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Abstract

It is widely assumed that British voters obtain a considerable amount of their political information from television and that television news plays an important part in shaping their political and economic perceptions. This study uses an experimental research design to assess the extent to which the political perceptions of a sample of 1125 UK voters tested during the 1997 general election campaign were affected by "positive" and "negative" party images presented in television news programmes. As well as being of intrinsic importance to debates about the effects of television news, this focus on positive and negative news has more than passing relevance for the kinds of campaigning that political parties adopt. The evidence reported in the paper shows that voters' views about the political parties can be swayed quite markedly by the content of television news. In particular, the analysis indicates that "positive" news images exert far more powerful effects on voters' perceptions than "negative" news.

It is widely assumed that British voters obtain a considerable amount of their political information from television and that television news plays an important part in shaping their political and economic perceptions. In these circumstances it comes as something of a surprise to discover that there is no direct individual-level evidence to show that any such effects do indeed operate. This study seeks to address this shortcoming. It uses an experimental research design to assess the extent to which the political perceptions of a sample of 1125 UK voters tested during the 1997 general election campaign were affected by "positive" and "negative" party images presented in television news programmes.

As well as being of intrinsic importance to debates about the effects of television news, this focus on positive and negative news has more than passing relevance for the kinds of campaigning that political parties adopt. Evidence from the United States shows not only that American journalists have become more "negative" in the way they approach the reporting of political stories but also that "negative campaigning" has become much more prevalent in American elections (Patterson 1993, Ansolabehere and Iyengar, 1997). Given the tendency for the United States to export its cultural and political habits to the UK, it is conceivable that both negative reporting and negative campaigning will increase in Britain in the future. Although there are obvious differences between supposedly neutral news broadcasts and self-evidently biased exercises in party propaganda, any evidence about the relative roles played by positive and negative television images could have important implications for the likely success of the alternative strategies available to political parties.

Section 1 of this paper briefly reviews the existing evidence that links (or fails to link) television news coverage to British voters' perceptions and preferences. Section 2 summarises our basic theoretical model and develops the specific hypotheses that we seek to test. Section 3 outlines the principles underlying our methodological approach. Section 4 reports our empirical findings. These show that voters' political perceptions are influenced by the content of television news and, in particular, that positive news images appear to exert more powerful effects than negative ones. The relationships that we report, though small, are sufficiently robust to withstand the application of statistical controls for a
wide range of potentially confounding variables. Although our analysis measures only short-term
responses to television news, the cumulative effects of repeated exposure to news broadcasts are likely to
be considerable. Indeed, in the concluding section we discuss possible ways in which our findings can
be linked to related data, covering both television news and public opinion, collected during the 1997
election campaign.

1. Previous studies of television news in Britain

Previous studies of British television news fall into three major categories. One strand of research,
mainly involving researchers in the communications studies field, has focused primarily on the content
of television news. The main research question considered has been the extent to which supposedly
"objective" broadcasts exhibit different sorts of political bias as a result of the "news values" espoused by
programme editors (Glasgow Media Group). Although the studies in this field have revealed much
about the way in which media agendas operate, they have not explicitly analysed the consequences for
public opinion of the observed "biases" in news coverage that they have identified. Indeed, they have
not investigated the links between news content and public opinion at all.

A second area of research has involved the analysis of individual-level survey data from the various
British Election Studies. Butler and Stokes (1974) first asked respondents about their
television-watching habits in 1964 and the questions they posed have since been supplemented in
subsequent BES surveys by questions about voters' perceptions of bias in the news coverage provide by
BBC and ITN. The data thus obtained, however, have not provided much insight into the effects that
television news might have on voters' political perceptions and preferences. Mughan (1996), for
example, found that voters' perceptions of bias in news coverage were linked to their partisan
identifications: party identifiers tended to believe that news coverage on both major channels was biased
against "their" party. However, this relationship in no way helps to "explain" voters' partisan
preferences. It merely indicates that partisan preferences affect voters' perceptions of television news
content, not that content influences preferences. The key limitation of BES data in this context -- and this is in no sense a criticism of the researchers involved -- is that they contain no information either about which particular news programmes respondents have seen or about the content of those news programmes. In these circumstances, it is simply not possible to specify and test convincing causal models that seek to assess the effects of television news coverage on voters' perceptions.

A third strand of research has used aggregate-level time-series survey data in an explicit effort to consider the effects of television news coverage on public opinion. The only study so far conducted using this approach (Gavin and Sanders, 1996) focused on economic news and involved content-analysing news programmes on the major UK television channels over a 15-month period. Coverage, across a range of sub-categories, was coded as being "positive" (i.e. favourable to the government), "negative" (unfavourable) or neutral. Weekly variations in the balance of coverage (positive versus negative) were compared with aggregate movements in voters' political preferences and economic perceptions. Although the study found significant relationships between the pattern of coverage over time and changes in public opinion, its conclusions were necessarily tentative. Aggregate-level analysis of this sort involves making quite strong (critics would say heroic) assumptions about what is going on at the individual level. In order to draw causal inferences about individual attitudes and behaviour, it must be assumed that "the typical voter" is exposed each week to the balance of news coverage that is indicated by the aggregate-level coverage measure and that s/he responds to changes in that balance in a more or less consistent fashion. The limitations of these assumptions are self-evident. Aggregate-level correlations, since they reveal nothing about individuals, could be highly misleading. In common with individual-level BES data, aggregate data reveal nothing about which individuals have been exposed to which news programmes. Aggregate data also fail to specify which individuals -- or even which sorts of individual -- change they political preferences and perceptions over time. In principle, a strong aggregate time-series correlation between television coverage and changing preferences could be observed even in circumstances where the particular individuals who change their opinions have not been exposed to the television coverage that supposedly generates their changed
opinions. People who watch long sequences of “damaging” news about a particularly party, for example, *could* be the very ones who reinforce their commitment to it -- or even convert to it -- rather than desert it. With aggregate-level data, we simply do not know if individual-level behaviour conforms to theoretical expectations.

All of these considerations about previous studies suggest a simple conclusion. If we are to establish how voters react to the content of television news, we need to adopt a rather different approach from that followed thus far. In order to conduct a "critical" test of the effects of television news on voters' opinions, we need to know what preferences and perceptions an individual has before he or she is exposed to a particular set of news messages. We need to know the precise character of the messages to which the individual is then exposed. And we need to know what changes in preferences and perceptions this exposure in turn invokes. These requirements cry out for an experimental research design of the sort developed in the United States by Shanto Iyengar and his associates. The approach adopted here follows his classic experimental logic. Respondents completed a pre-test questionnaire and then randomly assigned to separate groups. Each group was exposed to a distinctive 30-minute selection of video news and a post-test questionnaire then administered to each respondent. The purpose of the experiments was to establish the extent to which any changes between pre- and post-test responses varied according to the type of video footage that had been seen.

2. The Theoretical Model

The theoretical model that we employ here is so simple that we would not wish to dignify it with the label "theory". We make two core assumptions: that television news is an important source of political information for voters; and that voters modify their political attitudes and preferences in the light of information they receive about political parties. We assume further that, although significant and permanent changes in perceptions are likely to occur only after repeated exposure to new and potentially challenging information, small (and possibly ephemeral) changes in perceptions are likely to result from
quite limited exposure to such information. We also assume that some voter-types are more likely to change their perceptions than others -- a point that we develop in hypotheses H3-H7 below.

Based on these assumptions, our pivotal hypothesis (H1) is that, ceteris paribus,

"Positive" television news coverage of a particular party will tend to create a more favourable image of that party among voters than "neutral" coverage; "negative" coverage will tend to produce a less favourable image.

By "positive" news, we mean items that present the party in question in a favourable light, such as reports that stress its unity, morale or success. By "negative" items, we mean reports that portray a party in an unfavourable light, stressing its embarrassment, disunity, failure or disarray. By "party image", which we measure on a 10-point scale described in section 3 below, we mean the overall impression -- favourable versus unfavourable -- that voters have of each major party.

Specifically, we test for the direct effects of four types of positive or negative coverage, producing four sub-hypotheses.\(^1\)

H1.1 Positive coverage of the Conservative party will increase the Conservatives' party-image ratings.

H1.2 Negative coverage of the Conservative party will reduce the Conservatives' party-image ratings.

H1.3 Positive coverage of Labour will increase Labour's party-image ratings.

H1.4 Negative coverage of Labour will reduce Labour's party-image ratings.

An obvious corollary to these hypotheses derives from the potentially "zero sum" character of party politics. If positive coverage of one party increases that party's ratings, it may serve to reduce the ratings of others -- to inflict "collateral" damage on them. This produces H2.1 to H2.4.

H2.1 Positive coverage of the Conservative party will reduce the image ratings of both Labour and the Liberal Democrats.
H2.2 Negative coverage of the Conservative party will increase the image ratings of both Labour and the Liberal Democrats.

H2.3 Positive coverage of Labour will reduce the image ratings of both the Conservatives and the Liberal Democrats.

H2.4 Negative coverage of Labour will increase the image ratings of both the Conservatives and the Liberal Democrats.

These simple hypotheses, however, say nothing of the different tendencies of various sorts of voter to shift their party-image perceptions. In line with evidence reported by Iyengar and Kinder (1987), we expect to observe distinctive tendencies among three voter-types. Specifically, we would expect strong partisans, the politically well-informed and those who are interested in politics and current affairs to be less likely to change their pre-test to post-test responses than their respective comparator groups, the less partisan, the ill-informed and uninterested. This expectation derives from the fact that the partisan, the informed and interested are all likely to have thought seriously about political matters prior to being exposed to our experimental manipulations. They are concommitantly more likely to hold stable political views than their comparators. This in turn implies that we should observe smaller differences in their pre- and post-test party-image responses. These expectations can be stated formally as:

H3.1 Changes in party-image responses between the pre-test and post-test should be negatively associated with partisanship: stronger partisans of all three major parties will be less likely to change their party-image ratings than weaker partisans.

H4.1 Changes in party-image responses between the pre-test and post-test should be negatively associated with political knowledge: well-informed respondents will be less likely to change their party-image ratings than ill-informed respondents.

H5.1 Changes in party-image responses between the pre-test and post-test should be negatively associated with interest in politics and current affairs: interested respondents will be less likely to change their party-image ratings than uninterested respondents.

The effects of partisanship, knowledge and interest do not necessarily stop here, however. In addition to being less likely to change their party-image responses, it can be argued on a priori grounds that these groups are also less likely to be affected by exposure to television news; that is to say they are less likely
than their comparators to be affected by our positive and negative experimental manipulations. This supposition reflects a similar calculation to that made in relation to H3.1, H4.1 and H5.1. The partisan, the informed and the interested are all less likely to be influenced by what they see and hear about party images in our video experiments -- either because they have already made up their minds (the partisan) or because on many previous occasions they have been exposed to, and have taken note of, similar messages (the knowledgable and the informed). Technically, these expectations imply that there should be interaction effects between partisanship, knowledge and interest, on the one hand, and video exposure, on the other: any observed effects of positive or negative video exposure should be weaker for the partisan, the knowledgable and the interested than they are for comparator groups. These considerations suggest the following sub-hypotheses.

H3.2  The effects of positive and negative news coverage summarised in H1.1 to H1.4 and H2.1 to H2.4 should be weaker for those respondents with a stronger commitment to the Conservative, Labour or Liberal Democrat parties.

H4.2  The effects of positive and negative news coverage summarised in H1.1 to H1.4 and H2.1 to H2.4 should be weaker for respondents with high levels of political knowledge.

H5.2  The effects of positive and negative news coverage summarised in H1.1 to H1.4 and H2.1 to H2.4 should be weaker for respondents with high levels of political interest.

Two other sets of potential effects on voters’ changing perceptions need to be considered. It is clear from the foregoing discussion that, in addition to the purely experimental controls that we apply in H1 and H2, we also apply non-experimental controls (for partisanship, knowledge and interest) in H3 through H5. Given the information that we obtained from our pre-test and post-test questionnaires, we are also in a position to apply non-experimental controls both for (a) the standard set of socio-demographic variables (age, gender, class and so on) that are normally found to exert significant effects on voters’ political preferences and perceptions and (b) respondents’ television-watching habits. As a result of our experimental design, however, our hypotheses in both of these contexts favour the null. The experimental approach is predicated on the random assignment of subjects to test and control groups. If the stimulus (video exposure) genuinely affects the response (a shift in the respondents’ party image), the
Group effect should be observable regardless of respondents' sociodemographic characteristics or television-habits because the test and control groups should contain roughly equal proportions drawn from all groups. At the individual level, we could, of course, simply assume that sociodemographic and television-habit effects do not confound any bivariate statistical relationships that we might observe between video exposure and changing party-images. We prefer, however, to conduct formal tests for any such possible effects. These are summarised formally in H6.1, H6.2, H7.1 and H7.2.

H6.1 Any observed relationship between positive/negative video exposure and pre- to post-test changes in party image will withstand the application of statistical controls for the effects of the standard battery of sociodemographic variables.

H6.2 The standard sociodemographic variables will not affect changes in Conservative, Labour and Liberal Democrat party images in any consistent way.

H7.1 Any observed relationship between positive/negative video exposure and pre- to post-test changes in party image will withstand the application of statistical controls for the effects of respondents' television-watching habits.

H7.2 Respondents' television-watching habits will not affect changes in Conservative, Labour and Liberal Democrat party images in any consistent way.

Our final theoretical consideration also generates a null hypothesis. A standard problem that confronts any questionnaire-based assessment of attitude change -- whether it involves pre-test/post-test comparisons of the sort developed here or panel data in which several months elapse between waves -- is that some individuals' responses at different points in time are far more unstable across a range of different measures than the equivalent responses of other individuals. This begs the question as to whether some sort of correction for individual "respondent instability" needs to be made before the consequences of measured change in the test items can be properly evaluated. We collected data on a sufficient number of measures in our pre- and post-test questionnaires to enable us to investigate precisely this sort of phenomenon. Specifically, we are able to make corrections for respondents' varying tendencies to provide unstable over-time responses to the nine-item battery of party image questions. We begin by calculating each respondent's average pre-test/post-test movement on all nine
party image questions. We can then measure the individual’s shift on each party image variable as a *deviation* from his or her average movement score. It could be argued that this deviation score gives a more accurate representation of the extent to which each respondent has genuinely moved his or her position on each of the party image questions that we are concerned to examine. In any event, given that this alternative way of characterising change *can* be operationalised, it makes sense to see if makes any difference to the substantive implications of the empirical findings that are reported here. Our expectation, however, is that the use of alternative, corrected, measures should make no difference to our empirical results. Accordingly, we state our final hypothesis as

\[ H8.1 \text{ The use of corrected party image measures for } H1.1 \text{ through } H7.2 \text{ will not produce significantly different results from those obtained using uncorrected measures.} \]

3. *The experimental research design*

During the 1990s experimental methods have gradually entered the standard repertoire of political research. Nevertheless because this approach remains less familiar than survey analysis we will outline our research design in some detail. In order to examine the effects of positive and negative news coverage on voters’ perceptions, we carried out a series of fifteen experiments in a central London location (Regent Street). We included 1125 respondents in total, more than most experimental designs. Participants were drawn primarily from Greater London and south-east England. Respondents were not selected explicitly as a random sample of the British electorate, but they did generally reflect the Greater London population in terms of their social background and party preferences (see Appendix B). We chose a busy central London location during the day to provide a diverse group of Londoners including managers, office-workers and casual shoppers. The generalisability of the results rests not on the selection of a random sample of participants, as in a survey design, but on the way that subjects were assigned at random to different experimental groups. Any difference in the response of groups should
therefore reflect the stimuli they were given rather than their social backgrounds or prior political attitudes.

One potential problem of experiments is that participants may alter their own behaviour given the artificiality of the research setting and their perceptions of the aims of the study. In order to counter this, respondents were told that they would be participating in research to learn how people evaluate and understand television news. Prior to the experiment, we informed respondents (falsely) that we were primarily interested in "selective perception", that is, whether young people and older people, or men and women, are interested in different stories in the news. We did not mention that the news would be about the election, which might well have discouraged participation by the politically apathetic, and we found that many participants believed we were carrying out television market research. We used a single-shot rather than a repeated design so that respondents would not become unduly conditioned by the research process itself.

Participants completed a short (15-minute) pre-test questionnaire about their media habits, political interests and opinions and personal background. They were then assigned at random to groups of 5-15 to watch a 30-minute video compilation of television news. Respondents subsequently completed a short (15-minute) post-test questionnaire, after which they were paid £10 for their time and debriefed in writing about the purpose of the experiment. Respondents who were unable to read the questionnaire were interviewed separately on a face-to-face basis by a member of the research team. To reduce the artificiality of the exercise, the atmosphere was relaxed, with newspapers and refreshments provided in a comfortable environment. People often came in with friends and family, and the whole process lasted about an hour for each group. The experiments were carried out in April 1997 during the middle of the official general election campaign. This timing was deliberate: we wanted to examine the attitudes of participants who had been subjected to the intensive barrage of political coverage that characterises television news during an election period.
The video compilations of news stories were chosen to represent a "typical" evening news programme during the campaign. We drew on stories recorded from all the main news programmes on the terrestrial channels from mid February until early to April 1997. The videos all had the same format. They consisted of a "sandwich", with ten minutes of identical, standard footage at the top and bottom of each programme and one of fifteen different experimental video stimuli in the middle "core". Respondents were not told which video was being shown to which group or even that different videos were being watched by different groups of respondents.

To test for the effects of positive and negative news on subjects' perceptions of the political parties, we monitored the reactions of 240 participants who were divided at random into four treatment groups: positive Conservative, negative Conservative, positive Labour, negative Labour. We recognise the difficulty of objectively determining whether or not the content of a particular video selection is genuinely "positive" or "negative" in its portrayal of a particular party. Our decision rule as to what constituted positive, negative and neutral news coverage was that an item had to be coded as such by two independent coders. We have every confidence, however, that similar codings would have been produced by other researchers. Full transcriptions of the content of the four videos concerned are provided in Appendix B. In addition to the treatment groups, we also monitored the reactions of two control groups. The first was an explicit control group of 92 participants who were shown a non-political video "core". The second was an implicit control group whose 700 members were shown "politically neutral" video footage relating to other experiments that we were conducting. Given the similarities in the responses of these two preliminary control groups, the results reported here combine them into a single control group. Our simple expectation, reflected in hypotheses H1.1-H2.4, is that subjects in this overall control group did not significantly change their images of the major parties between the pre- and the post-test whereas subjects in the four test groups did.
Operational measures

Measures of changes in party image. We designed the research to achieve conceptual replication of responses, that is, tests were repeated with conceptually similar but empirically different measures of the variables under scrutiny. We included nine related, BES-based, measures of party image in both the pre-test and the post-test. For each of the three major parties, we asked respondents to assess, on 0-10 scales, (a) how likely it was that they would vote for the party, (b) how much they liked the party, and (c) how highly they rated the (named) party leader. For each party, and for both the pre-test and the post-test measures, the three scales were averaged to produce a single party image index where a 0 score meant a respondent had a very poor image of the party and 10 meant a very good image. Calculating each respondent's "change in party image" score was simply a matter of subtracting the pre-test score from the post-test score: a positive (negative) change indicated that a respondent had a more (less) favourable view of the party in question after the experimental manipulation than before it.

Measures of partisanship, political knowledge and political interest. For each party, the respondent's partisan commitment was measured using the pre-test score on the "probability of voting for the party" scale referred to above; it was assumed that a higher pre-test score reflected a greater degree of commitment to the party; a lower score, a weaker degree of commitment. Political knowledge was measured from the responses to a five-item political quiz that had been included in the post-test questionnaire. In some of the model specifications that we employ, political knowledge is measured as a 0-5 scale. The "interaction" results relating to H4.2 distinguish between the "politically informed" (who answered four or more questions correctly) and the "uninformed" (those who answered less than four questions correctly). Political interest was measured according to whether or not respondents expressed an strong interest either in current affairs or in political items of television news.

Measures of sociodemographic characteristics and television-watching habits. Previous research has shown that voting preferences (though not necessarily changes in preference) are linked to a range of sociodemographic and attitudinal characteristics (Butler and Stokes, 1974; Sarlvik and Crewe, 1983;
Heath *et al.* 1985, 1991 and 1994). During the 1980s and early 1990s -- though not, perhaps, in 1997 -- Conservative support tended to be weakest, and Labour support strongest, among men, younger voters, manual workers, the unemployed, students, non-homeowners, non-graduates and voters from ethnic minorities (Brynin and Sanders, 1997). With the exception of age, which was measured as a continuous variable, these various characteristics were all measured as dummy variables so that they could be entered as independent variables in OLS equations. Finally, television-watching habits were measured as the average number of hours per week that the respondent watched television.

4. *Empirical Findings*

Table 1 reports the pre- and post-test average scores on the main dependent variables of our study. The table also reports the average change that was observed on each variable between the pre- and post-test measurements. All the scales, including the three party-image indices, range from zero to ten. The overall pattern of pre-test and post-test averages shows that Labour was the most popular party (post-test average index score and the Conservatives the least popular. The average change scores indicate that the Conservatives and the Liberal Democrats were both viewed marginally more favourably after our experimental manipulations than before them: the "probability of voting" scores, the "liking" scores and the "party-image" indices all increased for both parties. Tony Blair's ratings also increased marginally, though this tendency was counteracted by small reductions in our respondents' "liking" and "probability of voting" for Labour: as a result, Labour's average party-image index score remained more or less constant. There are two obvious explanations for the general increase in Conservative and Liberal Democrat ratings. One is that this increased sympathy was somehow triggered by our participants' being reminded of the election campaign: all our videos began with the opening item from BBC1's Nine O'Clock News on the day that John Major called the election. Another possibility is that what we thought was generally neutral coverage in the common "top" and "bottom" of each video "sandwich" was not in fact neutral but slightly pro-Conservative and pro-Liberal Democrat. We are not in a position
to determine which, if either, of these explanations is correct (though we would prefer to believe the first). However, the fact that there is a slight "inflation" of Conservative and Liberal Democrat scores does not in any sense damage either the character or the purpose of our experiments. What matters is whether there are any treatment differences in the average change scores; whether or not subjects who watched our test videos exhibit a different change profile from those subjects who watched a control.

Table 2 allows us to explore this question explicitly. It compares the average changes in our twelve party image measures across five groups of respondents: the control group (who were shown neutral coverage); and those who were exposed to Positive Conservative, Negative Conservative, Positive Labour and Negative Labour coverage. The first point to note about the table is that, for the control group, all three party-image index scores show only small pre-test to post-test differences (+.05 for the Conservatives, -.02 for Labour and +.04 for the Liberal Democrats). This suggests, notwithstanding our earlier comments about Table 1, that the overall coverage in the control videos was broadly politically neutral.

The scores relating to the Conservatives' component party-image variables show three statistically significant effects. Two of them relate to John Major's ratings. In line with H1.1, Major's ratings increased significantly among the group that were exposed to Positive Conservative coverage (mean change = +.43) compared to a small decline (mean change = -.07) in the control group. Similarly (and in line with H2.4) Major's ratings also increased significantly among the Negative Labour group (+.33). The third significant change, however, is a clear anomaly in terms of our initial hypotheses. In direct contradiction of H2.3, those respondents who watched the Positive Labour video significantly increased their liking for the Conservatives (mean change = +.49, compared with +.07 for the control group). Fortunately, this anomaly disappears when the more reliable Conservative party-image index is considered. Here, the control group registers an (agreeably small) increase of .05 and only the Positive Conservative group shows a significantly different change (a mean increase of .50), consistent with H1.1.
The *Labour* change scores in Table 2 exhibit a far simpler pattern. The only significant effects relate to the group exposed to the Positive Labour video. As H1.3 predicts, this group's mean scores on "probability of voting Labour", "liking" for Labour, and the Labour-image index were all significantly higher than those for the control group. The *Liberal Democrat* results in Table 2 are somewhat more ambiguous. The Positive Conservative and Positive Labour videos both seem to have elicited increased "collateral" liking for the *Liberal Democrats* (see the significant column 2 scores in the Liberal Democrat section of the table). This suggests that positive television images of one party can increase respondents' sympathy for another, on the face of it a somewhat bizarre finding that contradicts H2.1 and H2.3. Note, however, that this effect does not extend to either the "probability of voting Liberal Democrat" or "liking for Ashdown". Indeed, the party-image index mean scores display no significant video exposure effects whatsoever.

The simple conclusion suggested by Table 2 is that, out of our initial set of H1 and H2 hypotheses, only H1.1 and H1.3 are supported by the data: *positive coverage clearly improves a party's image among voters*. This conclusion is based on the assumption that the index measures -- since they are composites of three different indicators of party image -- are the most reliable measures of opinion change. (Indeed, for the remainder of this paper we report only the results of models estimated using the three index measures). The only significant effects observed in the party image index column are the increased Conservative image scores for respondents exposed to the Positive Conservative video (H1.1) and increased Labour image scores for those who watched the Positive Labour video (H1.3). Although most of the remaining relationships have the correct signs, none of them is statistically significant. This implies that, for the other H1 and H2 hypotheses, we should accept the null and conclude (a) that negative coverage does not adversely a party's image and (b) that positive (or negative) coverage of one party does not appear to damage (or enhance) the image of its rivals.

This conclusion is reinforced by the results shown in Table 3. The table outlines three OLS models, one for each of the party-image index measures, using dummy variable predictors reflecting respondents'
exposure (or not) to each of our four experimental manipulations. The base category is the control
group who were exposed to politically neutral coverage only. Although the use of dummies in this way
violates standard OLS assumptions, we use OLS here as a means of clarifying the overall pattern of
effects rather than as a vehicle for obtaining good estimates of coefficients. The clear message of these
results is that, yet again, it is positive news coverage of a party that is most likely to elicit an increase
that party's overall image ratings; negative coverage of a particular party does not appear to have a
damaging effect on that party's ratings.

Table 4 reports a set of models that introduce controls for (Conservative, Labour and Liberal Democrat)
partisanship, for political interest and political knowledge. The table suggests partial support for H3.1
and H4.1. With regard to H3.1, strong Conservative and Labour supporters are less likely to alter their
image of Labour (see the significant negative coefficients for Conservative and Labour partisanship in
the Labour model); and strong Liberal Democrat supporters are less likely to shift their opinions of
"their" party (see the significant negative coefficient for Liberal partisanship in the Liberal Democrat
model). With regard to H4.1, a high level of political interest appears to reduce respondents'
propensities to change their opinions of the Conservatives (see the significant negative coefficient for
interest in the Conservative model), though this effect does not extend to either the Labour or Liberal
Democrat models. The key feature of Table 4, however, is that -- again -- positive coverage increases a
party's ratings significantly: the two largest and most significant coefficients are for Positive
Conservative and Positive Labour news exposure; none of the other exposure variables produces a
significant effect.

Table 5 shows the extent to which H3.2, H4.2 and H5.2 are supported by our data. These hypotheses
suggested that there should be some sort of interaction between the effects of video exposure and,
respectively, partisanship, political knowledge and political interest; the more partisan, the more
knowledgeable and the more informed should all be less affected by exposure to partisan news coverage
than their comparator groups. The reported models only represent an illustrative sub-set of the class of
models that we estimated in this context. The results displayed, however, are representative of all the estimates that we obtained. Although the signs of some of the interaction coefficients imply that the partisan, the knowledgeable and the informed are indeed less likely to be affected by exposure, the non-significance of the coefficients means that we cannot reject the null and that we must conclude formally that no such interaction effects exist. In short, Table 5 suggests that we should reject H3.2, H4.2 and H5.2.

Table 6 represents a more fully specified model of the effects of exposure to our experimental manipulations. It includes controls for the standard battery of sociodemographic characteristics and for the respondent's television-watching habits, as well as for partisanship, knowledge and interest. The results confirm most of our earlier observations. First, the inclusion of these additional controls does not in any way perturb the strong effects of exposure to the Positive Conservative and Positive Labour videos: the estimated coefficients on these variables remain large, significant and positive while the coefficients on the remaining exposure measures are still non-significant. These findings clearly support H6.1. Second, the partisanship variables display the same coefficient pattern as in Table 4, with the same implication that stronger partisanship generally (though not invariably) tends to reduce respondents' propensities to change their opinions. Third, the sociodemographic and television-watching variables fail to demonstrate any consistent pattern of effect on the change indices. The model for Conservative party-image suggests that graduates are significantly less likely to change their overall view of the Conservatives (b=-.14), but this finding has no confirming counterpart in either the Labour or the Liberal Democrat equation. The crucial point, as H6.2 correctly anticipates, is that the sociodemographic and television-habit variables simply do not affect respondents' propensities to change their images of the three main parties. The critical driving factor that influenced our subjects' tendencies either to change their party-images or to retain them was whether or not they were exposed to our experimental manipulations. And what mattered, in particular, were the two manipulations that featured positive images of the Conservative and Labour parties.
But what happens to our findings if corrections are made for individual subjects' pre-test/post-test "response instability" as envisaged in H8.1? Table 7 describes the effects on the mean changes in party image observed in our treatment and control groups, using our corrected measures of party-image. The results are certainly more ambiguous than the equivalent ones reported in Table 2. Exposure to the Positive Conservative video continues to be associated with an improvement in the Conservatives' party-image (mean change score = +.34), but such exposure now also significantly damages Labour’s image (mean change score = -.30). The effects of the Positive Labour and Negative Labour videos on Labour’s image both have the correct signs (the mean change score for Positive Labour is +.14 and for Negative Labour is -.23) but neither effect is statistically significant. In short, while the results shown in Table 7 broadly support our earlier conclusions using uncorrected data, the beneficial effects of exposure to the Positive Labour video are not sufficiently strong to achieve statistical significance.

This qualification can be abandoned, however, in view of the multivariate results shown in Table 8. The models shown here replicate those estimated in Table 6, but on this occasion using corrected party-image measures. To be sure, there are some minor differences between the results in Table 6 and those in Table 8. For example, in Table 8, improvements in the Conservatives' party image are less likely if the respondent is interested in current affairs (b = -.15) and more likely if the respondent is an avid television-watcher (b = +.005). The only important difference between the two sets of results, however, is that exposure to the Positive Conservative video continues to damage Labour's image (b = -.29) as well as to enhance the Conservatives’ (b = +.27). This apart, the overall results are clearly consistent with our earlier observations: the sociodemographic variables do not exert consistent effects on changes in party-image; strong partisans are less likely to change their party-image perceptions; and, decisively, exposure to Positive Conservative and Positive Labour news coverage yet again significantly enhances the respective images of those two parties.

An obvious question follows from the somewhat asymmetrical empirical findings that we have reported. Why should positive news have exerted such clear and consistent effects on our respondents'
party-image perceptions while negative news appears to have had so little impact? Although we cannot
answer this question definitely, we can explore the possible reasons for this asymmetry. One possibility
relates to the timing of our experiments. Our fieldwork was conducted after a long period -- covering
most of the 1992 parliament -- in which the two major parties had focused a significant part of their
campaiging efforts on attacking their opponents. This in turn could have inured voters to the effects of
negative political images to such an extent that they failed to respond to the negative images to which
we exposed them: they would have needed a much more powerful negative stimulus to have produced a
measurable response. If this were indeed the case, it would imply that negative campaigning perhaps
contains within it the seeds of its own long-term failure: the more that voters are exposed to it, the less
they are affected by it.

A second possibility is that British voters are more susceptible to positive news images precisely because
they are generally so cynical about, and dismissive of, politics and politicians. Indirect evidence for this
cynicism can be gleaned from Gallup's long-running time-series on voters' "approval of the
government's record". These data show that, whichever party is in power, the vast majority of voters
most of the time disapprove of what the government of the day has done. In these circumstances of
general cynicism, it is possible that positive news about a political party -- any political party --
represents more of a challenge to voters' existing mind-sets, thereby invoking more of a reaction in
terms of changes in their party-image perceptions. Negative news images, on the other hand, since they
conform with and confirm voters' prior predispositions, perhaps produce less of a response.

A third possible explanation for the asymmetrical effects of positive and negative news is that the
images to which our respondents were exposed varied in intensity; the positive news stories included in
our experiments were somehow more powerful than the negative ones. In compiling our videos, we
obviously sought to ensure that such imbalances did not occur. Equally, however, we cannot be sure that
that we eliminated them altogether. To some degree, readers can judge these matters for themselves by
examining the transcripts of the video tapes, which are available from us on request. We can only assert
that, in our view, there were no obvious differences in intensity between the positive and negative news videos that we employed. We are confident that our respondents genuinely reacted differently to positive as opposed to negative news items about the major political parties. Further research will clearly be necessary to establish the precise factors that underlie this (to us, fascinating) empirical finding.

Summary and Conclusions

The method that we have adopted here is based on the simple principle that a given experimental stimulus should produce an observable test response. We wished to know if voters’ attitudinal responses varied systematically at the individual level according to the types of television news coverage they were shown. The very clear answer is that they do. Our analysis provides unambiguous experimental evidence that exposure to positive news coverage of a particular political party produces a clear and significant improvement in respondents’ perceptions of that party’s image (H1.1 and H1.3). In contrast, exposure to negative news coverage elicits no consistent response (H1.2 and H1.4).

Apart from this strong finding about the effects of "positive" news coverage on voters’ party-images, our analysis -- using non-experimental statistical controls -- suggests a number of other conclusions. First, we find little evidence that positive or negative coverage of one party exerts "collateral" effects on the images of other parties (H2.1-H2.4). In general, Positive Conservative and Positive Labour exposure, though they respectively helped the Conservatives and Labour, inflicted no collateral damage. The only exception to this pattern was when we used "corrected" party-image measures. In this context, Positive Conservative exposure did weaken respondents’ images of Labour. Unfortunately, we are not in a position to determine whether the "corrected” or the "uncorrected” findings that we have reported in this regard (H8.1) are the more appropriate; this remains a matter for future research into the question of response instability.
Another important conclusion implied by our findings is that respondents' partisan commitments do influence their susceptibility to party-image change. In general, stronger partisans are less likely to change their party-images than weaker partisans (H3.1). The tendency does not extend, however, either to the politically knowledgeable or to the politically interested: these groups are no less likely to change their party-image perceptions than their more ill-informed and uninterested counterparts (H4.1 and H5.1). We also found no evidence that more partisan, more informed or more interested respondents were any less likely than their respective comparator groups to change their assessments of the parties as a result of being exposed to positive or negative news (H3.2, H4.2 and H5.2). Finally, our findings about the role of sociodemographic characteristics and television-watching habits suggested that these variables not only failed to exert any clear effects on our respondents' changing party-images (H6.2 and H7.2) but also failed to weaken the effects on positive and negative news coverage on those party images (H6.1 and H7.1).

What, if anything, does all this tell us about the more general effects of television news on British public opinion? The cynical observer would almost certainly argue that, since we have "merely" examined experimental effects, we still know precisely nothing about the effects of television news on "real" voters "in the real world". Such a conclusion, however, would be both ill-advised and unfair. The value of the sort of research conducted here lies in the way that it relates to other projects which approach the same core materials from different perspectives. As we noted at the outset, aggregate correlations between television news coverage and voters' opinions have in the past been obliged to assume that exposure affects perceptions. We have been able to show that this is indeed the case. This in itself represents an important development for aggregate analysts. The fact that we have been able to demonstrate the existence of individual-level television news coverage effects, albeit in an experimental context, provides the necessary empirical underpinning for any analyses that seek to make use of the television coverage data that were systematically collected by Semetko and Scammel during the 1997 election campaign. Future attempts to relate these data to aggregate-level opinion poll data of the sort collected, on a daily
basis during the campaign, by Gallup can be confident that their investigations are solidly grounded in a
known, individual-level, relationship between coverage and party-image perceptions.

What we do not know, of course, is how enduring -- or ephemeral -- the changes in response that we
have measured might turn out to be. The short-term changes that we observed were in fact quite
considerable. The mean pre-test Conservative party-image score was 3.33. Our best estimate (from
Table 4) of the effect of ten minutes of Positive Conservative news coverage yields a coefficient of +0.33.
This represents no less than a 9% increase on the mean Conservative pre-test score. Remarkably, the
equivalent calculation for the effects of ten minutes of Positive Labour coverage produces the same
estimated 9% increase on the mean Labour pre-test score.\(^5\) It seems highly unlikely that effects of this
magnitude could last for very long. Equally, we have no way of determining, from our data, the rate at
which they might discount over time. Our respondents were guaranteed confidentiality and anonymity,
so we were unable to re-test them on a subsequent occasion in order to see if there might be any trace of
the experimental effects that we observed. The only way of establishing the discount rates of any
experimental effects would be for us to bite the "experimental conditioning" bullet and construct a
repeated-test research design. We certainly intend to do precisely this in our future work. For the
moment, however, we have clear evidence that it is positive rather than negative television images that
seem to best serve the electoral interests of the party concerned. Party managers, as well as news editors
contemplating their own power, should take note.
References


Footnotes

1 We originally intended to investigate the effects of two additional news categories: “positive Liberal Democrat” and “negative Liberal Democrat”. The Liberal Democrats, however, received such scant attention during the period sampled that few positive and almost no negative Liberal Democrat news items were identified. Both the positive and the negative Liberal Democrat hypotheses were subsequently dropped from our analysis.

2 The programmes sampled were Nine O’Clock News (BBC1), News at Ten (ITN), Channel Four News and Newsnight (BBC2).

3 The results of these agenda setting and time balance experiments are reported in a companion paper (Norris and Sanders, 1997).

4 In these circumstances, it is tempting in any case to regard this single significant sociodemographic effect as a statistical artefact. Given the sheer number of coefficients estimated in Table 6, the chances of observing an .05 level coefficient, even if none of the exogenous variables genuinely affects the dependent variable, are high.

5 Between January 1964 and March 1997, for example, the average “government’s record” approval rating was only 31%. This is considerably lower than the average popularity of the major parties. Over the same period, the average popularity rating of the governing party was 38.4%.

6 The estimated coefficient for Positive Labour coverage in the Labour image equation is +.49 which represents 9% of the mean Labour pre-test score of 5.40.
Table 1: Average Ratings on Party Image Variables and Indices, Pre-test and Post-test Levels, and Changes$^a$

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Mean change$^b$</th>
<th>N for mean change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of voting Conservative</td>
<td>2.82</td>
<td>3.01</td>
<td>+0.21</td>
<td>945</td>
</tr>
<tr>
<td>Liking of Conservatives</td>
<td>3.19</td>
<td>3.32</td>
<td>+0.14</td>
<td>1082</td>
</tr>
<tr>
<td>Liking of John Major</td>
<td>3.86</td>
<td>3.84</td>
<td>-0.02</td>
<td>1084</td>
</tr>
<tr>
<td>Conservative party-image index</td>
<td>3.33</td>
<td>3.44</td>
<td>+0.11</td>
<td>916</td>
</tr>
<tr>
<td>Probability of voting Labour</td>
<td>5.67</td>
<td>5.50</td>
<td>-0.09</td>
<td>1003</td>
</tr>
<tr>
<td>Liking of Labour</td>
<td>5.30</td>
<td>5.29</td>
<td>-0.03</td>
<td>1085</td>
</tr>
<tr>
<td>Liking of Tony Blair</td>
<td>4.94</td>
<td>5.08</td>
<td>+0.13</td>
<td>1089</td>
</tr>
<tr>
<td>Labour party-image index</td>
<td>5.40</td>
<td>5.34</td>
<td>+0.01</td>
<td>969</td>
</tr>
<tr>
<td>Probability of voting Liberal Democrat</td>
<td>3.25</td>
<td>3.43</td>
<td>+0.20</td>
<td>889</td>
</tr>
<tr>
<td>Liking of Liberal Democrats</td>
<td>4.46</td>
<td>4.64</td>
<td>+0.13</td>
<td>1053</td>
</tr>
<tr>
<td>Liking of Paddy Ashdown</td>
<td>4.69</td>
<td>4.76</td>
<td>+0.04</td>
<td>1068</td>
</tr>
<tr>
<td>Liberal Democrat party-image index</td>
<td>4.13</td>
<td>4.30</td>
<td>+0.10</td>
<td>8.59</td>
</tr>
</tbody>
</table>

$^a$ All measures are based on 0-10 scale. The index score is the arithmetic average of the three other scores in each party grouping. It is only measured for those respondents who answered all three component questions.

$^b$ Note that the average change figures are calculated only from those respondents who answered both pre-test and post-test questions.
Table 2: Difference of means test on changes in pretest to post-test scores
on 12 measures of party image, by video exposure

<table>
<thead>
<tr>
<th>Change in probability of voting Conservative exposure</th>
<th>Change in liking for Conservatives</th>
<th>Change in liking for Major</th>
<th>Change in Conservative party image index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group mean (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Conservative exposure mean (N)</td>
<td>Positive Labour exposure mean (N)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Conservative exposure mean (N)</td>
<td>Negative Labour exposure mean (N)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Difference of means test on changes in pretest to post-test scores on 12 measures of party image, by video exposure\(^a\) (*.05 level; ** .02; *** .01)

<table>
<thead>
<tr>
<th>Change in probability of voting</th>
<th>Change in liking for Labour</th>
<th>Change in liking for Blair</th>
<th>Change in Labour party image index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group mean (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>-.14 (543)</td>
<td>-.08 (590)</td>
<td>.10 (594)</td>
</tr>
<tr>
<td>Positive</td>
<td>-.27 (55)</td>
<td>-.25 (59)</td>
<td>-.10 (60)</td>
</tr>
<tr>
<td>Conservative exposure mean (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>.30 (54)</td>
<td>-.07 (67)</td>
<td>.31 (68)</td>
</tr>
<tr>
<td>Positive</td>
<td>.29* (62)</td>
<td>.59*** (63)</td>
<td>.34 (62)</td>
</tr>
<tr>
<td>Labour exposure mean (N)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>-.14 (58)</td>
<td>.33 (58)</td>
<td>.20 (61)</td>
</tr>
</tbody>
</table>

\(^a\) Differences between means are significant at the indicated levels.
Table 3: Direct effects on Conservative, Labour and Liberal Democrat party-image indices of exposure to Positive Conservative, Negative Conservative, Positive Labour and Negative Labour

<table>
<thead>
<tr>
<th>Change in Conservative party-image index</th>
<th>Change in Labour party-image index</th>
<th>Change in Liberal party-image index</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>se</td>
<td>b</td>
</tr>
<tr>
<td>Exposure to Positive Con News .43***</td>
<td>.13</td>
<td>-16</td>
</tr>
<tr>
<td>Exposure to Negative Con News .07</td>
<td>.11</td>
<td>.21</td>
</tr>
<tr>
<td>Exposure to Positive Lab News .13</td>
<td>.13</td>
<td>.41**</td>
</tr>
<tr>
<td>Exposure to Negative Lab News .14</td>
<td>.14</td>
<td>.09</td>
</tr>
<tr>
<td>Constant</td>
<td>.07</td>
<td>.03</td>
</tr>
<tr>
<td>Corrected R²</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>N</td>
<td>911</td>
<td>968</td>
</tr>
<tr>
<td>Standard error of estimate</td>
<td>.90</td>
<td>1.08</td>
</tr>
</tbody>
</table>

** denotes coefficient significant at .01 level; *** at .001 level. Standard errors reported as se. Estimation by OLS.
Table 4: Direct effects on Conservative, Labour and Liberal Democrat party-image indices of exposure to Positive Conservative, Negative Conservative, Positive Labour and Negative Labour, controlling for political interest, political knowledge and initial partisan preferences

<table>
<thead>
<tr>
<th>Change in</th>
<th>Change in</th>
<th>Change in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservative</td>
<td>Labour</td>
<td>Liberal Democrat</td>
</tr>
<tr>
<td>party-image</td>
<td>party-image</td>
<td>party-image</td>
</tr>
<tr>
<td>index</td>
<td>index</td>
<td>index</td>
</tr>
<tr>
<td>b</td>
<td>se</td>
<td>b</td>
</tr>
<tr>
<td>Exposure to Positive Con News</td>
<td>.40***</td>
<td>.13</td>
</tr>
<tr>
<td>Exposure to Negative Con News</td>
<td>.07</td>
<td>.13</td>
</tr>
<tr>
<td>Exposure to Positive Lab News</td>
<td>.14</td>
<td>.13</td>
</tr>
<tr>
<td>Exposure to Negative Lab News</td>
<td>.18</td>
<td>.15</td>
</tr>
<tr>
<td>Politically interested/not</td>
<td>-.12*</td>
<td>.06</td>
</tr>
<tr>
<td>Political Knowledge (0-5 scale)</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>Pre-test score on p(vote Con)</td>
<td>.00</td>
<td>.01</td>
</tr>
<tr>
<td>Pre-test score on p(vote Lab)</td>
<td>-.01</td>
<td>.01</td>
</tr>
<tr>
<td>Pre-test score on p(vote Lib)</td>
<td>-.02</td>
<td>.01</td>
</tr>
<tr>
<td>Constant</td>
<td>.22</td>
<td>.10</td>
</tr>
</tbody>
</table>

Corrected R² | .03 | .07 | .03 |
N | 848 | 860 | 827 |
Standard error of estimate | .91 | 1.08 | 1.13 |

* denotes coefficient significant at .05 level; ** at .01 level; *** at .001 level. Standard errors reported as se. Estimation by OLS.
Table 5: Direct effects on Conservative and Labour party-image indices of exposure to Positive Conservative, Negative Conservative, Positive Labour and Negative Labour, controlling for political interest, political knowledge and initial partisan preference interaction effects

<table>
<thead>
<tr>
<th>Change in Conservative party-image index</th>
<th>Interest Model (H5.2)</th>
<th>Knowledge Model (H4.2)</th>
<th>Partisan Model (H3.2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b  se</td>
<td>b  se</td>
<td>b  se</td>
</tr>
<tr>
<td>Exposure to Positive Conservative news coverage</td>
<td>.39* .19</td>
<td>.55*** .16</td>
<td>.39* .15</td>
</tr>
<tr>
<td>Politically informed/not</td>
<td>-.10 .06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure to Positive Conservative news coverage*informed</td>
<td>.03 .25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Politically knowledgeable/not</td>
<td>.02 .06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure to Positive Conservative news coverage*knowledgeable</td>
<td>-.34 .25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Conservative vote probability</td>
<td>.01 .01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure to Positive Conservative news coverage*initial Conservative vote probability</td>
<td>.01 .03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.14 .04</td>
<td>.07 .04</td>
<td>.06 .03</td>
</tr>
<tr>
<td>Corrected R²</td>
<td>.01</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>N</td>
<td>915</td>
<td>915</td>
<td>915</td>
</tr>
<tr>
<td>Standard error of estimate</td>
<td>.90</td>
<td>.90</td>
<td>.93</td>
</tr>
</tbody>
</table>
(Table 5 contd) Change in Labour party-image index

<table>
<thead>
<tr>
<th></th>
<th>Interest Model</th>
<th>Knowledge Model</th>
<th>Partisan Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(H5.2)</td>
<td>(H4.2)</td>
<td>(H3.2)</td>
</tr>
<tr>
<td></td>
<td>b se</td>
<td>b se</td>
<td>b se</td>
</tr>
<tr>
<td>Exposure to Positive Labour news coverage</td>
<td>.56** .21</td>
<td>.69*** .23</td>
<td>.56* .29</td>
</tr>
<tr>
<td>Politically informed/not</td>
<td>-.11 .07</td>
<td>-.31 .29</td>
<td></td>
</tr>
<tr>
<td>Exposure to Positive Labour news coverage*informed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Politically knowledgeable/not</td>
<td>.00 .07</td>
<td>-.47 .30</td>
<td></td>
</tr>
<tr>
<td>Exposure to Positive Labour news coverage*knowledgeable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Labour vote probability</td>
<td></td>
<td>-.05*** .01</td>
<td></td>
</tr>
<tr>
<td>Exposure to Positive Labour news coverage*initial</td>
<td></td>
<td>-.02 .04</td>
<td></td>
</tr>
<tr>
<td>Labour vote probability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.04 .05</td>
<td>-.01 .05</td>
<td>.26 .06</td>
</tr>
<tr>
<td>Corrected R²</td>
<td>.01</td>
<td>.01</td>
<td>.04</td>
</tr>
<tr>
<td>N</td>
<td>968</td>
<td>968</td>
<td>968</td>
</tr>
<tr>
<td>Standard error of estimate</td>
<td>1.08</td>
<td>1.08</td>
<td>1.06</td>
</tr>
</tbody>
</table>

* denotes coefficient significant at .05 level; ** at .01 level; *** at .001 level. Standard errors reported as se. Estimation by OLS.
Table 7: "Corrected" difference of means tests for Conservative, Labour and Liberal Democrat party-image indices; mean pre-test to post-test change measures corrected for the individual respondent's tendency to shift responses across the range of party-image variables

<table>
<thead>
<tr>
<th></th>
<th>Conservative party-image index</th>
<th>Labour party-image index</th>
<th>Liberal Democrat party-image index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control group mean (N=452)</td>
<td>+.02</td>
<td>-.04</td>
<td>+.02</td>
</tr>
<tr>
<td>Positive Conservative exposure group mean (N=51)</td>
<td>+.34***</td>
<td>-.30***</td>
<td>-.04</td>
</tr>
<tr>
<td>Negative Conservative exposure group mean (N=50)</td>
<td>-.07</td>
<td>+.03</td>
<td>+.04</td>
</tr>
<tr>
<td>Positive Labour exposure group mean (N=50)</td>
<td>+.01</td>
<td>+.14</td>
<td>-.15</td>
</tr>
<tr>
<td>Negative Labour exposure group mean (N=38)</td>
<td>+.14</td>
<td>-.23</td>
<td>+.08</td>
</tr>
</tbody>
</table>

*** denotes comparison with control is significant at .001; all other control comparisons non-significant.