0.83; alpha[wave III]=0.84): "In the article, how strong is the evidence supporting the conclusion that the "1000 foot" rule will be ineffective in protecting children from drug areas?"; "How reliable is the information in the article?"; "This is an example of good reporting"; "The statements in this article were supported by facts." The *Fairness* scale was constructed by averaging responses to two items (alpha[wave I]=0.61; alpha[wave II]=0.68; alpha[wave III]=0.62): "How credible are the statements made by Rebecca Haag, the individual cited in the story?" and "How reliable is the information in the article." Both the *Evidence* and *Fairness* scales were then recoded to vary from 0 to 1, such that high scores denote stronger evidence and fairness, respectively.

Figure 1 displays the scores on these scales across the quality of the story, crossed with whether one is in the News Literacy course and the experimental condition in which respondents were assigned. The blue bar represents the assessment at wave I, the red bar is wave II, and the green

bar is wave III. The "Less Reliable" portion of the figure refers to participants in the less reliable source condition, whereas the "More Reliable" portion of the figure refers to participants in the more reliable source condition.
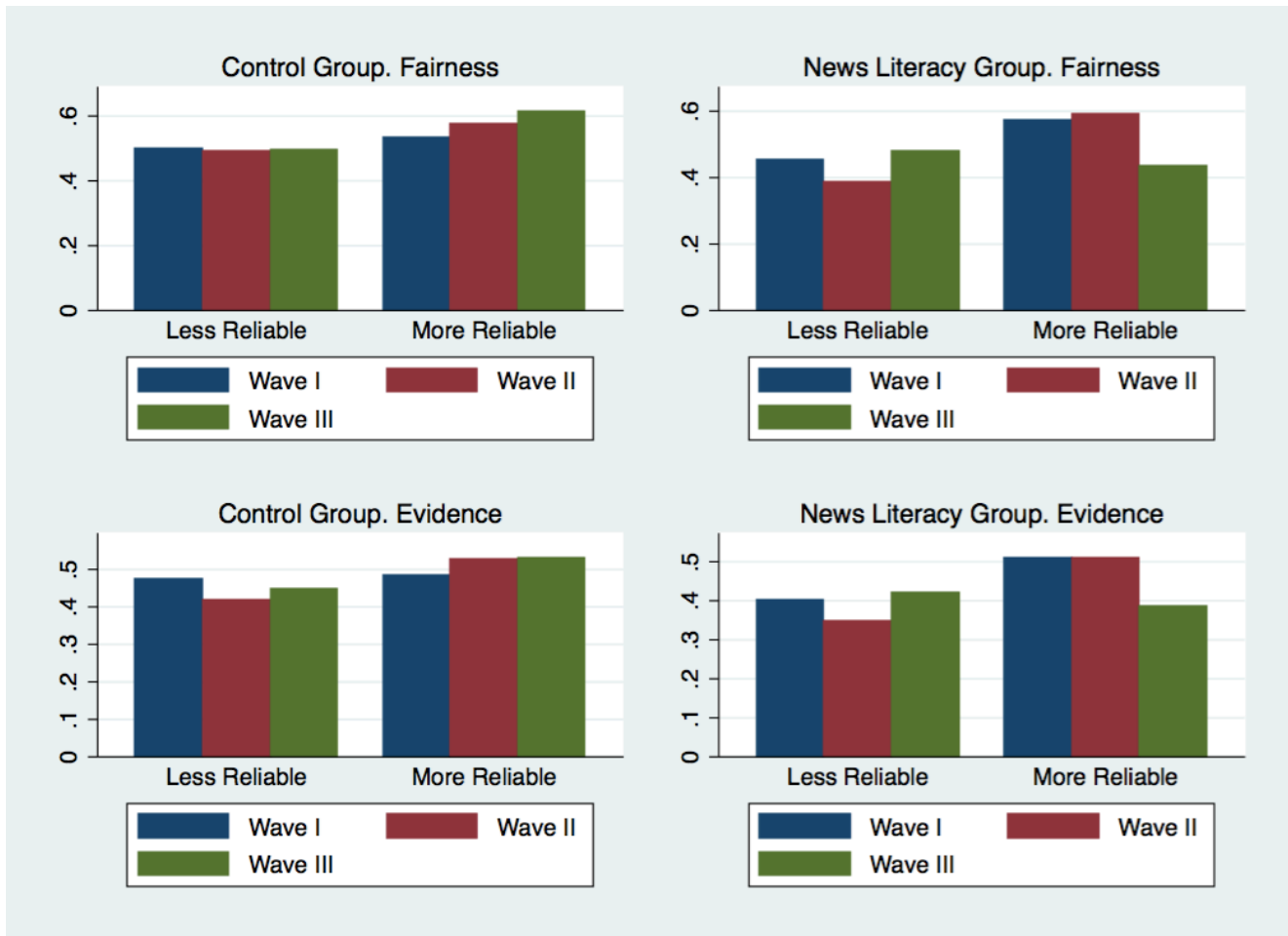

Figure 1: Perceived fairness and strength of evidence, across waves and news literacy versus control groups. Needle Exchange Experiment.

The wave II and wave III bars should be greater in the "more reliable" source condition relative to the "less reliable" condition. Why? This indicates that participants rate the story as more fair and the evidence is stronger when the source is more reliable. Moreover, participants in the news literacy group should be *most* likely to rate the story as fair and the evidence as strong in the "more reliable condition" relative to the control condition. In other words, the bars should be highest in the rightmost column and shortest in the second to rightmost column, the "less reliable"/News Literacy column.

There is weak evidence supporting this expectation. Comparing waves I and II, the news literacy group is better able to appropriately evaluate the source as fair and the evidence as strong, when in the more reliable news condition. Indeed, the red bars in the News Literacy/"more reliable" condition are taller than the red bars in in the Control/ "more reliable" condition. However, this effect dissipates one year later. In fact, the control group is better able to pick up on the reliability of the source. They rate the more reliable source as more reliable, relative to the news literacy group, and control participants are about as likely to rate the less reliable source as reliable, relative to the news literacy group.

Social Media

We conducted a similar second experiment by again asking people to read a news article. This time it was entitled, "Does Technology Reduce Social Isolation?" We created a "high quality" version and a "low quality" version. We did this by varying whether a (fictitious) senior researcher at the Pew Internet and American Life Project cited scientific research or personal anecdote in reaching a conclusion about the societal impact of social media.

Since the expertise of the source was held constant, we only analyze whether the conclusions rendered in the story were based on strong evidence. We made slight modifications to the *needle exchange* questions to reflect the characteristics of this story, but otherwise, the same four questions and response options were identical. An *Evidence* measure was constructed by averaging individual responses to these questions (alpha[wave I]=0.86; alpha[wave II]=0.87; alpha[wave III]=0.89). The scale was then recoded to vary from zero to one, where high scores simply mean the evidence was strong. Figure 2 displays the averages across conditions and the two groups, news literacy and control participants.
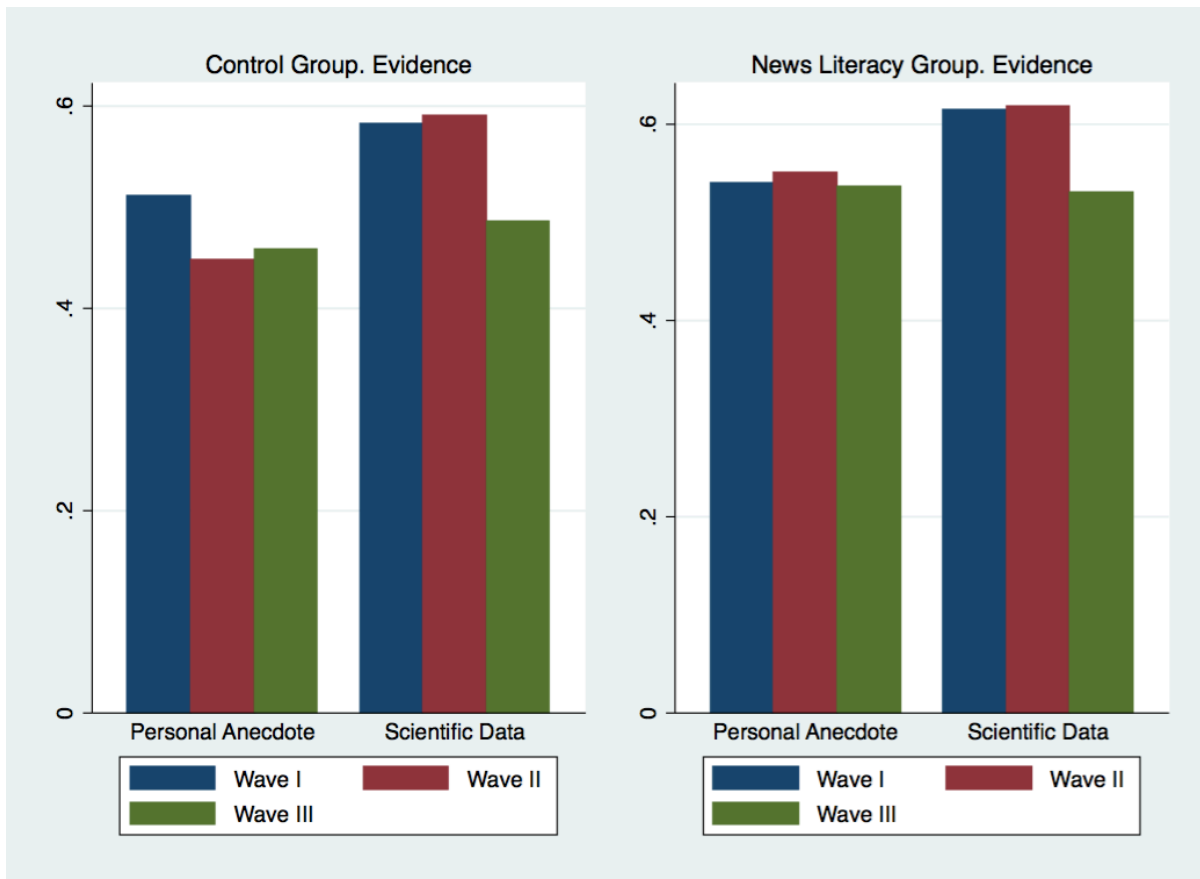
Figure 2: Perceived strength of evidence, across waves and news literacy versus control groups. Social Media Experiment.

The figure illustrates that, contrasting waves I and II, news literacy and control group participants appropriately rate the scientific data as stronger evidence relative to personal anecdote. News literacy students also rate the evidence as slightly stronger in the scientific data condition at wave II. However, much of this effect dissipates at wave III. In fact, examining the four green bars, both news literacy and control participants rate the evidence as strong in the scientific data condition relative to the control.

The Bank Merger

In the bank merger experiment, participants were exposed to an identical story, but with one exception: We varied the self-interest of the source. In a fictitious story about a Citibank-Citizens Bank merger, half of our respondents were given a story that cites "The Center for Financial Responsibility, an industry group funded by Citibank"; the remaining participants are offered an

identical story but were told that the Center for Financial Responsibility is research center at the University of Connecticut.

Again, we created a scale from the respondent's assessment regarding the strength of the evidence, which was based on three items and was rescaled to vary from 0 (weak) to 1 (strong) (alpha[wave I]=0.76; alpha[wave II]=0.75; alpha[wave III]=0.83). Specifically, "How strong is the evidence supporting the merger of Citibank and Citizens Bank that it will not change the responsiveness of these banks to the public's interest?" "How reliable is the information in the article." And, "This is an example of good reporting."
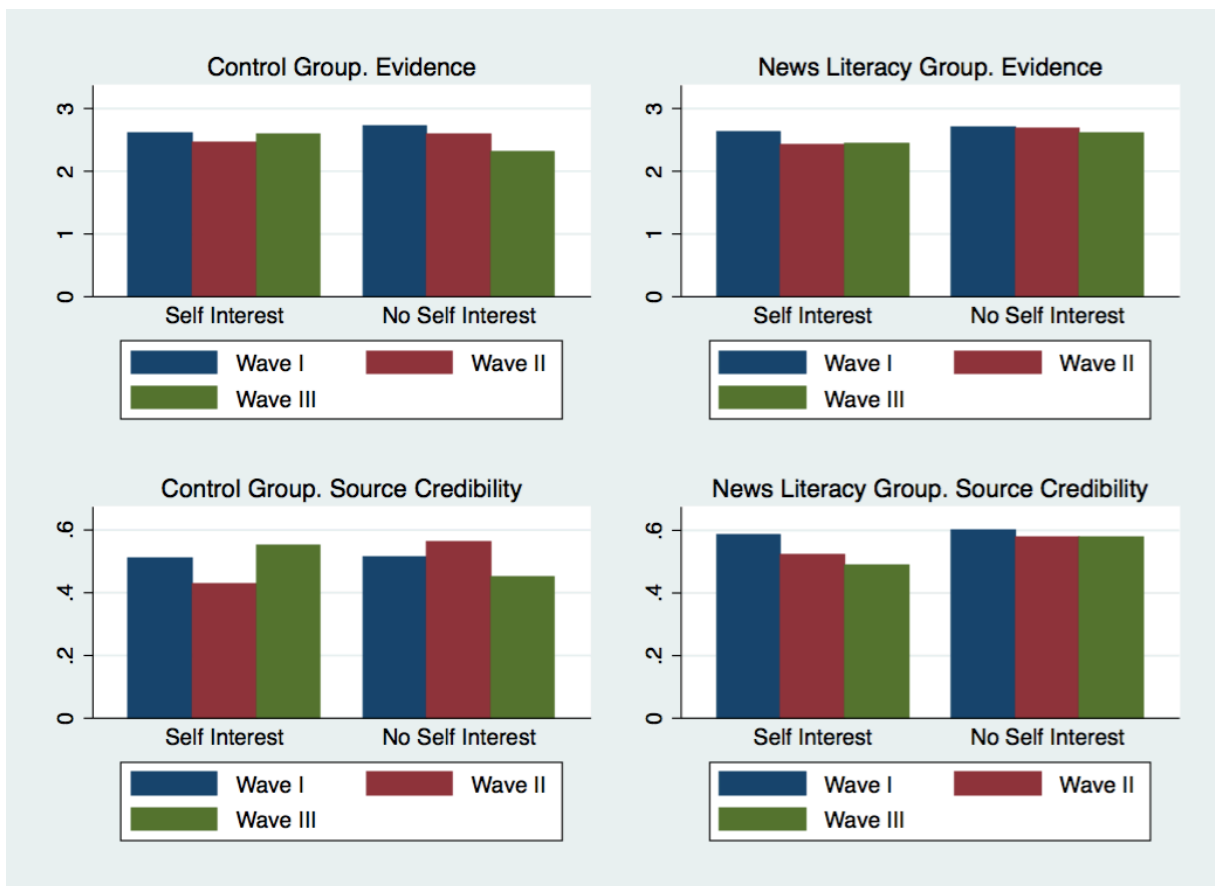

Figure 3: Perceived strength of evidence and source credibility, across waves and news literacy versus control groups. The Bank Merger Experiment.

A measure of source credibility was also constructed, by averaging responses to two items (alpha[wave I]=0.80; alpha[wave II]=0.71; alpha[wave III]=0.81). "How credible are the statements made by Stacy Jenkins, The Center for Financial Responsibility's CEO?" And, "How would you rate the statements of Stacy Jenkins, the Center for Financial Responsibility's CEO?" This scale too was recoded to vary from 0 to 1.

Figure 3 displays the results from this experiment. The results from this experiment indicate a difference between news literacy relative to control participants. News literacy students are more likely to rate a source as credible the the evidence as strong in the no self interest condition, relative to the self-interest condition. This ability persists into wave III. However, there is weak evidence suggesting that the control group is also able to reach an appropriate conclusion (at wave II). Simply examining the means across condition and time, the self-interest cue appears to resonates differently across the control and news literacy groups.

The Blog Experiment

In the blog experiment, the story was the same, but we vary whether participants receive information from a current website with links to verify the accuracy of information in the article (the "good" story condition). In the "bad" version of the story, we include the same story, but place it on an outdated blog that does not link to information thus reducing the ability to fact-check.

Following exposure to the story, we created a strength of evidence scale, equivalent to the ones described above, based on the average response to four items (alpha[wave I]=0.75; alpha[wave II]=0.74; alpha[wave III]=0.87). Figure 3 illustrates mixed, and largely inconsistent results. At wave II, the control, but not news literacy participants, are more likely to rate the links present site as containing strong evidence. News literacy participants, on the other hand, are less likely to rate the "links present" site as containing stronger evidence. However, at wave III, both news literacy and control groups rate the "links present" site as containing presenting sufficient evidence.
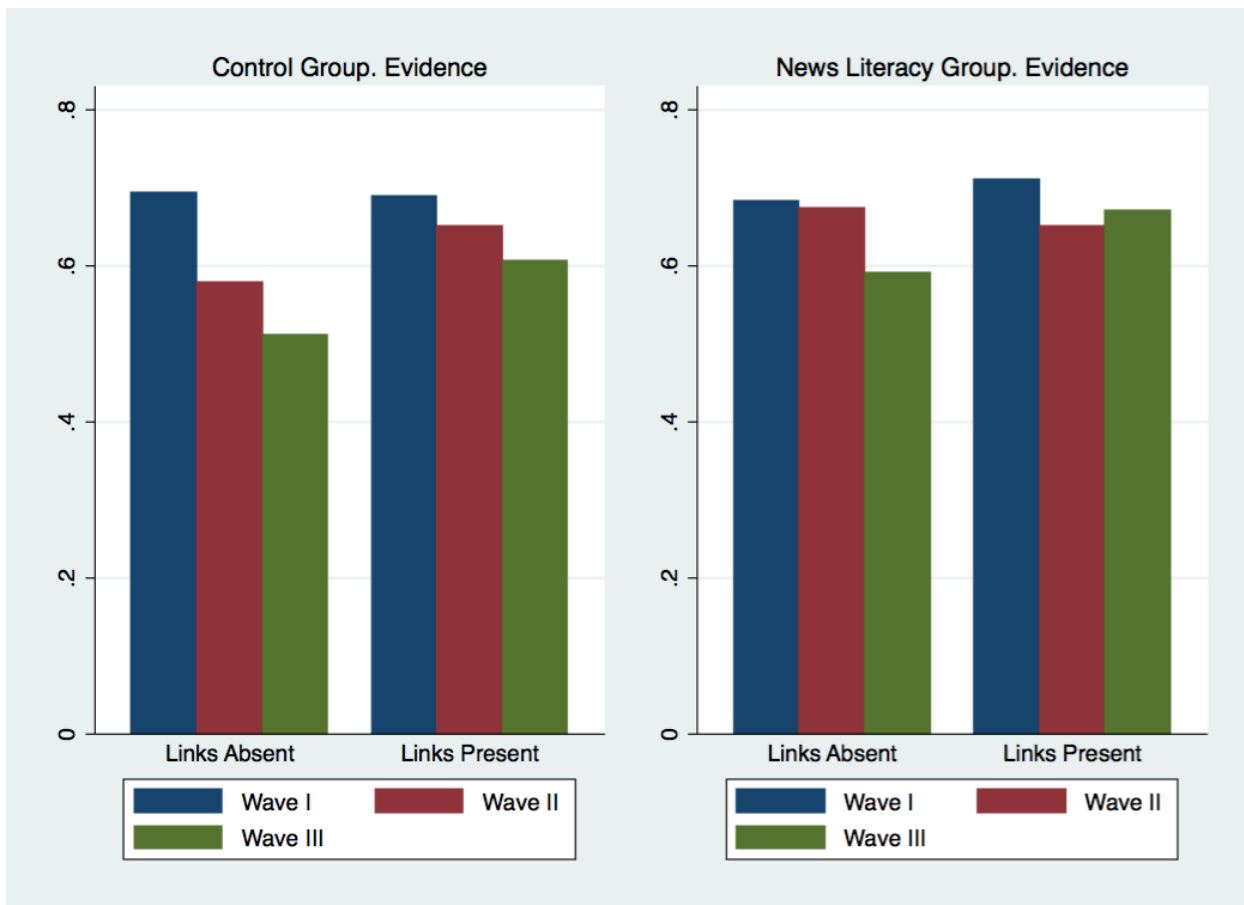
Figure 4: Perceived strength of evidence, across waves and news literacy versus control groups. The Blog Experiment.

The Opinion Experiment

In the opinion experiment, we presented information in an opinion piece versus a standard news piece, again with the expectation that participants should confer less reliability, accuracy, and fairness to a story that is opinion based.

In this experiment, we did not include the same battery of posttest questions. We constructed a measure of perceived fairness in reporting from two questions – "This is an example of good reporting" and "This is an example of fair news reporting" (alpha[wave I]=0.74; alpha[wave II]=0.82 ; alpha[wave III]=0.77). We also created a measure of perceived source bias from two questions – "In your opinion, how slanted is the information in the article" and "In your opinion, how biased is the information in the article?" (alpha[wave I]=0.82; alpha[wave II]=0.77 ; alpha[wave III]=0.87).
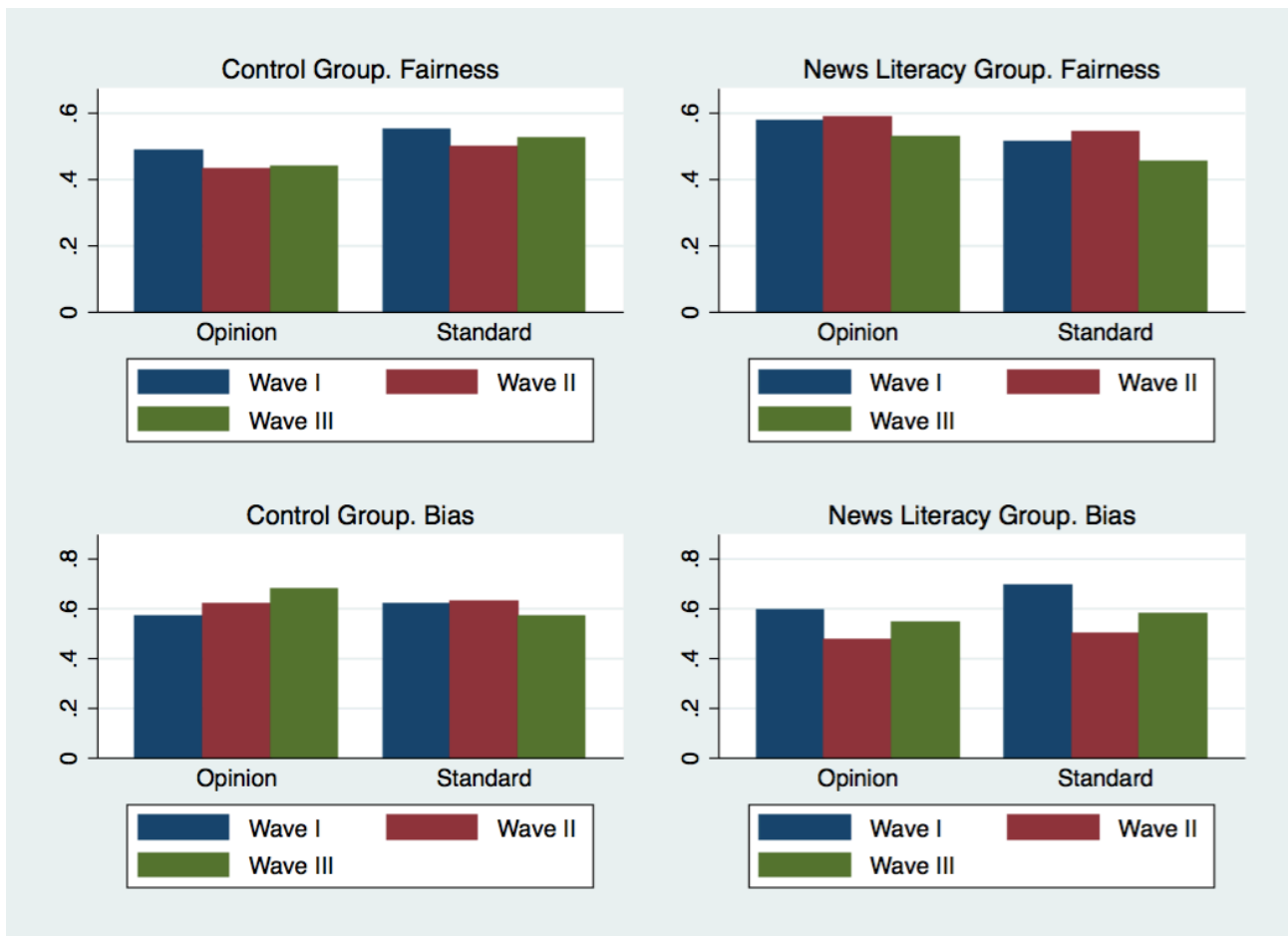
Figure 5: Perceived Fairness and Bias, across waves and news literacy versus control groups. The Opinion Experiment.

While there are striking differences between the "good" and "bad" conditions, the effects are largely inconsistent across time and groups. The control group is more likely to say the standard story is more fair than the opinion piece, and this effect increases with time. However, news literacy students are somewhat less likely to view the standard news piece as fair, relative to the opinion piece. They are also less likely to perceive the standard piece as biased, relative to the opinion piece, in waves II and III.

The Broadcast Media Experiment

In the final experiment, we did not randomly assign participants to a good or bad news story. Instead, every participant was exposed to a short news clip and asked to indicate whether the report was unfair and inaccurate. We again constructed a fairness/accuracy scale, which is the compos-

ite of five items ("the information in the story is "fair," "accurate," "good," "credible," and "reliable"; alpha[wave I]=0.93; alpha[wave II]=0.93 ; alpha[wave III]=0.94). The fairness/accuracy scale ranges from 0 to 1, where high scores indicate greater information fairness and accuracy.
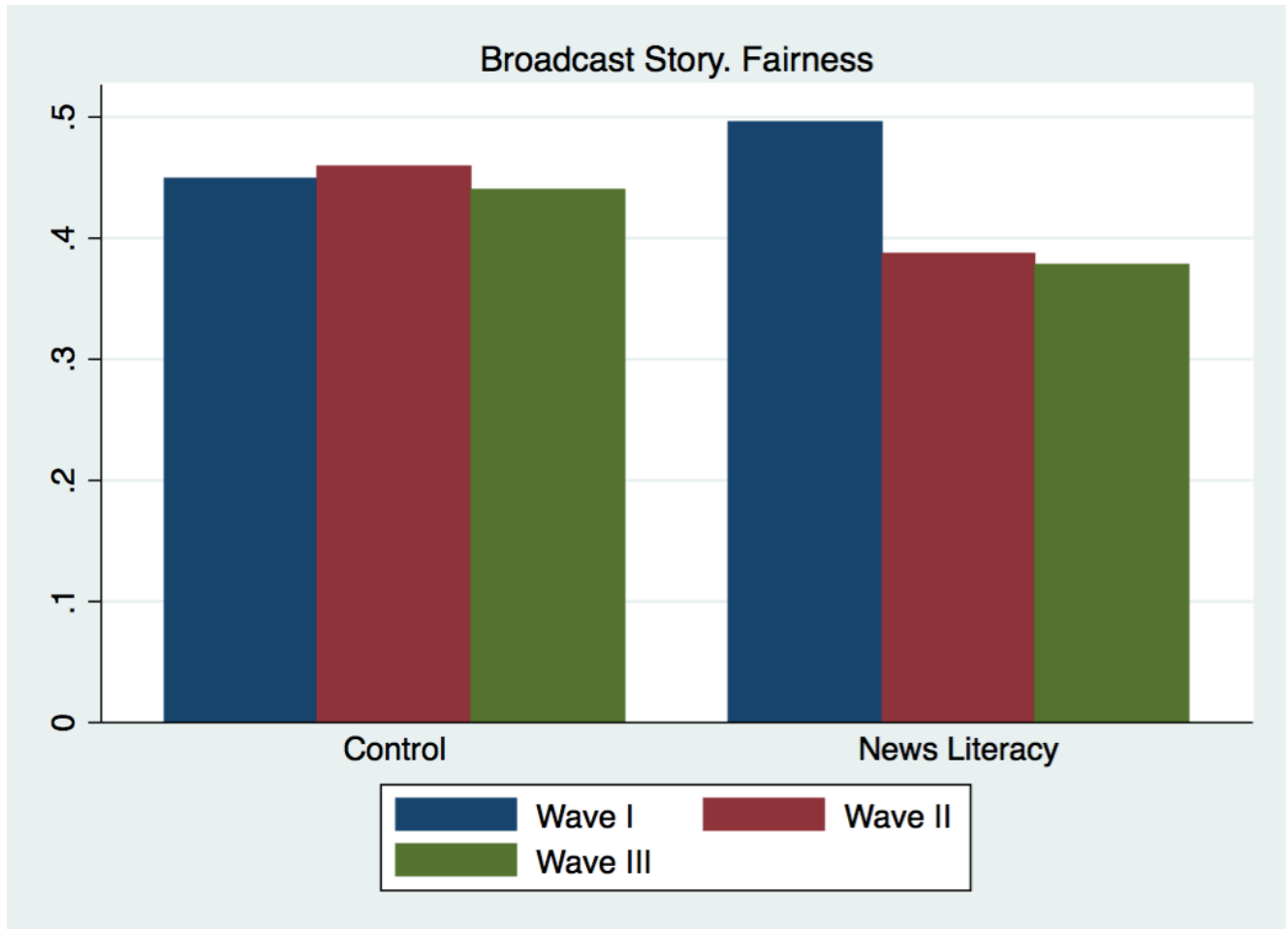

Figure 6: Perceived fairness, across waves and news literacy versus control groups. The Broadcast Media Experiment.

Figure 6 illustrates that News Literacy students appropriately discounted the fairness and accuracy of the story, and this effect persists in wave III. However, the bars on the leftmost portion of the figure illustrate that control group participants did not discount the accuracy and fairness of the story at any of the three time points.

Summary

Media Consumption. Media consumption habits changed for the news literacy group, but remained constant, or at times decreased, for the control group. Media literacy contributed to media consumption, as evident by the finding that from wave I to wave II, general news consumption, late night comedy consumption, late night news consumption, local news consumption, cable news consumption, radio news consumption, newspaper consumption, and internet consumption increased in the news literacy group. However, the three-wave data demonstrate a half life to these effects. In the third wave, many of the media consumption habits dissipated to wave I levels. Control group participants, on the other hand, did not drastically change media consumption behavior over the three waves. Of the eight analyzed media consumption variables, four consumption habits decrease from wave I to wave II.

Media Perceptions and Trust. On average, news literacy students are more trusting of the media than the control group; media trust remained relatively stable for the News Literacy group across the three waves. The class did result in a generally more positive view of the media. The belief that the media is a watchdog that protects democracy increased substantially from wave I to wave II among the news literacy students, while staying relatively constant among the control group. While there again was a half-life to this effect, news literacy participants at wave III still hold more positive evaluations of the media than at wave I. Moreover, the class also resulted in a belief that the news media is unbiased and ideologically neutral.

Civic Engagement. There are other positive externalities associated with the News Literacy course. While trust in government slightly decreased over the course of the three waves among news literacy students, political knowledge and interest increased, though the increase was slight.

The Six Experiments

Needle Exchange Example. The needle exchange example was designed to examine whether students can differentiate a good, reliable source from a less reliable source. Participants were randomly assigned to a news story released by a reliable or less-reliable source. Comparing waves I and II, there is some evidence to suggest that news literacy students appropriately rate the evidence as strong and the story as fair in the reliable source condition. However, these effects dissipated in the wave III data.

Social Media Example. In the social media example, we randomly varied whether an expert source relies on objective, scientific data or anecdote in reaching a conclusion about the societal consequences of social media. Control and news literacy students rated the scientific data story as possessing stronger evidence than the personal anecdote story, yet this effect dissipated one year later. Unlike the control group, news literacy students rated the personal anecdote the same across the three waves.

The Bank Merger. In the bank merger example, we vary whether a source has economic interests involved in the bank merger, or whether the source is from an unaffiliated, independent organization. We compare groups on a measure of perceived strength of the evidence, as well as source credibility. News literacy students rate the less self interest story as possessing stronger evidence and the source as being somewhat more credible, which is an effect that persists into wave III. A similar trend exists for the control group. However, control group participants at wave III view the evidence as weakest and the source as less credible in the no self interest condition, contrary to expectations.

The Blog Experiment. In the blog example, we varied whether information on a blog was accompanied with information that would or would not allow the participant to fact check. While the links to extra information were deactivated, we expected that news literacy students would rate the accompanying evidence as stronger when there is an opportunity to fact check. The presence of links led to a belief that the evidence in the story was stronger. However, this effect was found for both control and news literacy students.

The Opinion Experiment. In the opinion experiment, we presented information in a standard news format, or as part of an op-ed piece. Control group participants rated the standard news story as more fair than the opinion piece; they also rated the opinion piece as

more biased. News literacy students did not demonstrate a consistent pattern for fairness, nor did they evaluate the opinion piece as more biased.

The Broadcast Media Experiment. In this experiment, we presented a broadcast news story to participants. We then inquired about whether the story was fair. News literacy students were more likely to recognize that the story was unfair, relative to the control condition. This ability to recognize that the story was unfair persisted to wave III.

Future Directions

These results point to a number of important conclusions. First, there are desirable civic consequences of the news literacy course, as the course generates more interest and involvement in politics. Equally as important, the course contributes to the belief that the media is effectively acting as the fourth estate, by fostering more effective representation and playing a critical watchdog role. Moreover, the course has the consequence of stimulating greater attention and interest in a variety of media, from traditional news consumption to attention to newer mediums, such as internet and late night comedy. Across the board, there is evidence of half-life to these effects, in that the news literacy students at wave III gravitated towards wave I behavior, but in the case of beliefs about the media, the positive consequences of the class are still evident one year later.

The six experiments were generated to examine whether news literacy students were better equipped to deconstruct news stories and appropriately discount stories that rely on questionable sources and information. The findings were somewhat mixed. In some cases, the control and news literacy groups reacted similarly to the news stories. In other cases, the results indicated that the news literacy class led to more accurate story deconstruction -- the broadcast media experiment, the bank merger experiment, the needle exchange experiment, and the social media experiment, in particular.

There are several important limitations that will need to be addressed in future studies. First, attrition was pronounced in this study. Over 1,000 respondents participated in the first wave, which dropped to $n=192$ who completed surveys at all three waves. A greater incentive, particularly for the control group, will facilitate retention. Second, the reason for the somewhat mixed results in the experiment likely stem from the fact that several were too easy. For instance, both the news literacy and control participants performed comparably in the social media experiment, likely because both groups understood that the scientist in the story was articulating an opinion left unsubstantiated with data. Perhaps the most promising experiment was the broadcast experiment. News literacy students were far better at deconstructing this story. Part of this may stem from the fact that deconstruction occurred in real time and participants were unable to read and reread elements of the story. Future iterations of the project should better parse the differences between print and broadcast media.