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The Consequences of Forced Versus Selected Political Media Exposure

Natalie Jomini Stroud¹, Lauren Feldman ², Magdalena Wojcieszak³, & Bruce Bimber⁴

1 Department of Communication Studies, University of Texas at Austin, Austin, TX 78712, USA

2 School of Communication and Information, Rutgers, The State University of New Jersey, New Brunswick, NJ 08901, USA

3 Department of Communication, University of California, Davis, CA 95616, USA

4 Department of Political Science, University of California, Santa Barbara, CA, 93106, USA

The effects of media exposure differ when people are given the opportunity to choose content compared to when they are forced to view it. Contemporary explanations propose that differences between forced and selected exposure occur because of between-subject differences. We propose that differences also result from within-subject psychological reactions. Using a novel experimental design, a representative sample of U.S. adults (N = 1,967) provided their content preferences in a first session and then, in a second session, were randomly assigned to choose content or to view randomly-assigned content. Results confirm that forced exposure yields different psychological reactions than selected exposure, even in some cases among participants forced to view their preferred content.

Keywords: Media Effects, Cognitive Dissonance, Reactance, Experiment, Selective Exposure.

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Scholars long have known that media effects are heterogeneous; some are affected by messages differently than others are. Although many factors could moderate the effect, whether a person has chosen a message or has been exposed to it absent a choice is arguably critical. Clearly, a prerequisite for an effect is exposure (Price & Zaller, 1993), but the circumstances of exposure can vary. It is commonly observed that the high-choice media environment makes it easier for audiences to choose their preferred content (Bennett & Iyengar, 2008; Prior, 2007). Yet media exposure is not always under an individual's control. In some situations, such as when the television is on in a waiting room or bar, when a friend circulates a news story via social media, or when an experimental researcher assigns study participants to watch a media stimulus, media exposure is not actively chosen. In this paper, we

Corresponding author: Natalie Jomini Stroud; e-mail: tstroud@austin.utexas.edu

call the former situation, in which individuals have control over the content they see, “selected exposure,” and the latter situation, in which individuals are exposed to media unintentionally, “forced exposure.” The purpose of this study is to show how the two situations generate different psychological reactions.

An important motivation for this research is the fact that much evidence about media effects comes from experiments involving forced exposure to predefined content via random assignment (although see [Arceneaux & Johnson, 2013](#); [Levendusky, 2013a](#); [Trilling, van Klingeren, & Tsfati, 2016](#)), while extensive theoretical discussion in the literature currently focuses on selected exposure (e.g., [Garrett et al., 2014](#); [Iyengar & Hahn, 2009](#); [Stroud, 2011](#)). The implications of the distinction between forced versus selected exposure are both theoretical and methodological. Theoretically, it is not known whether media affect people differently depending on whether exposure is selected versus forced. Despite theoretical reasons to anticipate that there will be differences, traditional experimental work on media effects tends to treat the two as interchangeable. Only by employing recent advances in experimental design do we have the ability to distinguish between the potentially different reactions to forced and selected media exposure. Methodologically, if forced exposure affects people differently than selected exposure, we must carefully think through the limitations of standard experimental designs. Although experiments are the best method for examining causality, random assignment forces media exposure on study participants. As of yet, it is unclear how standard experimental results apply to situations in which participants are given choice regarding their exposure, and thus to most “real world” contexts.

Here, we join recent work that has modified standard experimental designs in order to give participants some choice over media content ([Arceneaux & Johnson, 2013](#); [Gaines & Kuklinski, 2011](#); [Levendusky, 2013a](#); [Trilling et al., 2016](#)). We extend that work by showing that people respond differently when they choose media compared with when they are forced to view the same content. More specifically, we propose that differences in media effects between forced and selected exposure occur within subjects, based on their psychological reaction to having a news story chosen for them or having the agency to choose the content.¹

Theories of both reactance and cognitive dissonance suggest that reactions to forced and selected exposure will differ (e.g., [Brehm, 1966](#); [Cotton & Hieser, 1980](#); [Festinger, 1962](#); [Frey & Wicklund, 1978](#); [Miron & Brehm, 2006](#)). Thus, we analyzed affective and cognitive reactance as well as two strategies of dissonance reduction: trivialization and effort justification. We employed a unique experimental design to show that conclusions about how people react to freely-chosen messages cannot always be inferred from their reactions to forced exposure, even when adjustments are made to forced-choice experiments to account for the frequency of selected exposure or the preferences of subjects who are randomly assigned to content. The study first asked people to report their content preferences and, several weeks later, either allowed them to choose among pro-attitudinal, counter-attitudinal, or balanced news content or forced their exposure to one of these messages. The results

demonstrate that there are small, but persistent and meaningful, differences between forced and selected exposure. Those forced to view news media content exhibited more reactance and greater efforts to reduce dissonance than those given a choice of news media content.

Why forced and selected exposure produce different results

Historically, citizens have had some choice over news, such as selecting between newspapers when their city had more than one or attending to certain articles while skipping others. The current media environment, with numerous cable channels and nearly unlimited content online, however, offers unprecedented possibilities for people to choose preferred content. Given the centrality of individual agency, the assumption that the effects from forced media exposure are comparable to the effects from selected exposure requires close examination. The current project joins the recent scholarly effort to examine whether and how active-choice versus experimentally-assigned exposure influences media effects. Some studies have shown that forced and selected exposure differ (Arceneaux & Johnson, 2013), whereas others have found that there are no differences on outcomes like polarization (Trilling et al., 2016). Despite these useful findings, the potential differences between selected and forced exposure have not been fully elaborated. Arceneaux and Johnson (2013) presented the most comprehensive account to date of why forced and selected exposure differ, focusing on between-subject differences. They proposed a two-step rationale for the differences between forced and selected exposure: dilution and differential treatment effects. We begin with a discussion of their research and then propose an extension that draws on psychological effects that may create within-subject differences between selected and forced exposure.

The distribution of media exposure

The first step in understanding the difference between forced and selected exposure in experimental designs involves differences in the distribution of media exposure, or what Arceneaux and Johnson (2013) call dilution. The percentage of people forced by random assignment to view a certain type of media content in a typical experiment differs from the percentage of people who would choose to view the same content if given a choice. For example, study participants may be asked to view pro-attitudinal news, counter-attitudinal news, or balanced news. In a standard experiment, the distribution of respondents into each condition is uniform, with roughly the same fraction viewing each type of content. If, instead, participants were presented the same three news options and given the opportunity to choose among them, their selections would not be uniformly distributed. The literature on selective exposure indicates that participants would select more likeminded than counter-attitudinal content (Iyengar & Hahn, 2009; Knobloch-Westerwick & Meng, 2009; Stroud, 2011; Taber & Lodge, 2006) and also more balanced than counter-attitudinal

news (Brenes Peralta, 2017; Brenes Peralta, Wojcieszak, Lelkes, & de Vreese, 2017; Chaffee & McLeod, 1973).

In their work on the choice among pro-attitudinal news, counter-attitudinal news, and entertainment, Arceneaux and Johnson (2013) argued that the news media's effects are diluted in the presence of more diverse content options because some people choose entertainment. When people are randomly assigned to news and entertainment conditions in a forced exposure experiment, the percentage of people viewing entertainment is likely to be less than the percentage who would choose entertainment outside of the experiment (e.g., Prior, 2007).

Preferences influence reactions

In addition to the distribution of media exposure, people's preferences also explain why there are differences in the effects of forced versus selected media exposure. Specifically, people forced to view content that they would not have chosen if given the chance may react differently than those viewing content that they would have chosen. Arceneaux and Johnson (2013) call this differential treatment effects. When those preferring pro-attitudinal content are forced to view counter-attitudinal content in an experiment, for example, they may react differently from those who would have naturally gravitated toward counter-attitudinal content.

One way to address this problem is by using a "participant preference design," where study participants are first asked about their media preferences. For example, Arceneaux and Johnson (2013) first inquired whether people preferred news or entertainment, and then randomly assigned people to view pro-attitudinal news, counter-attitudinal news, or entertainment. Similarly, Levendusky (2013a) randomly assigned participants to watch pro-attitudinal, counter-attitudinal, or balanced news after gauging their preferred choice among these three types of news programs.

The scholars then analyzed whether the effects of the experimental conditions were moderated by the participants' expressed preferences. Both approaches yielded differences. Across several studies, Arceneaux and Johnson (2013) demonstrated that forced exposure to pro- and counter-attitudinal news affected the political attitudes of those preferring entertainment more than those preferring news. Levendusky (2013a) found that the effects of exposure to likeminded partisan news were stronger among those who preferred this type of news. Although the results differ, likely due at least in part to the content alternatives tested (Arceneaux and Johnson included entertainment; Levendusky included balanced news), they show that the effects of the news media are moderated by people's preferences. This makes the participant preference design approach promising, such that we can learn about media effects from forced exposure experiments by looking at the effects only among those who would choose the content they were forced to see. Yet the design assumes that people respond identically whether they are forced to view content or choose the same content.

A psychological explanation

The core aim and contribution of this study is to propose an additional—psychological—explanation for why forced exposure produces different effects than the opportunity to select content. The dilution and differential treatment effects approach assumes that media effects are identical for an individual, regardless of whether the person is forced or elects to view content. However, there are good reasons to expect that there also are within-subject differences between forced and selected exposure (see also [Leeper, 2013](#)). In other words, we argue that different psychological reactions to the experience of being forced to view versus able to select content may be a key factor responsible for the differential effects. Drawing from the theories of reactance and cognitive dissonance, we develop the theoretical rationale for this explanation, and argue that forced exposure should differ from selected exposure because of the reactance and cognitive dissonance it generates. We describe our theoretical rationale below.

Reactance

[Brehm's \(1966\)](#) theory of psychological reactance holds that when people's choices are constrained, they feel upset about the restriction of their freedom and are motivated to respond. One study, for instance, gave participants a choice among three movies ([Brehm, 1966](#)). The experimenter then removed one movie from the choice set, thus inspiring reactance because participants' choices had been constrained. In response, participants became more favorable toward the eliminated choice. Reactance varies by situation and need not be confined to situations where a choice set is defined by the experimenter before being reduced. The mere absence of choice also can create reactance (e.g., [Edwards, Li, & Lee, 2002](#); [Shen, 2015](#)). More generally, prior research has shown that reactance is induced by the perception that one's ability to choose among alternatives is compromised ([Quick & Stephenson, 2007](#)). Early studies of reactance found that taking away even the third-ranked of four choices increases positive evaluations of that alternative, suggesting that the loss of choice overall—and not merely of one's top choice—is what induces reactance ([Brehm, Stires, Sensenig, & Shaban, 1966](#)). Further, a restriction of freedom in one setting may inspire more reactance than an identical restriction in another setting. As [Miron and Brehm \(2006, p. 5\)](#) explained, reactance theory “does not deal with general moral principles, but rather with specific behaviors that are context-based ... in one context a person may feel great reactance ... whereas in another s/he might not care.”

A primary tenet of reactance theory is that reactance increases when a person has the freedom to choose among options and their choice is taken away ([Brehm, 1966](#)). When applied to a media context, citizens' habituation to a high degree of choice may create reactance once that choice is not available and content is assigned to them in an experimental setting. The forced choice treatment

associated with random assignment violates subjects' typical experience of news as being freely chosen or avoided altogether.²

Scholars have operationalized reactance in terms of both negative affect (i.e., affective reactance) and counter-arguing (i.e., cognitive reactance; Dillard & Shen, 2005; Miron & Brehm, 2006; Rains, 2013). Applied to our focus, reactance theory suggests that those forced to view media content should experience greater negative affect and engage in more counter-argument than those given a choice.

H1a: Those forced to view news media content will experience more cognitive and affective reactance than those given a choice of news media content.

Cognitive dissonance

The second psychological reaction that could be influenced by forced versus selected exposure is cognitive dissonance. In Festinger's (1962) original theory, cognitive dissonance is aroused when people recognize conflict among their cognitions and/or behaviors. In the present study, greater cognitive dissonance should result from being forced to view a news story than from being given a choice among several stories.³ Evidence indeed confirms that dissonance reduction is related to the extent to which people believe that they have a choice (e.g., Cotton & Hieser, 1980; Frey & Wicklund, 1978). According to Festinger, those experiencing dissonance are motivated to reduce it by using strategies such as seeking consonant information (see Knobloch-Westerwick & Meng, 2009), diminishing the importance of the dissonant elements (see Beasley & Joslyn, 2001), or changing one of the dissonant elements (Cooper & Fazio, 1984). Which dissonance reduction strategy is (or strategies are) adopted depends on numerous factors, including which strategy is most easily employed in a given situation (Simon, Greenberg, & Brehm, 1995). In our analysis, we examined two possible strategies: trivialization and effort justification. These strategies were the most available to subjects in the psychological context of our design, where dissonance was induced by reading a news story that was forced rather than selected. Changing the dissonant behavior by refusing to read the article would mean that participants were not complying with the study, which could create even further dissonance, and information seeking was not an option within the confines of our design.

Trivialization involves reducing the importance of cognitive elements that are in conflict (Festinger, 1962; Simon et al., 1995). Across a series of four studies, Simon et al. (1995) analyzed how people responded to being asked to write a counter-attitudinal essay about an issue. They found consistent evidence of trivialization, whereby study participants rated the issue and their behavior as less important in response to the dissonance aroused by writing the essay. Later work replicated the finding (Joule & Martinie, 2008). In this research, we looked beyond any particular news slant and focused on the differences between forced and selected exposure. As dissonance results from conflicting cognitions, reading an article that one did not choose—regardless of its slant—should arouse dissonance.

If forced exposure yields greater dissonance than selected exposure, trivialization suggests that those forced to view content will rate an issue featured in the content as less important than those given a choice.

H1b: Those forced to view news media content will rate the issue as less important than those given a choice of news media content.

Effort justification is another dissonance reduction strategy whereby those undertaking an effortful task subsequently evaluate the task as valuable, particularly when the task is undesirable (Aronson & Mills, 1959). Dissonance results when the effort expended does not match the perceived payoff. To resolve the dissonance, one can evaluate the payoff more positively. Early research on effort justification showed that people evaluated being part of a boring group more positively when they had to complete an embarrassing initiation ritual compared to having to complete a less embarrassing ritual or no ritual at all (Aronson & Mills, 1959). Later research also found that people respond to dissonance by bolstering the evaluation of a pay-off (Axsom & Cooper, 1985; Norton, Mochon, & Ariely, 2012; Rosenfeld, Giacalone, & Tedeschi, 1984). In the context of news, more dissonance should result from being forced to view a news story than choosing one's exposure. To resolve the dissonance, one could value the task more positively, hence justifying the effort of being forced to read news content. Given that information surveillance, or learning, is a chief motivation for consuming news (David, 2009), the desired payoff from a news-reading task is the ability to understand its issue content.

H1c: Those forced to view news media content will rate the issue as more understandable than those given a choice of news media content.

In sum, we propose that differences between forced and selected exposure occur due to a psychological reaction to being forced to view content in comparison to having a choice of which content to view. Finding support for H1a–c cannot allow us to know whether the dilution and differential treatment effects explanation is sufficient or whether psychological reactions also matter, however. Both could produce the same pattern of findings. If affective reactance among those forced to view content differs significantly from those electing the same content, it could be because people have divergent psychological reactions, as proposed above, or because of the dilution explanation, whereby more people came into contact with counter-attitudinal content in the forced conditions than when given a choice. To understand whether the psychological explanation bears fruit experimentally, one must take dilution and differential treatment effects into account and then examine whether differences between forced and selected exposure persist. We did each in turn. First, if the psychological explanation holds, then we would anticipate that differences would remain after controlling for dilution. As we explain below, the dilution explanation can be addressed by weighting the experimental conditions by the probability that the condition would be selected.

H2: Taking dilution into account, differences between forced and selected exposure as predicted by H1a–c will remain.

To incorporate the differential treatment effects explanation, we need to look at those who are forced to view the same content that they would have selected if they had the option. Based on the dilution and differential treatment effects explanation, there should be no differences between those who were forced to view what they would have chosen and those who were able to choose it. Our psychological explanation, however, suggests that differences should persist even among those viewing preferred content. Those being forced to do something—even something that they would have selected on their own—may experience reactance and dissonance from the constraint of their freedom, especially given that, as aforementioned, users in the high-choice media environment are accustomed to having the complete agency to select whatever content they wish. Consistent with the psychological explanation, we propose:

H3: Among those viewing preferred content, there will be differences between forced and selected exposure as predicted by H1a–c.

Method

These hypotheses were tested using data from a larger study that involved an online, survey-based experiment conducted between November 2011 and January 2012, designed to assess the effects of forced versus selected exposure. YouGov (formerly Polimetrix), the research firm fielding the study, has a pool of opt-in panel respondents consisting of 1.5 million U.S. residents. Respondents were matched to a randomly-selected probability sample based on their gender, age, race, education, party identification, ideology, and political interest. The study took place in two sessions. For the first session, YouGov surveyed 3,325 respondents. Three weeks later, the respondents were re-contacted for the second session. After finalizing the sample matching procedure, 2,300 respondents completed the study. The final sample was 54% female and 73% White, with a mean age of 48.4 ($SD = 15.5$) and “some college” as their median level of education. Demographic comparisons with census data can be found in Appendix Table 1.

In the first session, participants were told that the purpose of the study was “to assess your thoughts about current political issues.” Those providing consent completed a questionnaire about their demographics, news preferences, and political attitudes. In the second session, participants took part in the experimental portion of the study, where they were asked to read a news article. Participants were randomly assigned to one of four conditions: (a) forced exposure to pro-attitudinal news content, (b) forced exposure to counter-attitudinal news content, (c) forced exposure to balanced news content, or (d) selected exposure, where they could choose among pro-attitudinal, counter-attitudinal, and balanced news content. As

we knew that few in the selected exposure condition would select counter-attitudinal news, we randomly assigned participants at a rate of 75% to the selected exposure condition and 25% to the three forced choice conditions. This allowed for a reasonable number of participants in both conditions viewing each type of available content. After viewing, participants reported their reactions to the article and the issue covered. Our design combined two methods used by [Arceneaux and Johnson \(2013\)](#) to allow us to test our hypotheses: (a) the incorporation of a condition that allows choice and (b) assessing participant preferences prior to forced media exposure (see also [Knox, Yamamoto, Baum, & Berinsky, 2014](#), who proposed a similar experimental design, albeit to answer a different question than we examine here).

News articles reflecting a liberal, conservative, and balanced perspective on four different issues (abortion, health care, teacher funding, and gun control) were created for this study. Respondents were randomly assigned to see articles on one of these four issues. The articles had a similar length, number of sources, and number of arguments. Pretests revealed that the headlines and leads, as well as the articles, were perceived as intended, as either favoring a liberal or conservative stance or as presenting a balanced take (see Appendix Tables 2 and 3).

To determine whether the news articles were pro- or counter-attitudinal, we asked respondents in the first session to report their attitudes about the issue to which they were randomly assigned on a scale from 1 (strongly oppose) to 7 (strongly favor; 4 = neutral).⁴ The responses were trichotomized into oppose/neutral/favor.⁵ Respondents who favored or opposed the policy and selected the pro or con article, respectively, were coded as preferring pro-attitudinal news. Similarly, those who favored or opposed the policy and selected the con or pro article, respectively, were coded as preferring counter-attitudinal news. Respondents who selected the balanced article were coded as preferring balanced content. Those who reported neutral attitudes ($n = 333$) were excluded because a pro- or counter-attitudinal classification for these respondents could not be made. This is consistent with the practice of others (e.g., [Levendusky, 2013a](#)).

Measures

Dependent variables

Following the negative affect operationalization of reactance ([Brehm, 1966](#); [Dillard & Shen, 2005](#); [Miron & Brehm, 2006](#); [Rains, 2013](#)), participants reported their experience of anger and frustration when reading the article to which they were assigned on a 7-point scale (1 = not at all, 7 = very much). These items were averaged to form a measure of affective reactance ($M = 4.90$, $SE = 1.76$, $r = .72$, $p < .01$).

To measure cognitive reactance, we followed a multi-step procedure (see [Dillard & Shen, 2005](#) for a similar procedure). After reading the article, respondents were asked to list their reactions in up to five open-ended boxes. With these data, we first coded the responses for relevance to identify content that was not

related to the article. Two coders independently assessed 20% of the open-ended responses to assess reliability, which was strong (Krippendorff's $\alpha = .82$). We then coded the data for whether it contained any counter-arguments. Counter-argument was operationalized as "any thought that represents a negative evaluation of the message, the advocacy, or the source of the message" (see [Dillard & Shen, 2005](#)). For instance, a response that "the statistics seem unconvincing" would be coded as a counter-argument. Again, two coders assessed 20% of the responses (Krippendorff's $\alpha = .76$). After completing these steps, any respondent that left any open-ended response that was relevant and contained a counter-argument was coded as 1 (17%) and all others were coded as 0 (83%).⁶

Attitude importance was selected as an indicator of trivialization. Participants reported how important the issue was to them personally on a 7-point scale (1 = very unimportant, 7 = very important; $M = 5.28$, $SE = 1.66$). Lastly, issue understanding was used as a proxy for effort justification. Participants reported if they (a) had a pretty good understanding of the issue and (b) thought that the issue seemed "so complicated that a person like me can't really understand what's going on" (reverse-coded; 1 = strongly disagree, 7 = strongly agree; $M = 5.27$, $SE = 1.41$, $r = .55$, $p < .01$). Although these measures are not perfect indicators of trivialization and effort justification, they were the closest theoretical approximations of those concepts in the current project. We proposed these items as adaptations to online survey experiments from contexts where trivialization and effort justification are assessed with reactions to highly idiosyncratic activities and tasks that individuals perform in lab settings (e.g., [Aronson & Mills, 1959](#)).

These four dependent variables are weakly correlated (r varies between .17 and $-.04$). A principal component analysis of the individual items comprising the dependent variables using an oblique rotation returned three factors with eigenvalues greater than 1 and accounting for 73% of the variance: affective reactance (anger, frustration), issue understanding (good understanding, complicated), and cognitive reactance. If we allow for eigenvalues greater than .85, there are four factors accounting for 88% of the variance, with issue importance loading on the final factor.

Media preferences

In the first study session, participants indicated their preferences among two lists of articles. The first list included six headlines and leads: three describing entertainment-related news and three representing a liberal, conservative, or balanced perspective on their assigned political issue. In the second list, participants were shown only the three headlines associated with the political issue. A similar technique has been used in previous participant-preference designs ([Arceneaux & Johnson, 2013](#); [Levendusky, 2013a](#)).⁷ Three weeks later, participants were either forced to view media content or again given a choice among the news articles and asked to read their selection. Measuring media preferences and then exposing participants to the media at a later point in time allows us to compare people forced

to view content that they wanted to view and those having the ability to choose their exposure.

Condition comparison

Before turning to our results, we must first discuss one analytic move that differs from previous work on forced versus selected exposure. In their research, [Arceneaux and Johnson \(2013\)](#) analyzed how selection changes the media's effect by comparing three groups, all relative to the control condition of forced entertainment exposure: (a) forced pro-attitudinal exposure, (b) forced counter-attitudinal exposure, and (c) selected entertainment or news exposure.⁸ Given our substantive interest in comparing forced and selected exposure, we analyzed the data differently. Here, we compared (a) the forced exposure condition, combining those forced to view balanced, pro-, and counter-attitudinal news, to (b) the selected exposure condition, where people could choose among these options. We made this choice for an important methodological reason: to preserve random assignment. Although it would be possible to disaggregate the forced condition because participants were randomly assigned to view forced pro-attitudinal, forced counter-attitudinal, and forced balanced news, disaggregating the selected exposure condition would result in the loss of the desirable properties of random assignment.⁹ Note that we also focused on news exposure as opposed to news and entertainment exposure. As we discuss in the results section, our overarching conclusions are unchanged when we analyzed only those preferring news or only those preferring entertainment.

Results

First, we present the general selection patterns in our sample for those randomly assigned to the selected exposure condition, as those in the forced exposure condition saw balanced, pro-, or counter-attitudinal articles with equal frequency. For those randomly assigned to the abortion issue, 56.2% chose a pro-attitudinal article, 40.7% a balanced article, and 3.1% a counter-attitudinal article. For health care, 61.4% chose a pro-attitudinal article, 33.2% a balanced article, and 5.5% a counter-attitudinal article. For teacher funding, 49.7% chose a pro-attitudinal article, 39.1% a balanced article, and 11.2% a counter-attitudinal article. Finally, for gun control, 55.9% chose a pro-attitudinal article, 31.8% a balanced article, and 12.3% a counter-attitudinal article.

We examined whether differences exist between the aggregated forced and selected exposure conditions in several steps. First, we tested for simple differences in the outcome measures. Table 1 presents the results: those forced to read news experienced significantly greater affective reactance, evinced greater cognitive reactance,¹⁰ and rated the issue as more understandable (H1a and c) relative to those choosing content. There were no differences between forced and selected exposure for issue importance (H1b). We tested whether the results varied by the four issues

Table 1 Forced Versus Selected Means

	Raw Data				Weighted by the Distribution of Media Choices		
	Selected <i>M</i>	Forced <i>M</i>	<i>t</i>	Cohen's <i>d</i>	Forced <i>M</i>	<i>t</i>	Cohen's <i>d</i>
Affective reactance	4.83 (.05)	5.08 (.08)	2.78**	.14	5.04 (.08)	2.33*	.12
Cognitive reactance	.12 (.01)	.31 (.02)	8.92**	.49	.14 (.02)	3.00**	.17
Issue importance	5.30 (.04)	5.23 (.08)	-.78	.04	5.20 (.08)	-1.11	.06
Issue understanding	5.22 (.04)	5.40 (.06)	2.48*	.13	5.46 (.06)	3.38**	.17

Note: Standard errors given in parentheses. * $p < .05$, ** $p < .01$

analyzed. For cognitive reactance, issue understanding, and importance, there were no differences by issue. For affective reactance, however, significant effects appeared ($F[3, 1944] = 3.16, p < .05$). A post hoc comparison revealed that there was a significant difference for teacher funding ($F[1, 1952] = 12.28, p < .01$), but not for the other issues. The cognitive reactance and issue understanding results offer support for the hypotheses, and the affective reactance results partially support our expectation that people react differently to selected exposure than to forced exposure. Although statistically significant, the effect sizes are quite small for affective reactance and issue understanding (Cohen's d of .20 is considered small and .50 medium).

Our next concern was whether these effects persisted when we accounted for dilution and differential treatment effects. The dilution explanation proposes that the distribution of chosen media content explains the differences between forced and selected exposure. If dilution were the only factor influencing the results, then differences should disappear after taking the distribution of choices into account. If, however, the psychological explanation is correct, differences between selected and forced exposure should persist after controlling for dilution.

To test for this, we weighted the data based on the probability that a content type would be selected. Our approach is illustrated in Figure 1. The first column represents participants given a choice among news articles. The second column represents the distribution when participants were randomly assigned to view one of the news articles. The third column illustrates our weighting procedure: we weighted the forced choice data so that it resembled the selections people made in the selected condition. For instance, 55.9% of participants chose a pro-attitudinal article in the selected condition. When forced, by design, 33.3% saw a pro-attitudinal article. To weight the data, we divided 55.9 by 33.3 to arrive at a weight of 1.68. In the forced condition, we weighted the data so that all participants seeing pro-attitudinal articles were weighted as 1.68 participants. After weighting

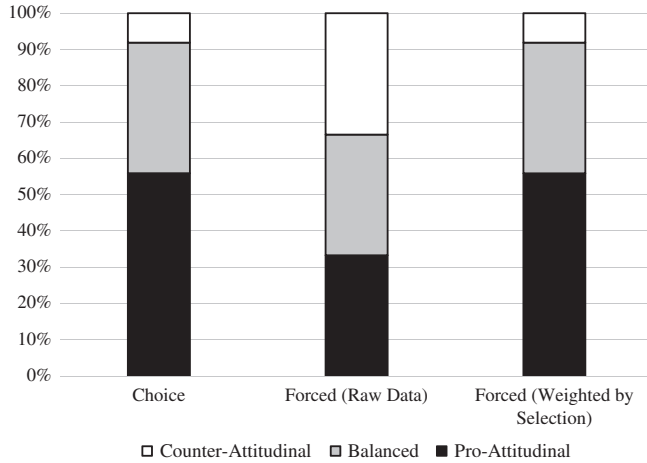


Figure 1 Weighting the forced data to match the selected condition.

respondents in the forced pro-attitudinal (1.68), balanced (1.08), and counter-attitudinal (.24) conditions, we could compare the forced and selected conditions, holding the probability of selection constant. This weighting strategy takes advantage of the fact that participants were randomly assigned to the forced pro-attitudinal, forced counter-attitudinal, and forced balanced conditions. Using weighting, it is possible to hold the participants’ choices constant and retain the desirable properties of random assignment.

The last two columns of Table 1 present the weighted forced exposure data. The percentage that viewed balanced, pro-, and counter-attitudinal content in the forced condition is identical to that for each of the selected conditions. As shown in Table 1, the results are similar. As with the raw data, those in the forced condition reported more affective reactance, cognitive reactance, and issue understanding compared to those given a choice, but no differences emerged with respect to issue importance. Consistent with H2 and supporting our psychological explanation, the percentage of respondents choosing each article does not account for differences between the forced and selected exposure conditions.¹¹ We note, however, that the effect sizes are small.

A more difficult test for the psychological explanation is to look exclusively at those viewing content that they wanted to see. This test allowed us to account for both dilution and differential treatment effects. As described before, participants indicated their preference among the balanced, pro-, and counter-attitudinal news articles three weeks prior to the experimental manipulation. We took advantage of this question by analyzing H1a–c separately by original news preferences. Further, we deconstructed the forced condition and looked separately at those viewing different content while still preserving random assignment. In other words, among those indicating a preference for pro-attitudinal news in the first study session, we

were able to compare (a) those in the forced pro-attitudinal exposure condition and (b) those in the choice condition. As those preferring pro-attitudinal news were randomly assigned to these two conditions, differences between the two can be attributed to forced versus selected exposure, not to other factors. The results of this comparison can be found in the first three columns in Table 2. Among those with a preference for pro-attitudinal news, those forced to view pro-attitudinal news reported higher issue understanding than those given a choice among the various news options. Among those with a preference for balanced news, shown in Table 3, those forced to view balanced news rated the issue as less important than those given a choice.¹²

There is some slippage in this comparison, however, because some of those indicating a preference for pro-attitudinal or balanced news in the first session did not select pro-attitudinal or balanced news when given a choice in the second session.¹³ If we looked only at those who chose content in line with their initial preference, we would sacrifice random assignment, because those who switched their preference likely differ from those who had consistent preferences across the two sessions. Nonetheless, in this analysis, controlling for participant demographics, political backgrounds, and the first study session affect, issue importance, and understanding, the results remain the same (see the second three columns of data labeled “Sacrifice Random Assignment” in Tables 2 and 3). The consistency across the two analyses makes it less likely that the observed differences are due to the non-consistent choices by those in the choice condition. Overall, the results show that differences emerged between forced and selected exposure even among those who viewed their preferred article. The documented effects, however, are small (partial η^2 of .01 is considered small). As the differences were confined to only a few of the possible dependent variables, we consider this as providing only partial support for H3.

One other component of the measurement of preferences is worth mentioning. Arceneaux and Johnson (2013) found that those with entertainment preferences respond differently to forced news exposure compared to those with news preferences. Recall that in the pre-test, we asked the participants which article they would like to read, presenting them an extended list of six titles and leads that included three entertainment options and three political articles about their randomly-assigned issue. Using this measure, it was possible to replicate our analyses, isolating only those who expressed a preference for news. The analyses, included in Appendix Tables 8 and 9, revealed no differences in the direction of the means, although the reduced sample size did result in some differences in the statistical significance. The cognitive reactance and issue understanding findings, however, persisted and remained significant when the sample was restricted to those preferring news. When looking at those preferring entertainment, there are differences in cognitive reactance depending on whether exposure was forced or selected.

Table 2 Forced Versus Selected Means Among Those Preferring Pro-Attitudinal News

	Preserve Random Assignment				Sacrifice Random Assignment			
	Selected <i>M</i>	Forced Pro-attitudinal <i>M</i>	<i>F</i> (1, 839)	Partial η^2	Selected Pro-Attitudinal <i>M</i>	Forced Pro-attitudinal <i>M</i>	<i>F</i> (1, 636)	Partial η^2
Affective reactance	5.00 (.06)	5.34 (.18)	3.38+	.004	5.08 (.07)	5.35 (.18)	1.97	.003
Cognitive reactance	.10 (.01)	.10 (.03)	.03	.00004	.09 (.01)	.10 (.03)	.03	.00004
Issue importance	5.42 (.05)	5.26 (.15)	1.02	.001	5.54 (.06)	5.29 (.15)	2.22	.003
Issue understanding	5.41 (.04)	5.68 (.11)	5.63*	.01	5.47 (.04)	5.72 (.11)	4.21*	.007

Note: Standard errors given in parentheses. Estimated marginal means displayed; analysis controls for demographics, political orientations, and first study session values of negative affect, issue importance, and issue understanding. Sample size restrictions do not allow for the same analysis for counter-attitudinal exposure (18 preferred counter-attitudinal and were forced to view counter-attitudinal). + $p < .10$, * $p < .05$.

Table 3 Forced Versus Selected Means Among Those Preferring Balanced News

	Preserve Random Assignment				Sacrifice Random Assignment			
	Selected <i>M</i>	Forced Balanced <i>M</i>	<i>F</i> (1, 563)	Partial η^2	Selected Balanced <i>M</i>	Forced Balanced <i>M</i>	<i>F</i> (1, 350)	Partial η^2
Affective reactance	4.60 (.07)	4.65 (.19)	.08	.0001	4.45 (.09)	4.70 (.19)	1.35	.004
Cognitive reactance	.15 (.01)	.09 (.04)	1.62	.003	.13 (.02)	.10 (.04)	.32	.001
Issue importance	5.16 (.06)	4.59 (.17)	10.04**	.02	5.10 (.08)	4.57 (.17)	7.69**	.02
Issue understanding	5.20 (.04)	5.15 (.12)	.16	.0003	5.16 (.06)	5.19 (.12)	.04	.0001

Note: Standard errors given in parentheses. Estimated marginal means displayed; analysis controls for demographics, political orientations, and first study session values of negative affect, issue importance, and issue understanding. Sample size restrictions do not allow for the same analysis for counter-attitudinal exposure (18 preferred counter-attitudinal and were forced to view counter-attitudinal). ** $p < .01$

Discussion and conclusions

Experiments provide useful information about the causal effects of media exposure. Their external validity, however, can be critiqued in part because they force exposure to media content. Examining the consequences of forced experimental assignment to content is especially relevant given that the current media environment offers unprecedented choice over content, making it unlikely that citizens are often forced to see certain outlets or messages. Some recent studies found that the effects of forced versus selected exposure vary in experimental settings (Arceneaux & Johnson, 2013; Druckman, Fein, & Leeper, 2012; Levendusky, 2013a, b). The best explanation for these variations has been that effects depend on people's preferences for media content, as captured by the dilution and differential treatment effects account.

We advanced another explanation related to the psychology of choice. We argued that the differences produced by forced versus selected exposure also occur as a result of the very act of choosing to read a news article versus being presented an article by an experimenter without being given a choice. We proposed that subjects would respond differently to an article that they were forced to read as opposed to an article they chose to read, and we examined several different psychological reactions: affective and cognitive reactance and two strategies for dissonance reduction, trivialization, and effort justification. Supporting the proposed psychological explanation, our results demonstrate that people have different reactions to forced versus selected exposure. Forced exposure leads to a stronger sense of issue understanding, higher levels of cognitive reactance, and, at least for one of the four considered issues, greater affective reactance than selected exposure. These differences persisted after weighting the data based on the distribution of content selected, and the effect on issue understanding held among those who preferred and saw pro-attitudinal content, offering a stringent test of our hypotheses. The mere act of being forced to see content in an experimental setting (and perhaps in other contexts, such as a waiting room in a doctor's office or a colleague sharing a news article) increases reactance and enhances strategies to reduce cognitive dissonance. These reactions are lower when people can select the content themselves.

Our analysis also provides support for the dilution and differential treatment account proposed by past work. Consistent with the dilution explanation, weighting the data reduced the magnitude of differences between forced and selected exposure for cognitive reactance. Consistent with the differential treatment account, participants who viewed the content they wanted to see did not display any reactance. Importantly, however, and offering a robust test of the psychological explanation, differences remained across these various tests.

Implications for experimental design

There are two different ways to interpret these findings, and both have important implications for experimental design and for understanding media effects. One

reading is that this study raises questions about the external validity of forced choice experiments. Significant and persistent differences between forced and selected exposure signal that people have distinct psychological reactions to being forced to view content. Efforts to control for these reactions, such as the use of weights or participant preference designs, do not eliminate the problem. When controlling for the distribution of media choice, differences persist. Further, those viewing their preferred media content responded differently when they chose as opposed to when they were forced to view the content. This calls into question the justification for using participant preference designs.¹⁴

Another way to interpret our findings is to conclude that the problem of forced exposure in media effects experiments is minimal. The documented effects are small in magnitude. Further, media effects studies consider a far greater variety of dependent variables than those we considered in this analysis. We chose measures most closely tied to the theories of reactance and cognitive dissonance that motivated our analysis, but we could have looked at many others. Past research has shown that reactance and cognitive dissonance can affect people's political attitudes (Beasley & Joslyn, 2001; Dillard & Shen, 2005; Rains, 2013), for example. Yet when we examined differences between forced and selected exposure with respect to issue attitudes, there were none (see Appendix Tables 10 and 11). Perhaps the psychological account is limited to a few small effects that appear only for a few variables directly implicated by cognitive dissonance and reactance. Yet, theory points in two different directions for attitude change. Reactance leads people to change their attitudes in the direction opposite the message. Cognitive dissonance, alternatively, can lead people to hold message-consistent attitudes. The differences between forced and selected exposure could thus cancel out in the aggregate. Future iterations of this type of study that look for within-subject differences can help to sort this out.

Our view is somewhere between these two interpretations. Although some of the differences were quite small (e.g., issue understanding) and some held only for specific issues (e.g., affective reactance), other effects came closer to medium in size and held across issues (e.g., cognitive reactance). The effects of forced choice experiments, therefore, may not generalize to contexts in which people can choose exposure. Participant preference designs can help account for, although not eliminate, the psychological effects of being forced to view content. To better understand the effects of forced versus selected exposure, we recommend that scholars adopt the hybrid experimental method used in this study. By giving some participants a choice and assessing their preferences, scholars can assess the implications of forced and selected exposure.

In addition to finding support for a psychological explanation, we provide some insight into when people might exhibit different psychological reactions to forced content, as each of the three predicted outcomes received some support in this study. Results supporting effort justification were most consistent. Evidence of effort justification appeared among the full sample and even emerged among those

who preferred and saw pro-attitudinal content. Those forced to view content felt that they were better able to understand it than those given a choice. Effort justification represents one possible explanation whereby forced exposure increased dissonance and participants inflated the value of reading the information to resolve dissonance. Another plausible explanation is that being forced to read pro-attitudinal information made participants believe that the information was endorsed by the experimenters, thus leading them to inflate its value further. Regardless of the explanation, the consequence was that forced exposure produced an effect different from selected exposure.

Less evidence supported the reactance and trivialization explanations, although both explanations emerged. Those forced to view content expressed more affective reactance than those selecting content, but only among those assigned to the teacher funding issue. The effect may be explained by the unique attributes of this issue; participants reported lower levels of understanding and weaker emotional responses in the first study session compared to the other issues. Evidence of cognitive reactance was more robust, holding for all issues and persisting with weights accounting for different rates of selection. This suggests that the primary effect is that exposing people to content they would not select naturally gives rise to counter-arguments. In the analysis of the differential treatment effects explanation, however, there was no evidence of reactance among those who preferred and saw pro-attitudinal content or among those who preferred and saw balanced content.

One finding supported the trivialization explanation. Among those who wanted and saw balanced content, forced exposure corresponded with seeing the issue as less important compared to those choosing balanced content. The negative reaction that can come from viewing balanced news (e.g., [Vallone, Ross, & Lepper, 1985](#)) may trigger a trivialization response.

Explanations of why different psychological responses appear at different points are beyond the scope of this study. As previous research has suggested, psychological reactions to stimuli can be diverse and dependent on individual and situational factors ([Simon et al., 1995](#)). Further, reactance, effort justification, and trivialization needn't be mutually exclusive processes, although the measures here are not strongly related to each other. What this analysis can point out is that at least some evidence supported each of the three reactions to forced content. This coincides with the ultimate point of our research: to demonstrate that forced and selected exposure differ in ways that can be explained by experimental subjects responding psychologically to the experimental context.

Although reactance and cognitive dissonance could explain the findings, it is important to discuss one additional alternative explanation: namely, that differences occur because those in the selected condition saw the other available options when they made their choice, while those in the forced condition did not see any other options other than the article to which they were assigned. This could explain why those in the forced condition rated the issue as more understandable than those in the choice condition; they did not know that other opinions existed.

Those in the choice condition, however, knew that they did not have a complete understanding of the issue because they saw that other options existed. Given that the same pattern did not appear among those preferring balanced news, however, it seems unlikely that mere exposure to the choice options can explain the observed patterns.

As with all research, this study is not without its limitations. The items we used to measure trivialization and effort justification, although the most direct approximations in the current data, were several steps removed from how one may assess these strategies to reduce cognitive dissonance. Other work may consider developing more direct scales and also validating those with self-reports of cognitive dissonance experienced during message exposure (e.g., Metzger, Hartsell, & Flanagan, *in press*). Further, we used only a single item to measure issue importance; it would be useful for future research to use multiple items to measure this construct. Providing respondents with additional dissonance-reducing options, such as the opportunity to search for additional information, also could extend the current study. Additionally, we recognize that there is some conceptual overlap between reactance and dissonance (e.g., cognitive reactance in the form of counter-arguing could be a response to dissonance); however, our measures of reactance followed from past literature (Dillard & Shen, 2005) and were empirically distinct from our dissonance indicators.

We are by no means the first to comment on the limitations of experimental design (e.g., Hovland, 1959). This study is one of (still) few studies, however, to leverage new techniques to showcase the limitations of traditional experiments and is also the first to offer a stringent test of the proposed psychological explanation responsible for different effects produced by messages that are experimentally assigned versus self-selected by citizens themselves. Forced media exposure can affect political outcomes simply because it is forced, and so the generalizability of standard experiments may be limited to circumstances in which people are forced to look at content. Our study showed differences in reactance and in two indicators of cognitive dissonance reduction: issue understanding, indicative of effort justification, and issue importance, pointing to trivialization. Especially where these may be relevant to other outcomes of interest, such as political behavior, caution is warranted in drawing general conclusions about media effects from designs exclusively employing forced choice. The psychology of choice—namely, the different reactions evoked as a result of the act of choosing versus having no choice over media selection—affects individual responses. As such, these results illustrate the necessity of natural experiments where the artifice of the lab is minimized yet random assignment is preserved.

Overall, this research demonstrates that people have different psychological reactions to forced versus selected exposure to news media content in experiments. As such, this is a potential limitation in generalizing forced exposure studies to circumstances in which people have the ability to choose. Our study also provides insight for those interested in understanding how media choice conditions the

effects of the media and how psychological reactions can impact experimental findings.

Supplementary Material

Supplementary material are available at *Human Communication Research* online.

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Notes

- 1 As the field has advanced, and as we draw from research published after our data were collected, we note the genesis of our hypotheses here. The major goal of our overall project was to assess the effects of forced versus selected exposure. We discussed reactance in a grant application for this work. The issue importance and understanding variables were included on our questionnaires as possible outcome variables, and emerged as key indicators as our thinking developed. The narrative we present builds on recent publications by others, despite the fact that the data were collected earlier, and for the purposes that we describe.
- 2 Studies have found that exposure can induce reactance in experimental settings where participants ostensibly agree to view media messages (e.g., [Edwards et al., 2002](#); [Quick & Stephenson, 2007](#); [Shen, 2015](#)). Although in most of these studies, reactance was induced as a result of particular content, we argue that the way people are exposed to media also can create reactance, consistent with [Edwards et al. \(2002\)](#), who showed that forced exposure to pop-up online ads induced reactance.
- 3 Some cognitive dissonance research looks at forced versus selected exposure, but uses the terms differently. In counter-attitudinal advocacy research, for example, some participants are told that they must write a counter-attitudinal essay (forced) and others are told that they have a choice, but that the experimenter would appreciate it if the participant would write a counter-attitudinal essay (choice; e.g., [Festinger & Carlsmith, 1959](#)). In this research, the choice condition yields more dissonance than the forced condition, because people make an active choice to do something counter-attitudinal. In our research, more dissonance is anticipated in the forced condition than the selected condition because, we argue, constraining choice in itself is dissonance-arousing.
- 4 Respondents were asked how strongly they favored or opposed (a) allowing a woman to get an abortion no matter what the reason (38% opposed, 14% neutral, 48% favored), (b) the national health care reform legislation that was passed by Congress and signed into law in 2010 (46% opposed, 15% neutral, 39% favored), (c) an increase in the use of

- federal tax dollars to support states' education budgets and fund teachers' jobs (31% opposed, 18% neutral, 51% favored), or (d) a law that bans assault weapons (36% opposed, 11% neutral, 53% favored).
- 5 Trichotomization of continuous variables results in loss of information and so is often avoided, but this approach is common in studies of selective exposure because of the need to properly handle subjects who express no directional opinion about an issue and to differentiate between pro- and counter-attitudinal exposure. Note that differences between forced and selected exposure appear if we do not use trichotomization or do not omit those with non-neutral views (see Appendix Tables 14 and 15).
 - 6 As respondents could give up to five open-ended responses, we also could have summed the total number of cognitive reactance ($M = .21$, $SD = .60$). The results remain the same with this measure. [Dillard and Shen \(2005\)](#) also excluded statements that contained an affective word. As we found participants' reactions contained a mix of affective and cognitive responses, we opted not to follow this step. We also analyzed whether the results would remain the same if we controlled for affective reactance when predicting the effect of forced versus selected exposure on cognitive reactance. The results continued to hold.
 - 7 There are two noteworthy differences between our design and extant participant-preference designs. First, in our study, the time lag between asking subject preferences and exposure was three weeks, whereas in some studies both the preference assessment and forced exposure occurred during the same session. Second, we allowed a random subset of subjects to choose their exposure in the second session, whereas prior work forced exposure for all participants.
 - 8 Based on our hypotheses, we collapsed the experimental forced exposure conditions to compare them with selected exposure. It is possible, however, to disaggregate these conditions and retain the desirable properties of random assignment (see [Arceneaux & Johnson, 2013](#)). With these data, there is evidence of overall differences among the conditions for affective reactance, cognitive reactance, and issue understanding. Between-group comparisons show that cognitive reactance is at its highest in the forced counter-attitudinal condition, followed by the forced pro-attitudinal and selected conditions, and lowest in the forced balanced condition (see Appendix Table 12).
 - 9 One potential concern is that by aggregating the forced condition, effects will cancel each other out. If pro-attitudinal exposure increases opinion strength, for instance, and counter-attitudinal exposure reduces it (see [Levendusky, 2013a](#)), the means comparison could show null effects when, in fact, there are considerable media effects. First, this is a different question. We were interested in whether forced versus selected exposure differ in terms of the psychological reactions they generate, not in the effects of exposure to different forms of media content. If effects cancel each other out in both conditions, then there is evidence that forced versus selected exposure does not matter. Second, if the effects were cancelling each other out in this way, in many cases, it would be revealed by the weighting scheme used to test H2.
 - 10 As cognitive reactance is a dichotomous variable, we replicated all analyses using logistic regression. The results remained the same.
 - 11 It is also possible that differences between forced and selected exposure occur based on who selects which content and how they react. If the knowledgeable, for instance, (a) make different selections than the less knowledgeable and (b) respond differently to

news content, then the distribution of the knowledgeable across conditions could explain differences between forced and selected exposure. We tested this, using weights for both media choice and demographic and political background characteristics that (a) predicted news selection and (b) interacted with news selections to predict the outcome variables. Results were similar to those presented. Even after taking media choice, demographics, and political characteristics into account, differences between selected and forced exposure persisted. Results are also the same if we use weights incorporating both issue and distribution of media choice. Details are available from the authors.

- 12 Due to sample size constraints, we were unable to do this calculation for those preferring counter-attitudinal news.
- 13 Of the 773 participants who preferred pro-attitudinal content in the first session and were randomly assigned to the choice condition in the second session, 567 chose pro-attitudinal content (165 chose balanced and 41 chose counter-attitudinal). Of the 522 who chose balanced content in the first session and were randomly assigned to the choice condition, 303 selected balanced content in the second session (185 chose pro-attitudinal and 34 chose counter-attitudinal). Our two strategies of analyzing the data in Table 2 make this change unlikely to affect our conclusions.
- 14 As reactance was not in evidence in Tables 2 and 3, it is possible that it could be controlled using a participant preference design (although see Table 15c in the Supporting Information). Yet, other outcomes were present, and we had an inadequate sample size to examine forced versus selected exposure among those preferring counter-attitudinal content.

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