Political Comedy as a Gateway to News Use, Internal Efficacy, and Participation: A Longitudinal Mediation Analysis

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Abstract

Despite a great deal of research, much about the effects of political comedy programming on its viewers remains uncertain. One promising line of work has focused on increased internal political efficacy — the sense that one is competent to engage with politics — as an outcome of exposure to political comedy programs. This may explain results showing that viewers are more likely to participate in politics. We extend this approach by considering the role of political comedy's "gateway" effect in encouraging political media consumption, which can promote additional increases in efficacy and participation. This study provides a theoretical synthesis of prior research and a rigorous empirical test using a representative panel survey of adults in the United States, providing evidence of a relationship between political comedy and participation with both news use and internal efficacy serving as mediators. Furthermore, we find that only political satire, not late-night talk shows, appear to produce these effects.

Keywords: political participation, internal efficacy, intramedia mediation, political comedy, satire

Political Comedy as a Gateway to News Use, Internal Efficacy, and Participation: A Longitudinal Mediation Analysis

The popularity of entertainment programming that frequently comments or focuses on politics has inspired a great deal of research on its potential impacts on viewers. Although programming, televised or otherwise, that is more obviously disconnected from politics has caused concern about less engaged citizens turning away from political life entirely (Prior, 2007), the role of political entertainment, in particular political comedy, has remained less clear. Research has suggested these programs might lead viewers to be less trusting of institutions and the press (Baumgartner & Morris, 2006; Guggenheim, Kwak, & Campbell, 2011), but also might stimulate attentiveness to politics (Xenos & Becker, 2009) and promote feelings of competence (Baumgartner & Morris, 2006; cf. 2008). One core group of findings has indicated that political comedy exposure is associated with political participation (e.g., Cao & Brewer, 2008; Hoffman & Young, 2011; Moy, Xenos, & Hess, 2005). Given the difficulties of studying participation in the laboratory and the need to find a mechanism, research has also explored the ability of this genre to promote one's sense of *internal political efficacy* — the belief that one can effectively engage in the political process — as a link between political comedy and participation. However, a recent review of the literature on political satire, the dominant subgenre of political entertainment scholarship, notes that "much evidence of political satire's effects remains to be collected" (Holbert, 2013, p. 312).

The present study adds to existing literature by providing theoretical synthesis of several related lines of research and then applying a rigorous empirical test that is novel to this research area. First, it follows up on arguably the most promising work on political entertainment and internal efficacy, testing a causal process beginning with political comedy and ending with

political participation. This relationship has been discussed and tested in past empirical work but our approach addresses several methodological shortcomings. We use a nationally representative panel survey of the United States, making our findings both more robust in its claims about causation compared with past cross-sectional work, and more generalizable to the entire U.S. population. Second, considering the correlation between political comedy exposure and news consumption (e.g., Feldman & Young, 2008), we expand upon the "intramedia mediation" hypothesis (Holbert, 2005b) by incorporating political comedy use alongside traditional television news and hypothesize that comedy viewers' subsequent increases in news consumption act as an additional mediator of the relationship between exposure to political comedy and internal political efficacy, expanding existing theory to answer calls both to consider multiple political communication sources concurrently (Holbert, 2005b; Holbert & Benoit, 2009; Shen & Eveland, 2010) and the potentially complementary impact of entertaining content alongside more traditional political communication formats (Holbert & Benoit, 2009; Landreville, Holbert, & LaMarre, 2010). Finally, we address the lack of clarity regarding the relevant categories of political comedy in prior work by separately measuring political satire and late-night talk shows, which have often been collapsed into single or other ad hoc categories in much of the literature (see Hoffman & Young, 2011). Our results suggest that these categories indeed are distinct, with positive effects only arising from political satire shows.

Political Comedy: Political Satire vs. Late-Night Talk Shows

Political entertainment, writ large, refers to a wide range of programming which may not simply be oriented towards relaying information and opinions about politics and instead either discusses politics in addition to other topics, raises politics in the context of comedic or dramatic portrayals of fictional or non-fictional content, or some mixture of these (see Holbert, 2005a for

an overview). The bulk of empirical research, however, has been aimed at two comedic genres: political satire (e.g., *The Daily Show with Jon Stewart/Trevor Noah*) and late-night talk shows (e.g., *The Late Show with David Letterman/Stephen Colbert*).

Although satire and late-night programming are often considered together in a broader category of political comedy, there are important differences between the content of each subgenre which may influence any effect that either satire or late-night talk shows exert, and must be considered. Satire has been said to be difficult to define (Holbert, Tcherney, Walther, Esralew, & Benski, 2013), but Test (1991) applies four criteria to define, each of which must be satisfied: laughter, play, aggression, and judgment. The former two are common to all types of political humor, but the latter two distinguish satire. Satire judges its targets in such a way that "undermines, threatens, and perhaps violates the target" (Test, 1991, p. 5). Satire, then, is not merely light-hearted but offers a substantive criticism to people, institutions, or social systems typically via irony or parody (Young, 2017). It is of course true that programs that are described as satirical sometimes engage in humor that is not satire as well as commentary that is not humorous. Late-night talk shows similarly lack a clear conceptualization, perhaps in light of the apparently self-defining nature of the term: this genre constitutes talk show programming, specifically airing after primetime. Political issues and candidates have become an increasing feature of late-night talk shows in recent decades (e.g., Baum, 2005; Moy et al., 2005), but typically remain far less critical of those candidates appearing on them (Baum, 2005) and focus their criticism on the superficial over the substantive (e.g., mocking personality traits over policy: Feldman & Young, 2008). Late-night content also appears less dominated by political topics¹ except when political stories are particularly newsworthy or when a public official

¹ This presumption has become frustrated in recent years as the prominence of politics in the monologues and segments by, predominantly, Stephen Colbert's *The Late Show* and Seth Meyers' *Late Night* in particular, has

appears as a guest (Holbert, 2005a). Thus, although late-night talk shows may feature politics or political entities, it typically does not meet the Test's (1991) judgment and aggression criteria. On the other hand, it is plausible the fact that late-night talk shows air more often and with longer episodes than satire shows makes up for the fact the political content is less concentrated. Likewise, it should be acknowledged that these distinctions may be to some extent more about degree than kind; late-night shows may occasionally veer into satire even if this is not the dominant form of political humor on these programs.

It was the lack of political focus that Hoffman and Young (2011) cited to explain why satirical content had a statistically significant indirect effect on political participation whereas late-night comedy did not, although the difference between a significant and insignificant result is not itself necessarily significant (Gelman & Stern, 2006). Baumgartner and Lockerbie (2018) likewise found, using 2012 ANES survey data, that exposure to The Daily Show with Jon Stewart or The Colbert Report was associated with most forms of political participation while The Late Show with David Letterman was associated with just one, when controlling for co-consumption; the same cautions about comparing significant and non-significant results apply. Other research has tended either not to make a distinction between satire and late-night shows (Cao & Brewer, 2008; Hoffman & Thomson, 2009; Moy et al., 2005) or otherwise not found a meaningful difference (Feldman & Young, 2008). Many other prior studies have completely omitted latenight shows, which makes the transportability of findings unclear. Both formats often include some degree of monologue as well as interviews, although satire shows tend to be heavier on monologue and lighter on interviews. Examining the differences in how interviews play out on The Daily Show compared to The Tonight Show (and other programs), Baym (2013) finds that

appeared to increase. This distinction was, however, guiding at the time that this project began planning to collect data in early 2016, the time point with which we reference in the present work.

then-*Daily Show* host Jon Stewart modeled good argumentation and acted, in part, as an "interpretive guide" (p.14) for his viewers whereas *Tonight*'s Leno is characterized as obsequious to his subject and more interested in spectacle than subject matter. The frequent media criticism found on satire shows, much less common on late-night shows due in part to their institutional home on cable networks, may also be tantamount to lessons in media literacy for viewers, who could walk away feeling better-prepared to engage with political media.

We therefore are open to the possibility (like Hoffman & Young, 2011) that effects from political comedy may differ between satire and late-night programming though acknowledge that because empirical research has considered these sub-genres unevenly, exactly what those differences may be exist are undetermined. We therefore pose the following research question:

RQ: Do political satire and late-night talk shows differ in their effects on participation?

Political Comedy, Internal Political Efficacy, and Participation

Political comedy has increasingly gained scholarly attention due in part to its potentially positive influence on engagement with the political process (Cao & Brewer, 2008; Moy et al., 2005). For instance, in an era where abundant entertainment options result in a marked decrease in news engagement (Prior, 2007) the focus which political comedy pays to socio-political matters can educate heavy consumers of this content, albeit at slightly lower levels than heavy consumers of cable news (Hardy, Gottfried, Winneg, & Jamieson, 2014). Beyond merely learning about it, the political communication literature has focused on more *active* ways in which citizens may be moved to participate in politics as evidenced through acts such as expressing opinions to elected officials, advocating in campaigns, and the like, with work considering the role political comedy plays in promoting such outcomes (Cao & Brewer, 2008; Moy et al., 2005). There are limitations in the extent to which cross-sectional survey data like

these can answer key causal questions, especially given the plausible alternative that viewers may already be the kinds of people who participate in politics. Even if the temporal ordering is correct, this type of observation leaves the exact nature of such a process unclear; one does not simply see a television show and then participate in politics. The programming would almost surely cause some psychological change or changes that would then lead to participation.

One proposed mechanism for how political comedy could promote participation in politics is through changes in internal political efficacy. Internal political efficacy, which is broadly consistent with the conceptualization and theorized role of self-efficacy in Social Cognitive Theory (Bandura, 2001), refers to "beliefs about one's own competence to understand and to participate effectively in politics". This contrasts with *external* political efficacy, which refers to "beliefs about the responsiveness of governmental authorities and institutions to citizen demands" (Craig, Niemi, & Silver, 1990, p. 290). The internal component, then, is an assessment of oneself while the external component is an evaluation of the political system. Internal efficacy, in particular, has long been established as a key predictor of, if not prerequisite for, political participation (e.g., Balch, 1974; Finkel, 1985; Gastil & Xenos, 2010). Logically speaking, one is unlikely to do something that he or she feels incapable of, so the connection between internal political efficacy and participation can be summarized as the simple fact that one of the most effective ways to promote participation is to make people feel that they are qualified to participate. Thus, we propose the following hypothesis:

H1: Increases in internal efficacy will be associated with increases in political participation.

Research on political comedy has investigated internal efficacy as a potential outcome of exposure. There are several potential mechanisms by which these programs may promote

internal efficacy. One of these relates to another area of research on the extent to which viewers of political comedies learn about politics from the programs and, therefore, feel more able to make an effective contribution to the process, given that a considerable amount of political information is presented in political comedy programs (Brewer & Marquardt, 2007; Fox, Koloen, & Sahin, 2007). It has been argued that political comedy presents politics in an easier to understand way (e.g., Baum, 2002), which may have the effect of either increasing knowledge or at least making the topics involved seem to be more comprehensible. On the other hand, political jokes so often put down politicians and political institutions (Baumgartner, Morris, & Walth, 2012; Peifer, 2016), internal efficacy may also be increased by virtue of the portrayal of political figures as unintelligent, incompetent, and so on. Although some programs — especially political satire — may make jokes that presuppose a level of knowledge so high as to not be funny without a certain baseline level of political competence (Young & Tisinger, 2006), there is evidence to suggest people may enjoy political satire even when they do not seem to "get" the jokes (LaMarre, Landreville, & Beam, 2009). Therefore, we propose the following linked hypotheses:

- **H2**: Engagement with (a) political satire and (b) late-night talk shows will be associated with increased internal efficacy.
- **H3**: The effect of engagement with (a) political satire and (b) late-night talk shows upon political participation will be mediated by internal efficacy.

These hypotheses describe the components of a mediation model, theoretically similar to those by Hoffman and Thomson (2009) as well as Hoffman and Young (2011). The present study extends beyond these works by bringing to bear a nationally representative panel design, a

refined set of measures, more rigorous statistical techniques to test the mediation model, and the theoretical integration that follows.

Despite a not insignificant number of studies that have raised the possibility that political comedies may increase internal efficacy, the empirical results have been equivocal. Experimental studies have shown somewhat conflicting results when examining the effects of political comedies on internal political efficacy. This may be due to the necessarily limited and idiosyncratic stimulus materials used in this kind of work. For instance, Baumgartner and Morris (2006) found a positive effect of viewing *The Daily Show* on internal efficacy in an experimental study using college students that also found negative effects on external efficacy and related concepts. In a follow-up experiment, however, the same research team found the opposite effect on internal efficacy in a similar group of participants when the stimulus was *The Colbert Report* (Baumgartner & Morris, 2008). A potential explanation for the oddly conflicting results of these two studies concerns measurement. Both studies use a common measure of efficacy with the following wording: "Sometimes politics and government seems so complicated that a person like me can't really understand what's going on." While the measure has face validity as an indicator of internal efficacy, Niemi, Craig, and Mattei (1991) advised against its use on the basis of a factor analysis. Morrell (2003) explained that the measure, while not unrelated to internal efficacy, also taps into external efficacy. If the stimulus in the 2008 study caused a reduction in external efficacy, that could very plausibly explain the empirical result, especially given that the models controlled for strong correlates of internal efficacy like political interest. Note that the 2006 study had itself documented a negative effect on external efficacy, so there is already evidence for such an effect. When the aforementioned measure is used, it cannot be surprising if it picks up changes in external efficacy.

A cross-sectional analysis of college students (Hoffman & Young, 2011) lent support to a theorized process beginning with entertainment media exposure causing greater internal efficacy, which in turn led to participation. This study is important for putting those pieces together theoretically and empirically testing them. The sample and design of that study, however, makes causal claims difficult to accept due to the possibility of unmeasured confounding variables and a lack of evidence of time ordering. Perhaps the best empirical support on this specific question comes from a panel study on adolescents in a US city (Hoffman & Thomson, 2009). Analyses supported the already-discussed mediation path in this case as well, but again this study has unclear generalizability to a wider population due to the population and participation measures focused on non-political activities accessible to young people. Taken together, the full body of work suggests a need to further investigate this process (particularly in light of those inconsistent findings), as was the conclusion of a recent review of research on political satire (Holbert, 2013).

Intramedia Mediation, the Gateway Hypothesis and a Pathway to Participation

Holbert and others (Holbert, 2005b; Holbert & Benoit, 2009) have discussed *intramedia* or *intra-communication mediation* as a process in which media, or other forms of communication, do not just affect psychological or other behavioral outcomes (e.g., participation in politics), but also future communication behaviors. For example, if watching television news promotes reading newspapers, then the effects of watching television news include not only a direct effect on some dependent variable but also a portion of newspaper reading's effect on that dependent variable. In other words, in order to truly understand the effect of political communications, particularly in a political campaign cycle (e.g., Theory of Political Campaign Media Connectedness: see Holbert & Benoit, 2009; see also, Landreville et al., 2010), one should consider the complementary and cumulative effect of all political media consumed. It is

referred to as mediation since some of the effects of a given form of communication are mediated through the effects of another. This basic proposition has been explored with reference to traditional media outlets (e.g., television news and newspaper coverage: Holbert, 2005b), print versus online media (e.g., Shen & Eveland, 2010) or versus social media, and balanced and one-sided media content (e.g., television news and newspapers versus partisan talk radio or cable news: Holbert & Benoit, 2009), and with a variety of outcomes such as political knowledge, campaign debate-viewing, and political discussion.

Although some have called for the inclusion of entertainment programming that deals inherently in political matters, such as satire or late-night talk shows, in intramedia/intracommunication mediation research (Holbert & Benoit, 2009; Landreville et al., 2010), no existing work has combined traditional political media platforms and political comedy in this way. Why, then, should we expect that incorporating political comedy programming into the intramedia mediation framework will provide insight into political outcomes of interest? Starting with studies of daytime talk show viewers, much attention has been paid to whether consumers of political entertainment learn from these programs (e.g., Hollander, 2005) or, at least, become more attuned to the issues raised on those shows in the traditional political press later on (Baum & Jamison, 2006; Xenos & Becker, 2009). The latter assertion has been called the *gateway* hypothesis (Baum, 2003), the idea being that exposure to politics in one's entertainment media diet may stimulate interest in engaging with politics from other outlets. This may particularly be the case with political satire that holds up topical issues or individuals for scrutiny, and sparks a desire to learn more about the matter (Eveland & Cooper, 2013). This notion has received some support in experimental work as well (Xenos & Becker, 2009) although the lab setting is a

difficult one within which to establish whether observed effects will endure. Therefore, and consistent with this previous work, we hypothesize that:

H4: Engagement with (a) political satire and (b) late-night talk shows will be associated with increases in news consumption.

In Holbert's (2005b) initial research proposing intramedia mediation with panel data, he demonstrated that one type of media use (e.g., television) not only predicted that same medium at a later timepoint, but also the use of an alternative news medium (e.g., newspaper content). Consistent with Holbert's formative work, then, one might propose that in addition to comedy use predicting news use at a later time point, the reverse — that news use predicts later comedy use — be hypothesized as well. This is not predicted by the gateway hypothesis, however, and given no empirical or intuitive justification for news use promoting engagement with either satire or late-night programming, we neither expect nor predict that this be the case.

We do, however, assert that this modification of intramedia mediation with respect of the gateway effect has bearing on hypotheses, H1-3. Although political comedy exposure is likely to have a direct impact on internal efficacy, watching the news may also impact internal efficacy in a positive way. Research on political news has a much longer history, though with more varied goals than for political entertainment, and solid evidence exists to support the prediction that watching the news can foster increases in feelings of internal efficacy using longitudinal designs (Hoffman & Thomson, 2009; Moeller, de Vreese, Esser, & Kunz, 2014; Semetko & Valkenburg, 1998). Research on the causal impact of news on internal efficacy has focused on participation as a subsequent outcome in the same way the related work on political comedies has. To build upon that research, we pose these hypotheses:

H5: News consumption will be associated with increased internal efficacy.

H6: News consumption's impact on political participation will be mediated by internal efficacy.

However, we argue that these need not be considered separate questions; instead, the connection between news and internal efficacy is in our view another part of the bigger picture of the impacts of political comedy exposure as an example of intramedia mediation. Furthermore, the gateway hypothesis, as an example of intramedia mediation, provides a plausible mechanism for how political comedy could promote internal efficacy by stimulating further engagement with politics. If political comedy also encourages news consumption (H4) and news consumption in turn encourages increased internal efficacy (H5), then political comedy's influence on internal efficacy is at least partly mediated by news use. We formalize this assertion with the following hypothesis:

H7: The effect of engagement with (a) political satire and (b) late-night talk shows on political internal efficacy will be partly mediated by increased news consumption.

Methods

Data come from a three-wave panel survey, which was part of [omnibus survey at redacted department at redacted university]. The survey was administered by GfK Group (formerly Knowledge Networks), who sampled adults aged 18 and older living in the United States from their online probability panel. The panel is recruited using address-based probability sampling and GfK provides resources as necessary to include panelists who are not internet users. The sample is designed to be representative of the non-institutionalized population of adults at least 18 years in the United States. In the initial wave, which was fielded from August 16, 2016 to August 22, 2016, 1,570 panelists were invited to complete the survey via email and

sent a reminder email if they had not responded after 3 days. Of those, 825 completed the survey and 812 met the eligibility criteria for a 52.5% completion rate and 98.4% qualification rate. Of those, 792 were retained following data quality checks.² The second wave, fielded between October 4, 2016 and October 12, 2016, yielded 630 responses (a 79.5% completion rate). The third wave, fielded from November 9, 2016 to November 15, 2016, collected 530 responses for an 84.5% completion rate. All respondents are included in analyses, however, thanks to the missing data capabilities of our modeling approach. On most of the measures available, the 530 who completed all three waves were similar to those who did not. They were, however, more likely to be White, were around 4 years older on average, and less likely to be ideological moderates. Detailed comparisons of those who did and did not complete each wave are included in the Supplementary Appendix.

Measures

All time-varying measures exhibit longitudinal metric invariance using the Λ CFI below .01 threshold (Cheung & Rensvold, 2002), meaning in substantive terms that the measures appear to be tapping into the same constructs across time.

Demographics. Several measures are included that describe basic demographic information about the respondents. These include age (M = 50.46, SD = 17.27), measured as a continuous variable; education, an ordered categorical variable ranging from "Less than high school" (1), "High school" (2), "Some college" (3), to "Bachelor's degree or higher" (4; M = 2.88, SD = 0.95); a dummy variable for which self-described female respondents are coded 1 and male respondents are coded 0 (52% female); and dummy variables indicating whether

² Cases were excluded if they met one of the following two criteria: a. The entire survey was completed in fewer than 6 minutes (median completion time was 18 minutes). b. The respondent "straightlined" (gave the same response to each question) responses on the extreme end of multiple scales of at least 5 items that included reverse-coded items. None of the scales used for this quality check were used in this study.

respondent described his or her race/ethnicity as Black (and not Hispanic), with Black coded as 1 (10% Black), as well as Hispanic of any race (12% Hispanic). Household income was measured in increments of \$15,000 starting with "less than \$5,000 per year," coded as 1, and up to "more than \$175,000 per year," coded as 19 (M = 12.55, SD = 4.34). None of these measures were repeated over time.

Partisanship and strength of partisanship. In the first wave only, respondents were asked, "which party do you identify with?" Response options were Republican, Democrat, and Independent/other. Those who chose Republican or Democrat were asked in a follow-up, "how strong a [Republican/Democrat] are you?" with response choices ranging from "weak" (1) to "strong" (3). Those who chose Independent/other were asked whether they lean towards one of the parties. These measures were combined into a measure of partisan strength, ranging from 0 (neither Republican nor Democrat and no lean) to 4 (strong Republican/Democrat; M = 2.42, SD = 1.25). Dummy variables indicating partisan direction are included as well (47% Democrat, 39% Republican).

Ideology and ideological extremity. In each wave, respondents were asked, "thinking about your political views, how liberal or conservative would you say you are?" Response options ranged from 1 ("very liberal") to 9 ("very conservative"; M = 5.20, SD = 2.21). A measure of ideological extremity was generated by "folding" the ideology measure, yielding a measure that is equivalent to the distance from the scale midpoint, ignoring the liberal/conservative direction (M = 1.71, SD = 1.41).

Political comedy exposure. Modifying the list-frequency approach (Andersen, de Vreese, & Albæk, 2016), respondents were shown a list of items from three genres — political

³ 3 respondents skipped this question and are not included in the calculation of the mean and standard deviation.

satire, late-night talk shows, and television news — and asked to indicate how often they had watched the listed show or category in the past 4 weeks. The use of this extended time frame marked a departure from Andersen and colleagues' approach, but was chosen to roughly correspond to the span of time between waves without specifically prompting respondents to try to remember their previous responses. As a result of the longer reference period, and the varying frequency of airings of the programs, participants response choices ranged from "never" (coded as 1) to "every or almost every time" (coded as 5) that the program was aired.

Political Satire Programming. Four shows were included in analysis for this genre: The Daily Show with Trevor Noah, Real Time with Bill Maher, Last Week Tonight with John Oliver, and Saturday Night Live. Exposure to political satire was operationalized by calculating a mean response across all shows listed. This resulted in an index which encapsulates both a respondent's breadth (the range or shows encountered) and depth (the regularity of engagement) of exposure to political satire (M = 1.35, SD = 0.67). 38.9% of respondents reported viewing at least one political satire show in the first wave. The Nightly Show with Larry Wilmore was initially included in this list, but was cancelled after the first wave and removed from the list for the second wave; therefore, it was omitted from our analysis to ensure consistency across waves. Also omitted from this list is Full Frontal with Samantha Bee, which had begun airing in February 2016 and was not included due to an oversight by the authors. Its omission is not meant to imply that the program did not belong on the list (particularly in light of ongoing debates about the gender imbalance of political comedy programming).

Late-Night Talk Shows. This category presented six currently-airing late-night shows:

Jimmy Kimmel Live!, The Late Show with Stephen Colbert, The Late Late Show with James

Corden, The Tonight Show Starring Jimmy Fallon, Late Night with Seth Meyers, and Conan.

Exposure to late-night programming was marginally smaller than fore satire (M = 1.32, SD = 0.59), with 39.3% of respondents reported viewing at least one late-night show in the first wave.

Television News Exposure. Respondents were also asked to report their viewing frequency of "network nightly news" and "cable network news" using the same response options (M = 2.42, SD = 1.25). 71.7% of respondents reported viewing this content in the first wave. We limited our scope to television news, rather than the broader spectrum of online and traditional news outlets, for two reasons. First, consistent with past research (e.g., Holbert, 2005b; with mainstream television and newspaper formats; Shen & Eveland, 2010, which considered only online and print news sources), we selected news formats which were like-for-like with our comedy formats, namely audiovisual content.

Exposure to Political Content on Social Media. Respondents were also asked to report the frequency with which they "encountered content shared by others via social media about politics" using the same response options (M = 2.54, SD = 1.90). 48.1% reported this type of media exposure in the first wave.

Efficacy. To measure internal and external efficacy, a 6-item scale presented in randomized order was administered. The items for this scale were derived from previous scale validation research (Craig et al., 1990; Morrell, 2003). Four items were designed to tap the internal component: "I consider myself well-qualified to participate in politics"; "I feel that I have a pretty good understanding of the important political issues facing our country"; "I think that I am better informed about politics and government than most people"; and "I feel that I could do as good a job in public office as most other people." Two items were used for the external component: "People like me don't have any say about what the government does"; and "I don't think public officials care much about what people like me think." Response options

were a 7-point, bipolar Likert-style set of choices ranging from "strongly disagree" (1) to "strongly agree" (7). Both components were operationalized by taking the mean of the scale's items. The internal efficacy scale (M = 3.96, SD = 1.58; Cronbach's $\alpha = .87$) and external efficacy scale (M = 4.55, SD = 1.61; Cronbach's $\alpha = .71$) were reliable. External efficacy is included as a control because the internal and external dimensions of efficacy are known to be correlated with one another.

Participation. Items measuring political participation were adapted from the Persson and Solevid (2014) study on reducing social desirability bias in self reports of political participation. Participants were given a list of the following activities: "attended a political rally or speech," "donated money to a political campaign or organization," "showed support for a political candidate with a yard sign, bumper sticker, or similar," "contacted an elected official, such as a member of Congress," and "showed support for a political candidate online, such as on social media." The latter item was excluded from the final analyses because it constitutes a different type of participation compared to the others; none of the statistical or theoretical conclusions are influenced by this decision. Respondents were told, "Here's a list of activities some people do. For each, please tell us whether you have done the activity in the past 4 weeks, some other time in the past, or not at all." For each item on the list, respondents were offered four response options: "yes, have done it in the past month," "yes, have done it some time further in the past," "no, have not done it but would consider doing it," and "no, have not done it and would not consider doing it." The only response coded as an act of participation is "yes, have done it in the past month." The other responses are included primarily to reduce overreporting (see Persson & Solevid, 2014). The quantity used in analyses is a count of the participation activities. The mean number of activities in wave 1 was 0.24 (5.2% reporting at least one activity), 0.29 (7.0%) in

wave 2, and 0.34 (7.7%) in wave 3, increasing with proximity to the general election as would be expected as political campaigns ramp up their efforts to involve people in the political process. Wave-by-wave descriptive statistics for the other key measures are available in the Supplementary Appendix.

Statistical Analyses

To address both the potential for omitted variables bias and reverse causation, we use a model that combines the cross-lagged panel model with fixed effects models (Allison, Williams, & Moral-Benito, 2017). The estimates from fixed effects models are robust to omitted variables bias from individual differences between participants — even those that are never measured which are controlled for automatically in the estimation of within-person effects (Allison, 2009). For instance, past work has noted that political comedy viewers are more educated and wealthier than the general population, potentially accounting for cross-sectional observations of greater political engagement among these people; a fixed effects specification rules out this kind of confounding variable by comparing subjects to themselves at different points in time, serving as their own control. Although fixed effects models are more robust to reverse causation than crosssectional regressions, they are still vulnerable to confusing cause and effect. Typically, this problem is the reason analysts use cross-lagged models, since past values of one variable are used to predict future values of another while controlling for past values of the dependent variable. Cross-lagged panel models are not robust to omitted variables bias (Allison, 2009), however, and consequently can cause estimates to be biased in unpredictable ways. The crosslagged panel model with fixed effects is estimated via SEM and is the best choice when analysts want the best defense against both omitted variables bias and reverse causality. Variables that change over time in these models are totally robust to confounding from individual differences,

measured or not, and reverse causality is accounted for in the model specification. Additionally, unlike fixed effects models, time-invariant predictors can be included in the model although they are not perfectly robust to confounding. Because all between-person differences in the time-varying variables are controlled for in these models, model coefficients are interpreted as the effect of *changes* in the variables from the subject's norm.

All models include age, gender, education, income, race, partisanship, and partisan strength as time-invariant covariates. The demographic controls are not strictly required for unbiased estimates of within-person effects, but may be substantively interesting, help to identify the structural equation model which is necessary with only three time points, and can adjust for differences between the sample and the target population. Also included are social media exposure to politics, ideology, ideological extremity, and external efficacy which are included primarily to serve as time-varying controls, since the within-subject estimates can still be vulnerable to spuriousness due to unmeasured time-variant predictors. Models are estimated using the "dpm" and "lavaan" packages for R (Long, Williams, & Allison, 2019; Rosseel, 2012). This SEM software allows for the use of incomplete data as in this case using full information maximum likelihood estimation. This widely-used procedure uses the non-missing data to estimate what the model parameters would be if the data were completely observed, doing so as part of the overall model estimation process. Prior work shows that full information maximum likelihood is generally preferred over multiple imputation when it is possible to use the former (Larsen, 2011). Results analyzed with only complete cases are presented in the Supplementary Appendix. Continuous predictors, excluding participation, are standardized before analysis. Note that the software authors advise that for these models, the oft-used model fit statistic CFI is misleading, by being biased upwards, so we do not report it.

We fit several models to test our several hypotheses and answer the proposed research question. When testing effects on internal efficacy from political comedy exposure (H2) and news (H5), we fit a model with internal efficacy as the dependent variable. Because the media measures refer to the 4 weeks before the measurement of efficacy, the media predictors included are the contemporaneous measures. In other words, the measure of internal efficacy refers to the respondent's psychological state at the time of the survey; the measures of media exposure refer to the 4-week period before the survey, the time in which media would be expected to have its effects on efficacy at the time of the survey. Temporal precedence is built into the measurements in this case. The theorized causal process linking political comedy exposure and news consumption⁴ (H4) likely occurs on a shorter time scale than the month between observations people constantly make decisions about which programs to watch, but our measures refer to the entire span of time between waves. Because of this, it is not possible to unequivocally show temporal precedence for these variables since their measurements refer to the same time period. The model we use is nonetheless fairly robust to this problem, however, but it does require assumptions that we believe are well-founded given prior experimental findings (Xenos & Becker, 2009) and the rationale that the causal direction is likely much stronger from political comedy to news than vice versa. The main potential threat to validity resulting from this is if changes in internal efficacy bias the way participants recall and/or report their media use. To assess direct effects of internal efficacy (H2), news, and political comedy on participation, we begin by simply modeling political participation⁵.

⁴ As noted, we found no empirical or intuitive basis to expect that news might also promote comedy use, and so did not predict as such. In the interest of due diligence, we did model that alternate relationship; no support for it was found.

⁵ Because participation is a count variable with many participants having a value of zero, it is not always appropriate to use a linear model. Unfortunately, the cross-lagged panel model with fixed effects has not been generalized beyond the linear case. To assess the plausibility of using the linear model anyway, we fit a multilevel Poisson fixed effects model, which does treat the count variable correctly. Since the point estimates and inferential

Together, these models generate estimates of each of the paths in the mediation model (Figure 1). Of course, our interest is in the combined effects, not just the individual paths. We estimate the indirect effects by multiplying the path coefficients as described for serial mediation by Hayes (2018). The fact the data are longitudinal makes bootstrapping less straightforward than in the typical case, and attempts to do so resulted in convergence problems when reestimating the structural equation models. Instead, we used Monte Carlo simulations to generate uncertainty estimates (Imai, Keele, & Yamamoto, 2010; Preacher & Selig, 2012), which performs quite similarly to the bootstrap, especially in relatively large samples like in the present study..

Results

Full details of the results for each regression model are included in Table 1. Model fit statistics indicate acceptable fits for all three models. Overall, the effect of changes in political comedy consumption on internal efficacy received support in the case of satire (H2a); the estimated within-subjects effect of increases in political satire exposure was positive (B = 0.61, z = 3.19, p = .001). The estimated effect of increases in late-night consumption (H1b), however, was negative (B = -0.29, z = -2.23, p = .026); therefore, in partial answer to the RQ, we see quite different effects of late-night on internal efficacy compared to satire. A post-hoc contrast test finds the two coefficients to be significantly different from each other (F(1, 776) = 8.99, p = .003), giving statistical leverage to say more explicitly that the effects of these shows are different when it comes to internal efficacy. We advise against taking the negative estimate for late-night too literally; if satire is dropped from the model, the coefficient becomes positive

statistics of the Poisson model are substantively equivalent compared to those for the linear cross-lagged model with fixed effects, we proceed with the linear cross-lagged model since it offers protection against reverse causality. We did want to state this decision-making process clearly, however, since in many cases treating a count variable as if it were linear could lead to incorrect inferences and estimates.

(though not statistically significant) suggesting a suppression effect. Negative suppression refers to cases in which a variable which has a positive or no zero-order relationship with a dependent variable takes on a negative coefficient upon the introduction of covariates into a regression model. Whether suppression reflects the true nature of the relationship or is mere statistical artifact cannot be determined analytically. There is no meaningful change of the estimate for satire regardless of whether late-night is included in the model, however, suggesting that at any rate *satire* is not responsible for suppressing the effect of late-night shows. Changes in news exposure (H5) are estimated to be associated with increased internal efficacy as well, but there is insufficient evidence to make statistical conclusions (B = 0.19, z = 1.65, p = .098).

In the model predicting news consumption, the effect of changes in political satire use (H4a) was a positive predictor of news consumption (B = 0.37, z = 2.43, p = .015). Late-night talk shows (per H4b), on the other hand, have a negative effect estimate that is close to zero (B = -0.11, z = -1.01, p = .310), again indicating a lack of comparable support for late-night content as compared to satire. The post-hoc test of the difference between this pair of coefficients provides support for a statistical difference between them (F(1, 776) = 3.93, p = .048).

Useful context for interpreting the results for participation is the mean number of participation activities, which is 0.32 in the final 2 waves (due to the lagged predictors, wave 1 participation is not modeled). In the model predicting political participation, internal efficacy (H2) was a positive predictor of increases in political participation (B = 0.40, z = 3.18, p = .002), consistent with the theorized mediation process. Each individual programming genre (satire, latenight talk shows, and television news) has a direct effect estimate upon participation that is very close to zero.

Because none of the constituent paths for late-night talk shows were even in the expected direction, those results are omitted and presumed zero. The indirect effect of political satire on participation, as mediated by internal efficacy alone, was estimated at 0.24 activities (95% CI [0.07, 0.47], p < .001), supporting H3a. The indirect effect of news use on political participation, as mediated by internal efficacy, was estimated at 0.08 activities (95% CI [-0.01, 0.20], p = .048), offering only weak support for H6. The full indirect effect of political satire was estimated at 0.26 activities (95% CI [0.06, 0.51], p = .005), meaning the estimated effect of political satire exposure through news and internal efficacy (per H7a) was on the order of about a 75% increase, although the estimate is consistent with considerably smaller effects as well. Of course, one should bear in mind that a full standard deviation increase in satire exposure would be quite substantial itself. That the indirect effect through efficacy only is not much smaller than the full indirect effect indicates that the contribution from news is not large. The estimated total effect of political satire is 0.31 activities (albeit not clearly distinct from 0; 95% CI [-0.03, 0.67], p = .041), indicating most, if not all, the effect of political satire on participation is via its effects on news consumption and internal efficacy. Readers should bear in mind that estimates of the total effect have less statistical power than for the indirect effect (Loeys, Moerkerke, & Vansteelandt, 2015). One way to translate these estimates into plain terms is that if someone goes from non-viewer to frequent viewer of a single satire program, they are expected on average to do 1 additional act of political participation. Of course, heavy media use or high baseline levels of participation may mean that certain people would not experience such effects, at least on the scale implied by these estimates.

Discussion

This study addressed a set of hypotheses derived both from existing literature and extended the intramedia mediation hypothesis to consider the way political comedy affects orientations toward citizenship and political engagement. By demonstrating that political satire exposure appears to promote news consumption over time, the results augment previous work showing that political entertainment consumers were also heavier consumers of news than the general public (Young & Tisinger, 2006), tended to increase their news use over the campaign (Feldman & Young, 2008), and selected news content in experimental settings (Xenos & Becker, 2009). There are convergent results, using several methods and across more than a decade, suggesting that political comedy promotes engagement with traditional news media.

For internal political efficacy, this study provided causal evidence for a hypothesized effect that in previous experimental work showed conflicting findings (Baumgartner & Morris, 2006, 2008) although we have provided what we feel is a strong explanation for the conflict in the two prominent experimental studies. Our finding here, using a strong measure of internal efficacy, supports our argument. Besides those experiments, this hypothesis otherwise had primarily been studied in cross-sectional designs (Becker, 2011; Hoffman & Young, 2011) of college students other than one panel study of high school students (Hoffman & Thomson, 2009). Our results add to this literature as well, suggesting the effect of political satire on internal efficacy is indeed positive and holds across a more generalizable sample of the U.S. population. The analytical method employed for this study also effectively rules out spuriousness due to pre-existing differences between consumers and non-consumers of political entertainment as an alternative explanation.

Since the theoretical interest in political comedy's effect on internal efficacy is largely driven by the expected relationship between internal efficacy and political participation, we investigated that as well. Indeed, as expected and consistent with much prior research (e.g., Finkel, 1985; Gastil & Xenos, 2010), our results suggest increases in internal efficacy are associated with subsequent increases in political participation. We then modeled the entire causal process, with political satire causing increased internal efficacy which in turn causes political participation. We also account for the downstream effects of political satire's "gateway" effect, leading to news consumption and subsequent changes in efficacy and participation that occur due to that increased news exposure. Our modeling approach, sample, and longitudinal design combine to both provide evidence that may be interpreted as causal under tenable assumptions and a chance to quantify the typical effects in the general public in the United States. Overall, the total effect of a 1 standard deviation change in political comedy consumption on participation appears substantial: the amount of predicted political participation approximately doubles. This should be contextualized, however, with the low average level of participation. For a person at the mean of all variables, an increase in political satire consumption of 1 standard deviation would increase the predicted number of activities from 0.32 to 0.65. Furthermore, given the relatively low levels of satire consumption, a 1 standard deviation increase would be quite substantial for most people. Nonetheless, the results are largely consistent with the claim that these programs have a positive effect on the political system in the United States, insofar as participation is a positive effect. Despite some past concerns about making viewers cynical, it is more likely viewers are merely gaining some constructive skepticism in navigating the world of politics (Bennett, 2007).

Our finding that all effects on political participation were mediated by internal efficacy affirms the important role of internal efficacy in promoting participation. Given we find no direct effects of any media variable on participation, one implication of the results is that all effects of media on participation are via efficacy. This may be too ambitious of an interpretation. First, it is always possible that some direct effects are not detected due to mere sampling variation.

Likewise, even the relatively complex theoretical model proposed in this study could very well leave out other influential parts of the underlying causal process. Further, even if internal efficacy is implicated in all causal processes, it does not rule out the involvement of other important variables. For instance, these results are perfectly compatible with a process in which the self-confidence that comes with internal efficacy also enables a greater emotional reaction to political events, and that it is this affective response that is the most proximate cause of participation. This is, of course, just one of many possibilities and not one that can be adjudicated by the data presented here.

In addition, we have provided suggestive evidence that not all political comedy is created equal, similar to cross-sectional observations in previous work (Baumgartner & Lockerbie, 2018; Hoffman & Young, 2011). Although some prior research found that viewers of late-night talk shows were more likely to be viewers of traditional newscasts compared to viewers of satire programs (Young & Tisinger, 2006), our results suggest this was probably not a causal relationship. Instead, we find that on the within-person level it is satire and not late-night which promotes greater traditional news use. Similarly, we found that political satire exposure, and not late-night exposure, increased its viewers' political internal efficacy. This might be attributed to satire featuring political matters to a lesser but still high degree compared to more traditional political communication fare like news content (Brewer & Marquardt, 2007; Fox et al., 2007),

though a comparison of the political content of late-night programing as compared to satire remains a void in the current literature which prevents us from stating more authoritatively *why* effects differed between satire and late-night consumption. We cannot rule out the possibility of a causal relationship between the consumption of these two genres that causes us to underrate the influence of late-night shows; increases in late-night show exposure are a strong predictor of increases in political satire exposure in these data, suggesting it is possible that there is an even more complex intramedia mediation process than what we have considered.

We also felt that this literature needed something of an "update." The vast majority of the research on political satire investigated shows that have either ended their runs or changed hosts: in particular, much of the prior work focused on *The Daily Show with Jon Stewart*, now hosted by Trevor Noah, and *The Colbert Report*, which no longer airs and whose eponymous host has abandoned the faux-conservative caricature in transitioning between satire and late-night. To some extent, one could argue that when Stewart retired in 2014 the continued generalizability of that research was in question — was there something uniquely influential about Stewart? Although we anticipated that the effect of these programs was not, in fact, contingent on Stewart or any single person, we felt it important to show that this was so and sought to contribute to the literature in this domain by considering the more recent and increasing variety of political comedy programing, the vast majority of which had not aired during a presidential election cycle at the time of our inquiry.

This study is not without limitations. As for measurement, there are general difficulties in generating accurate self-reports of media exposure (Prior, 2013). This motivated our use of program lists (Dilliplane, Goldman, & Mutz, 2013) which is currently best practice for media measurement in the discipline (Andersen et al., 2016), although we had to make slight changes to

the list-frequency approach to suit the design of this study. Relatedly, our use of mean indices for our genres of interest is consistent with past research on intramedia mediation, but this approach is necessarily blind to the particular content of these satire, late-night and television news shows on a per-broadcast basis. This is not a limitation in terms of the claims we specifically make, given that we specify that those findings relate to engagement with genres of programming generally, not specific airings of content falling within those categories. Nonetheless, our efforts to extend intramedia mediation to incorporate entertaining political communication formats would be further served by focusing in more detail on the content of these shows, alongside the traditional political communication sources being compared against.

Saturday Night Live employs a rather different format than the other satire programs and peer reviewers raised questions about whether it was properly categorized as satire. Its Weekend Update news bulletin and regular direct parody of the week's political events aligns it with satire, as defined. Likewise, it has frequently been described as such in previous research (Holbert, 2005a; Young, 2020). Although Saturday Night Live's other forays into politics are largely via parody, which as Young (2017, p. 873) notes is "not always satirical," it remains the case that "parodies, such as Saturday Night Live comedian Tina Fey's impersonation of vice-presidential candidate Sarah Palin, constitute political satire." That being said, it does feature non-political humor as well as non-satirical political humor in a way that has been uneven over its long run (Jones, 2009). Our view is that it provides important conceptual coverage, especially since other influential sketch-based satire programs were not active at the time of the survey (e.g., Key & Peele) and its turn towards more adversarial portrayals of the major candidates (particularly then-candidate Trump) in the 2016 election. We present a summary of results with SNL omitted in the Supplementary Appendix; there are no substantive differences in results.

We also do not manipulate exposure to political comedy; we cannot prove that exposure to political comedy is not simply a close correlate of something else that causes changes in internal efficacy, though we regard that as unlikely. With our design, that unmeasured variable would have to be something that changes simultaneously with political comedy exposure and causes the same effects that the research literature has long attributed to political comedy. If another mode of communication, not included in the model, changed both comedy exposure and efficacy, then these results could have arisen from that confound. We do wish to note that there is evidence that forced media exposure in the laboratory does not produce equivalent effects to self-selected media exposure (Stroud, Feldman, Wojcieszak, & Bimber, 2019), so there is no straightforward way to rule out all threats to validity. Even with experimental manipulation, recent work has explored how mediation analysis relies on some assumptions that are difficult or impossible to statistically test (Green, Ha, & Bullock, 2010). This means the plausibility of our mediation analysis rests on its theoretical justification, which is derived from prior research but is nonetheless open to criticism, and the study's design.

Furthermore, the design involves a tradeoff regarding the theoretical stimulus. We show that exposure to political comedy — including each of the sub-groups of satire and late-night talk shows — correspond with the aforementioned effects, *in aggregate*. What we cannot say with certainty is what it is about the shows that is responsible for the effects or whether a small number of the shows are responsible for a large portion of the effects. Although it is valuable to show that these programs have these effects in the patterns they are consumed in the general public, there are still open questions about the details of the process involved that are best parsed in the laboratory or with highly granular observational measures of media consumption. Our finding is not inconsistent with the possibility that one or a small subset of the shows promotes

the *opposite* effects or that some component (e.g., the interviews) does; these data simply suggest, consistent with existing intramedia mediation research, that the sum of all the effects of all the programs takes on this pattern.

We also acknowledge that some variables of potential interest are absent from this analysis. Questionnaire space is at a premium when using such high-quality sampling procedures, so the presence and quality of measurements is the result of necessary cost-benefit tradeoffs and our focus on comedy, efficacy, and participation. Measuring our key concepts and doing so as well as possible came at the expense of including all potential mediating, moderating or co-varying variables which might provide greater insight into the overall impact of political comedy upon political participation. For instance, measurement of typical affective responses to each program/sub-genre, and inclusion of political news consumption items measured with more breadth (i.e., non-televised news) and depth (i.e., breaking down "network" and "cable" news categories) would provide greater insight. Thus, our integration of political comedy into the intramedia mediation approach represents an important but formative step in theory-building. Further research is required to gain a greater understanding of the mechanisms implicated by considering political comedy alongside traditional political communication sources. An example of some nuance that may be lost is that it is not clear, from this design, whether increases in internal efficacy are driven by learning about politics or some other mechanisms, such as increased interest.

Nevertheless, this study adds considerable clarity to some persistent questions in the research on the effects of political entertainment. We have shown, in a single sample, evidence of a mediation process in which political satire, partly by promoting news consumption, increases internal political efficacy which then causes increases in political participation. Finding this in a

nationally representative panel survey extends the generalizability of this theorized process to a far broader population than where most past research has tested it. Leveraging repeated measurements, we were able to use analytical methods that rule out confounding from individual differences, which "arguably provides the most stringent causal test possible outside of an experimental setting" (Dilliplane et al., 2013, p. 241). In this study, we were able to analyze the process in a way in which each step in the mediation analysis precedes the next — first comes media exposure, then the measure of internal efficacy, then participation — a key requirement for causal inference and a piece of evidence often absent in prior research. The study does not provide unequivocal evidence of causality, but we have explained the assumptions necessary for such an interpretation and find them reasonable in our own estimation. Future research should seek to probe more consequences of changes in internal political efficacy, other downstream effects of consumption of political comedy and other political entertainment formats, and do so using panel designs to investigate other long-standing research questions.

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Tables

Table 1

Panel regressions predicting changes in key variables.

	News		Internal efficacy		Participation	
Within-person effects	Coefficient	z statistic	Coefficient	z statistic	Coefficient	z statistic
Political satire	0.375	*2.435	0.606	*3.196	_	_
Political satire (lagged)	_	_	_	_	0.049	0.349
Late-night talk shows	-0.112	-1.014	-0.292	*-2.226	_	_
Late-night talk shows (lagged)	_	_	_	_	0.072	0.583
News	_	_	0.192	#1.653	_	_
News (lagged)	-0.004	-0.044	_	_	-0.031	-0.263
Social media	0.011	0.150	0.126	1.520	_	_
Social media (lagged)		_	_	_	0.154	1.549
Internal efficacy (lagged)	-0.093	#-1.940	-0.033	-0.304	0.401	*3.178
External efficacy (lagged)	0.006	0.187	-0.055	-1.379	0.004	0.043
Ideology (lagged)	0.040	0.698	-0.035	-0.523	-0.164	-1.104
Ideological extremity (lagged)	-0.026	-0.616	-0.032	-0.663	0.016	0.138
Participation (lagged)	_	_	_	_	0.164	#1.892
Time-invariant controls						
Age	0.439	*9.497	0.094	1.468	0.181	*2.509
Education	0.056	1.433	0.225	*4.414	-0.121	#-1.802
Race/ethnicity (Black)	0.028	0.453	-0.042	-0.650	0.087	0.892
Race/ethnicity (Hispanic)	0.091	#1.689	0.002	0.039	-0.007	-0.091
Sex (female)	-0.026	-0.719	-0.234	*-5.401	0.068	1.170
Income	0.019	0.518	0.067	1.623	0.020	0.348
Party ID (Republican)	0.145	#1.926	0.145	#1.780	-0.004	-0.030
Party ID (Democrat)	0.101	1.475	-0.086	-1.191	-0.125	-1.140
Partisan strength	0.074	1.454	0.052	0.875	0.013	0.348
Total N	792		792		792	
Complete N	518		518		518	
χ^2 (d.f.)	16.169 (13)		22.314 (12)		21.123 (17)	
RMSEA	0.018		0.033		0.018	
p(RMSEA < .05)	.992		.904		.997	
SRMR	0.006		0.007		0.010	

Note: Values are linear regression coefficients as well as test statistics. All continuous variables are mean-centered and standardized. * p < .05; # p < .10