

Opposition to equality and support for tradition as mediators of the relationship between epistemic motivation and system-justifying identifications

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Abstract

Individuals with a high *need for cognitive closure*, or a preference for knowledge that is certain and clear, tend to adopt conservative system-justifying ideologies. Nevertheless, few studies have examined the intervening orientations responsible for this relationship. While conservatism is anchored in values that both support tradition and oppose equality, we suggest that the need for closure is linked primarily with the former. In three studies, we found (a) that the need for closure is more strongly related to support for tradition than opposition to equality, and (b) that the indirect effect of the need for closure on conservatism is stronger via the former than the latter. By clarifying the links between the need for closure and multiple antecedents of ideology, these findings provide new insight into the psychological foundations of political belief by suggesting that the need for closure is not equally relevant to all aspects of system justification.

Keywords

conservatism, epistemic motivation, ideology, system justification

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Ideological identifications provide people with a guide for explaining and justifying social arrangements. In particular, conservative identifications may play a key role in *system justification*, defined as the defense, reinforcement, and legitimation of existing social, economic, and political arrangements (Jost, 2006; Jost, Federico, & Napier, 2009). Despite a considerable amount of research, the psychological foundations of conservatism are still not completely understood (Jost et al., 2009). Psychologists have construed support for

system-justifying ideological identifications as being rooted in part in individual-level processes

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by which various psychological motives attract people to certain positions (Federico & Goren, 2009; Federico, Hunt, & Ergun, 2009; Jost et al., 2009; Jost, Glaser, Kruglanski, & Sulloway, 2003). For example, *epistemic motives*—motives that lead people to select certain kinds of information and process it in certain ways—have an important influence on system justification. In particular, research consistently demonstrates that people who prefer to see the world in certain, stable, and clear terms—that is, those high in the *need for cognitive closure*—tend to be more attracted to conservatism (Jost et al., 2003).

In this paper, we examine the different pathways underlying this relationship between the need for closure and conservative identification. More generally, conservatism as a general identification rests on two concerns: (a) acceptance (vs. rejection) of inequality and (b) support for (vs. resistance to) traditional or established lifeways (Erikson & Tedin, 2003; Jost et al., 2009; Jost et al., 2003). We argue that the second of these concerns more closely matches the needs of those high in the need for closure and that it is the primary route from need for closure to system justification (in the form of general conservatism) for these individuals. We begin with a brief review of recent work on ideology.

The Relationship Between the Need for Closure and System-Justifying Ideology

The need for closure (NFC)—the key epistemic variable we consider here—refers to the motivation to “seize and freeze” on beliefs that provide answers that are simple, certain, and clear (Kruglanski, 1996). It entails: (a) a preference for order and structure; (b) emotional discomfort with ambiguity; (c) impatience and impulsivity in decision making; (d) desire for security and predictability; and (e) closed-mindedness (Webster & Kruglanski, 1994). For people high in this orientation, the need to reach decisions may be so strong that they may prefer *any* firm answer or belief if the alternative is continued confusion and ambiguity.

This basic orientation regarding uncertainty is associated with support for system-justifying ideologies: Individuals who have a high need for cognitive closure are more likely to identify as political conservatives (Jost, 2006; Jost et al., 2003). Further, the need for closure is correlated with system-justifying positions on political issues (e.g., hawkish foreign policy), religious fundamentalism, and nationalism (Jost et al., 2009; Jost et al., 2003; see also Cunningham, Nezlek, & Banaji, 2004; Federico, Golec, & Dial, 2005; Federico & Goren, 2009; Hennes, Nam, Stern, & Jost, 2012; Jost et al., 2007). Thus, while the epistemic dimension represented by the need for closure is not the only motivational basis for conservatism (see Jost et al., 2009, for a review; see also Gerber, Huber, Doherty, Dowling, & Ha, 2010; Janoff-Bulman, Sheikh, & Baldacci, 2008; Jost et al., 2007), it is clearly and consistently one of the most consequential ones.

Bidimensional Models of Sociopolitical Orientations

As noted previously, ideology is often thought to rest upon concerns regarding equality and tradition. From this perspective, the system-justifying end of this spectrum—ideological conservatism—can be thought of as having two core foundations: opposition to equality and support for tradition. Although a great deal of research on ideology assumes that these two foundations are bound together to produce variation on a single left–right dimension (Jost, 2006), a variety of models are more explicit in their suggestion that the two foundations of ideology—and sociopolitical values, attitudes, and beliefs more generally—are governed by distinct (but related) processes and that each process reflects a different set of motives (Alford, Funk, & Hibbing, 2005; Braithwaite, 1994; Duckitt, 2001; Duckitt & Sibley, 2009; Eysenck, 1954; Feldman & Johnston, 2013; Rokeach, 1973; Schwartz, 1992; Stangor & Leary, 2006; Weber & Federico, 2007).

According to these models, sociopolitical orientations related to equality and tradition have their roots in distinct psychological orientations

and processes (Altemeyer, 1998; Federico et al., 2009; Feldman & Johnston, 2013). For example, one account of the two sets of processes is provided by the dual-process model developed by John Duckitt and his colleagues (e.g., Duckitt & Sibley, 2009, 2010). On one hand, this approach argues that opposition to equality reflects an orientation toward toughmindedness and competitive social ranking, a general belief that the world is a competitive jungle, and low levels of agreeableness (Duckitt & Sibley, 2010). Broadly speaking, individuals who fall toward the high end of this dimension accept the domination of the weak by the powerful as a normal feature of social life. This attracts them to those aspects of conservatism which favor inequality, particularly in the economic realm. This sociopolitical orientation is best represented at a general level by *social dominance orientation* (SDO; Sidanius & Pratto, 1999), which taps into a preference for inequality in intergroup relations. On the other hand, the model argues that support for tradition reflects an orientation toward structure, conformity, and security, a general belief that the world is a dangerous place, and low openness to experience (Duckitt & Sibley, 2010). In general, individuals on the high end of this spectrum seek and defend social order, which attracts them to those aspects of conservatism related to the preservation of tradition and well-defined social norms; in particular, these include conservative positions on social issues related to religion, gender, and social convention. In general terms, this orientation is best represented by *right-wing authoritarianism* (RWA; Altemeyer, 1998), which measures a preference for social control, obedience to authority, and traditional norms (see also Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Stenner, 2005).

Other models posit similar motivational dichotomies (Feldman, 2003). For instance, researchers interested in human values have identified dual dimensions reflecting interests in “self-transcendence versus self-enhancement” and “openness versus conservation” (Schwartz, 1992; see also Rokeach, 1973); in the political realm, these dimensions correspond to general egalitarianism and

general moral traditionalism (Feldman, 1988). Similarly, public opinion research tends to find related dimensions of issue attitudes corresponding to views about policies aimed at guaranteeing equality in the economic realm and policies aimed at preserving order and tradition (Feldman & Johnston, 2013; Fleishman, 1988; see also Duckitt & Sibley, 2009; Lipset & Rokkan, 1967).

Equality, Tradition, and the Interface Between the Need for Closure and Conservatism

Bidimensional theories thus suggest that support for system-justifying ideology may be rooted in multiple sets of values, attitudes, and beliefs—and more importantly, in multiple social motives. But does the need for closure cultivate conservative identification via opposition to equality, via support for tradition, or some combination of the two? Few studies have attempted to address this question, leaving researchers with an uncertain picture of how the need for closure relates to conservatism and how the epistemic motive most commonly linked to system justification interfaces with the multiple pathways highlighted by bidimensional attitude models.

In this paper, we investigate whether the need for closure is related to conservative identification more through the tradition dimension than the equality dimension. Conceptually, those high in the need for closure are after one thing above all: certainty and clarity in their knowledge of the world. Along these lines, researchers have often argued that support for tradition and opposition to equality may both serve this same basic need for epistemic certainty and clarity (e.g., Cunningham et al., 2004; Jost et al., 2003; Wilson, 1973). Conceptually, this connection is most apparent in the case of support for tradition. As noted previously, support for tradition is strongly linked to social motives which aim at the preservation of social order; it is rooted in concern about ever-present danger and tends to recoil from excess social openness (Duckitt & Sibley, 2010). The overlap between these *social* motives and the *epistemic* motives represented by the need

for closure is broad and striking. Like the general tradition dimension, the need for closure also taps the extent to which one desires clarity, stability, and order; indeed, the need for closure and low openness tend to go hand in hand (Jost et al., 2007). Accordingly, most perspectives on the psychological foundations of ideology find a strong link between a closed epistemic orientation and support for tradition (Jost et al., 2003). Thus, our expectations are similar: the need for closure should relate strongly to support for tradition and thus to general conservative identification.

On the other hand, the basis for the expected relationship between the need for closure and opposition to equality stems from the sense of order and clarity that should be provided by clearly delineated and justified hierarchies in which all “know their place” (e.g., Jost et al., 2003). While this argument makes intuitive sense, the overlap between the social motives typically associated with opposition to equality and the epistemic motives associated with the need for closure is less pronounced than in the case of support for tradition. As we have seen, the opposition-to-equality dimension goes along with toughmindedness and an affinity for competitive social ranking, while manifesting itself as low agreeableness in personality. Unlike the aversion to disorder associated with support for tradition, these tendencies do not *always* lend themselves to social relations that provide certainty; rather, they may promote conflict and confrontation in some cases (Duckitt, 2001; John & Srivastava, 1999). Moreover, the personality characteristic most closely associated (albeit negatively) with the need for closure—openness—appears to be more strongly linked to tradition-related constructs than to equality-related ones (Duckitt & Sibley, 2010). As such, it is likely that the need for closure will be more weakly linked to opposition to equality.

In sum, we argue that the epistemic motives embodied in the need for closure should align much more closely with the social motives embodied in support for tradition than those associated with opposition to equality. In turn, we also argue that support for tradition should better

mediate the relationship between the need for closure and conservatism.¹ As noted previously, few studies have explored these possibilities. One study finds that measures related to epistemic motivation—including the need for order and ambiguity intolerance—relate only weakly to beliefs about income inequality, while being more strongly related to a variable sometimes linked to traditionalism, that is, support for the status quo (Jost et al., 2007). While resistance to large-scale change in favor the status quo has some conceptual overlap with motives and ideological content associated with traditionalism (e.g., Schwartz, 1992), it does not capture other key aspects of the tradition dimension highlighted by bidimensional models (see Altemeyer, 1998; Duckitt & Sibley, 2009). Moreover, other studies suggest that traditionalists are willing to embrace disruptions to the status quo aimed at increasing social uniformity (Stenner, 2005). Another recent study (van Hiel, Pandelaere, & Duriez, 2004) went somewhat further, finding that the relationship between “need for simple structure” and conservative attitudes was mediated more strongly by RWA than SDO. However, this study focused only on certain aspects of the need for closure, and it limited itself to a consideration of only two particular operationalizations of the tradition and equality dimensions (i.e., RWA and SDO); moreover, no formal test of the difference in the magnitude of the indirect effects of the need for closure via the tradition and equality constructs was conducted. It also focused on conservatism in issue position, as opposed to conservatism as a general identification—the latter being our main interest here. Thus, to adequately test how the need for closure might operate through the dimensions identified by bidimensional models, further analysis is needed.

Our goal is to more thoroughly explore possible differences in the impact of epistemic motives on constructs explicitly connected with the tradition and equality dimensions suggested by dual-process models. We have two hypotheses. Hypothesis 1 predicts that the need for closure should be more strongly related to constructs related to tradition than those linked to equality,

while Hypothesis 2 predicts that tradition-linked constructs should emerge as better mediators of the relationship between need for closure and conservative identification than constructs associated with equality. We examine these hypotheses in three studies, each of which focuses on different operationalizations of tradition and equality concerns. In all studies, we use latent-variable structural equation modeling to test these hypotheses. We rely on this strategy—as opposed to conventional regression-based mediation analyses—to simplify and integrate the process of examining multiple mediators, correct for measurement error in our key constructs, and deal with the presence of missing data for some of our measured variables (Kline, 1998).²

Study 1

In Study 1, we examine the mediating roles of *social dominance orientation* (SDO) and *right-wing authoritarianism* (RWA). While SDO corresponds to one's general acceptance of inequality in intergroup relations (Sidanius & Pratto, 1999), RWA reflects submission to authority, support for convention, and hostility toward those who deviate from convention (Altemeyer, 1996, 1998). Although both variables predict conservative identification, research suggests that they do so differently. Current work directly links SDO to motivations dealing with ranking, hierarchy, and ruthlessness, while linking RWA to motivations dealing with security and social order (Duckitt, 2001; Duckitt & Sibley, 2009). This suggests that RWA should provide a closer fit to the certainty-related motivations central to the need for closure. Thus, our hypotheses imply that the need for closure should predict RWA more strongly than SDO, and that RWA should serve as a more powerful mediator of the relationship between need for closure and conservatism.

Method

Participants. The data for this study came from a survey of undergraduates enrolled in psychology courses at the University of Minnesota ($N = 309$).

All participants received either extra credit or \$5.00 as compensation. Participants were recruited for mass-testing sessions by class announcements, online advertisements, and flyers posted in university buildings. The sample consisted of 107 men and 200 women, with two respondents not indicating their gender. The mean age was 19.6 ($SD = 4.51$).

Measures. Measures of our key study variables are described next. Descriptive statistics for full scales are provided in this section. Unless otherwise indicated, all items used a 7-point response scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). All measures were recoded to run from 0 to 1; the descriptive statistics next refer to the recoded variables.

Need for cognitive closure. This construct was operationalized using the full 42-item Need for Closure Scale (Webster & Kruglanski, 1994). Examples of items included “I don't like situations that are uncertain,” “Any solution to a problem is better than remaining in a state of uncertainty,” and “I prefer activities where it is always clear what is to be done and how it needs to be done.” All items were coded so that high scores indicated a high need for closure ($\alpha = .85$; $M = 0.53$, $SD = 0.17$).

Social dominance orientation. Our key index of orientation to equality—SDO—was measured using the full 16-item Social Dominance Orientation Scale (Sidanius & Pratto, 1999). Sample items included: “Some groups of people are simply inferior to other groups,” “We would have fewer problems if we treated people more equally” (reverse coded), and “To get ahead in life, it's sometimes necessary to step on other groups.” All items were recoded so that higher numbers corresponded to higher levels of SDO ($\alpha = .93$, $M = 0.31$, $SD = 0.12$).

Right-wing authoritarianism. Our key measure of traditionalism—RWA—was measured using a shortened 12-item version of the Right-Wing Authoritarianism Scale (Altemeyer, 1996; Weber

& Federico, 2007). Sample items included: “Obedience and respect for authority are the most important virtues children can learn,” and “The courts are right on being easy on drug users. Punishment would not do any good in cases like these” (reverse coded). All items were recoded so that higher numbers indicated higher RWA ($\alpha = .74$, $M = 0.58$, $SD = 0.16$).

General conservatism. Our key dependent variable was operationalized using two 7-point items asking about ideology in the context of economic and social issues. Since economic and social attitudes are believed to have differential associations with the equality and tradition dimensions—with the former correlating more highly with equality and the latter correlating more highly with tradition (Duckitt & Sibley, 2009)—this operationalization was less optimal than items asking about conservatism *in general*. In Studies 2 and 3, we remedy this situation by replicating our findings with dependent-variable measures that draw only on *general* liberal–conservative items. However, since the economic and social items correlated highly ($r = .53$, $p < .001$) and were our only available left–right measures in this dataset, we combined them for the purposes of this study. The two items were: “How would you describe your political outlook with regard to *economic* issues?” and “How would you describe your political outlook with regard to *social* issues?” Participants responded to both items on a 7-point scale ranging from 1 (*very liberal*) to 7 (*very conservative*), so higher responses to both indicated greater conservatism ($\alpha = .69$; $M = 0.45$, $SD = 0.24$).

Results

In order to examine our hypotheses, we used latent-variable structural equation modeling. All models were estimated with Mplus 4.2, using the MLR estimator for robust maximum-likelihood estimation in the presence of nonnormal input variables and missing cases; raw data were used as input (Muthén & Muthén, 2006). Measurement models for the need for closure, SDO, and RWA were generated by averaging subsets of items to

create three item parcels for each construct. The three parcels for each construct were then used as latent-variable indicators. The measurement model for conservatism, on the other hand, was specified using the two individual conservatism items as indicators. The metric of all latent variables was set by constraining the first factor loading for each to 1. In the structural model, SDO and RWA were regressed on need for closure alone, while conservatism was regressed on SDO, RWA, and the need for closure. The disturbances for SDO and RWA were also allowed to covary in order to reflect the usual correlation between these two constructs (Weber & Federico, 2007). Finally, three error covariances were specified as well.³

Results for the final model are displayed in Figure 1; for clarity of presentation, factor loadings for the latent variables are not displayed. The overall fit of the model was excellent. While the chi-square for the model was significant, $\chi^2(35) = 64.14$, $p < .01$, the χ^2/df ratio was below the conventional cutoff of 3 (i.e., 1.83) and other fit indices that are less sensitive to sample size all indicated a good fit (i.e., CFI = .98, RMSEA = .052, SRMR = .044; see Kline, 1998). In the measurement models for each latent variable, all nonconstrained factor loadings had standardized loadings in excess of .55 and were significant at the $p < .001$ level.

Turning to the structural model, both SDO and RWA were significantly related to conservative identification; RWA was more strongly related than SDO to conservatism (i.e., $\beta = .73$ vs. $\beta = .15$).⁴ Interestingly, net of the effects of SDO and RWA, need for closure was *negatively* related to conservatism ($\gamma = -.28$, $p < .05$), despite a positive bivariate relationship between these two variables.⁵ Looking at the estimates most germane to our hypotheses, we see a pattern consistent with our predictions. In line with our first hypothesis, the direct effect of the need for closure on RWA ($\gamma = .87$, $p < .001$; standardized $\gamma = .47$) was larger than the direct effect of the need for closure on SDO ($\gamma = .38$, $p < .01$; standardized $\gamma = .17$). Moreover, constraining the direct effects of the need for closure on SDO and RWA

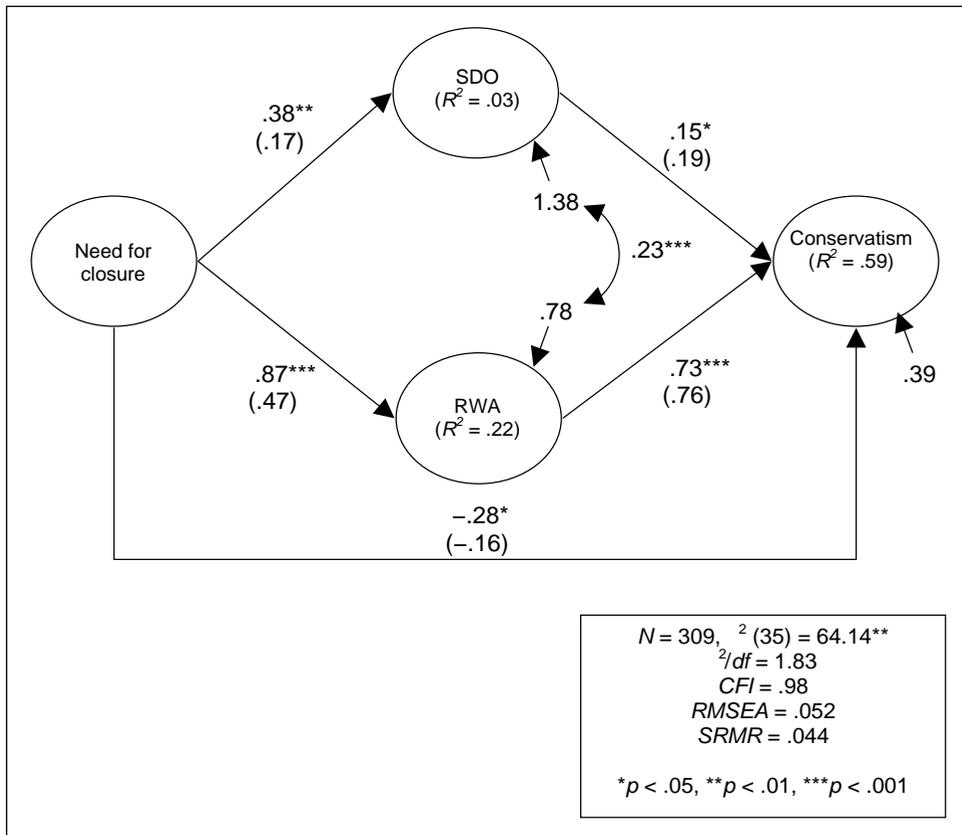


Figure 1. Final latent-variable model for SDO and RWA as mediators of the relationship between need for closure and general conservatism, Study 1. Unstandardized estimates are shown, with standardized estimates for structural coefficients in parentheses; tests on parameter estimates are based on robust standard errors. Factor loadings for latent variables are not shown.

to equality produced a significant decline in model fit, $\Delta\chi^2(1) = 5.53, p < .05$, further suggesting that the need for closure is more closely related to RWA than to SDO.

Consistent with our second hypothesis, the indirect effect of the need for closure on conservatism was stronger via RWA than SDO. Specifically, while the indirect effect of the need for closure on conservatism via SDO was small and nonsignificant ($IE = .06, \hat{\alpha} = 1.54, p > .10$; standardized $IE = .03$), the indirect effect of the need for closure via RWA was strong and statistically reliable ($IE = .63, \hat{\alpha} = 5.25, p < .001$; standardized $IE = .37$). A test on the difference between these two indirect effects was conducted

by creating a new parameter constrained to equal the difference between the two indirect effects; confidence intervals for this new parameter were then estimated using Mplus (Cheung, 2007; Muthén & Muthén, 2006).⁶ Using this method, the estimated difference between the indirect effects via RWA and SDO was 0.58, with a 5% confidence interval ranging from 0.34 to 0.82. Since this interval does not include zero, we can conclude that the indirect effect of the need for closure is indeed stronger via RWA than SDO. Study 1 thus provides a clear pattern of support for our two hypotheses: need for closure predicted RWA more strongly than it predicted SDO, and RWA was the stronger mediator of

the relationship between need for closure and general conservatism.⁷

Study 2

In Study 2, we had two goals. First, we wanted to move beyond prior work (e.g., van Hiel et al., 2004) by examining the mediating role of tradition and equality using constructs other than RWA and SDO. In particular, in doing so, we wanted to examine our hypotheses using orientations more central to concrete political debate than the relatively abstract SDO and RWA constructs. Second, we wanted to replicate our basic finding in a representative sample of adults as opposed to college students. To this end, we used a recent survey of American adults to examine the mediating role of two *core values* highlighted in the literature on political attitudes: *egalitarianism*, or general support for granting all an equal chance in life, and *moral traditionalism*, or a preference for conventional values, lifestyles, and family forms (Feldman, 1988, 2003). Current research suggests that egalitarian and traditional values are closely linked to the two general dimensions highlighted in our introduction, and that they have similar bases—i.e., toughmindedness and ranking in the case of equality and security and order goals in the case of traditionalism (Duckitt & Sibley, 2009). Thus, in this study, our hypotheses imply that the need for closure should predict traditionalism more strongly than equality aversion, and that traditionalism should serve as a more powerful mediator of the relationship between need for closure and conservative identification.

Method

Participants. The data came from the 2006 Core Predisposition Study (CPS; see Goren, Federico, & Kittilson, 2009). The 2006 CPS ($N = 1,201$) interviewed respondents using a representative sample of the U.S. population in the 48 contiguous states between February 1 to April 26 of that year. All interviews for the survey were conducted via telephone.⁸ A key feature of this study was the inclusion of a survey-wording experiment involving

items used to measure several values, including the equality and traditionalism values examined here. In the treatment conditions, respondents received cues about who supported certain value positions (e.g., “Conservative Republicans believe that individuals should depend more on themselves and less on others in order to get ahead in life...how about you?”). We used only the respondents randomly assigned to the control condition, who received questions containing no partisan or ideological cues ($n = 294$).

Measures. Our measures are described next. Again, items for each construct were either used as individual latent-variable indicators or grouped into item parcels for use as indicators in structural equation models, but descriptive statistics for full scales are provided here for summary purposes. All measures were recoded to run from 0 to 1; descriptive statistics refer to the recoded variables.

Need for cognitive closure. This construct was operationalized using six items. The items were: “In case of uncertainty, I prefer to make an immediate decision, whatever it may be,” “I get very upset when things around me aren’t in their place,” “When I need to solve a problem, I generally do not waste time in considering diverse points of view about it,” “Generally, I do not search for alternative solutions to problems for which I already have a solution available,” “Any solution to a problem is better than remaining in a state of uncertainty,” and “I prefer activities where it is always clear what is to be done and how it needs to be done.” All items used a 4-point scale, ranging from 1 = “*strongly agree*” to 4 = “*strongly disagree*” ($\alpha = .45$; $M = 0.49$, $SD = 0.19$).⁹

Antiegalitarianism. This was measured using three items: “Some people believe that we need to do a lot more to make sure everyone has an equal chance to get ahead in life...how about you,” “Some people believe that our country would be much better off if people were treated more equally...how about you,” and “Some people believe that our society should do whatever

is necessary to make sure that everyone has an equal opportunity to succeed...how about you?" Respondents indicated how strongly they agreed with each statement on a 0–10 scale, with 0 indicating strong disagreement and 10 indicating strong agreement. Responses were recoded so that higher scores indicated greater *opposition to equality* ($\alpha = .78$; $M = 0.23$, $SD = 0.21$).

Moral traditionalism. This was measured using three items: "Some people believe that our country would be much better off if there were more emphasis on traditional family ties...how about you," "Some people believe that nontraditional lifestyles are contributing to the breakdown of our society...how about you," and "Some people believe that there should be a lot more respect for traditional family values...how about you?" Respondents indicated how strongly they agreed with each statement on a 0–10 scale, with 0 indicating strong disagreement and 10 indicating strong agreement. Higher scores indicated greater moral traditionalism ($\alpha = .82$; $M = 0.71$, $SD = 0.25$).

General conservatism. This was operationalized using three measures. The first was based on a standard set of branching items. Respondents were asked, "Generally speaking, do you usually think of yourself as a liberal, a conservative, a moderate, or haven't you thought much about this?" Those selecting "liberal" or "conservative" received a follow-up query: "Would you call yourself a strong [liberal/conservative] or a not very strong [liberal/conservative]?" Everyone else was asked: "Do you think of yourself as closer to liberals or closer to conservatives?" Responses were used to construct a 7-point scale ranging from 1 (*very liberal*) to 7 (*very conservative*). The second and third measures were respondents' ratings of "conservatives" and "liberals" on "feeling thermometers" ranging from 0 (*very cold and unfavorable*) to 10 (*very warm and favorable*). Responses to the liberal thermometer were reversed and all items were recoded to run from 0 to 1; as such, higher scores on all recoded items indicated greater conservatism ($\alpha = .74$; $M = 0.57$, $SD = 0.23$).

Results

As before, structural equation modeling was used to analyze the data. The models were again estimated with Mplus 4.2 (Muthén, & Muthén, 2006), using the MLR estimator and raw data as input. A measurement model for the need for closure was generated by creating three item-parcel indicators of two averaged items each. Measurement models for antiegalitarianism, moral traditionalism, and conservatism were specified using the three individual items for each construct as indicators. The metric for all latent variables was set by constraining the first factor loading for each construct to 1. In the structural model, antiegalitarianism and traditionalism were regressed on need for closure, while conservatism was regressed on antiegalitarianism, traditionalism, and the need for closure. The disturbances for antiegalitarianism and traditionalism were also allowed to covary. Estimates from this model are displayed in Figure 2; factor loadings are not shown. The overall fit of the model was superb, $\chi^2(48) = 51.81$, $p > .30$, $\chi^2/df = 1.08$, CFI = 1.00, RMSEA = .016, SRMR = .041. In the measurement models for the latent variables, all unconstrained loadings had standardized values in excess of .40 and were significant at the $p < .001$ level.

In the structural model, we find a pattern of results that closely resembles that in Study 1. Traditionalism had a stronger direct effect on conservative identification than antiegalitarianism (i.e., $\beta = .92$ vs. $\beta = .57$). Moreover, once the effects of the two values were considered, the need for closure had no significant direct effect on conservatism ($\gamma = .06$, $p > .50$). In turn, the other parameter estimates conceptually replicate the results of Study 1 and provide a clear pattern of support for our hypotheses. Consistent with our first hypothesis, the direct effect of the need for closure on traditionalism was strong and significant ($\gamma = 1.03$, $p < .001$; standardized $\gamma = .50$), but its direct effect on antiegalitarianism was weak and nonsignificant ($\gamma = .08$, $p > .30$; standardized $\gamma = .03$). Further confirming this result, constraining the direct effects of the need for closure on the two core values to equality

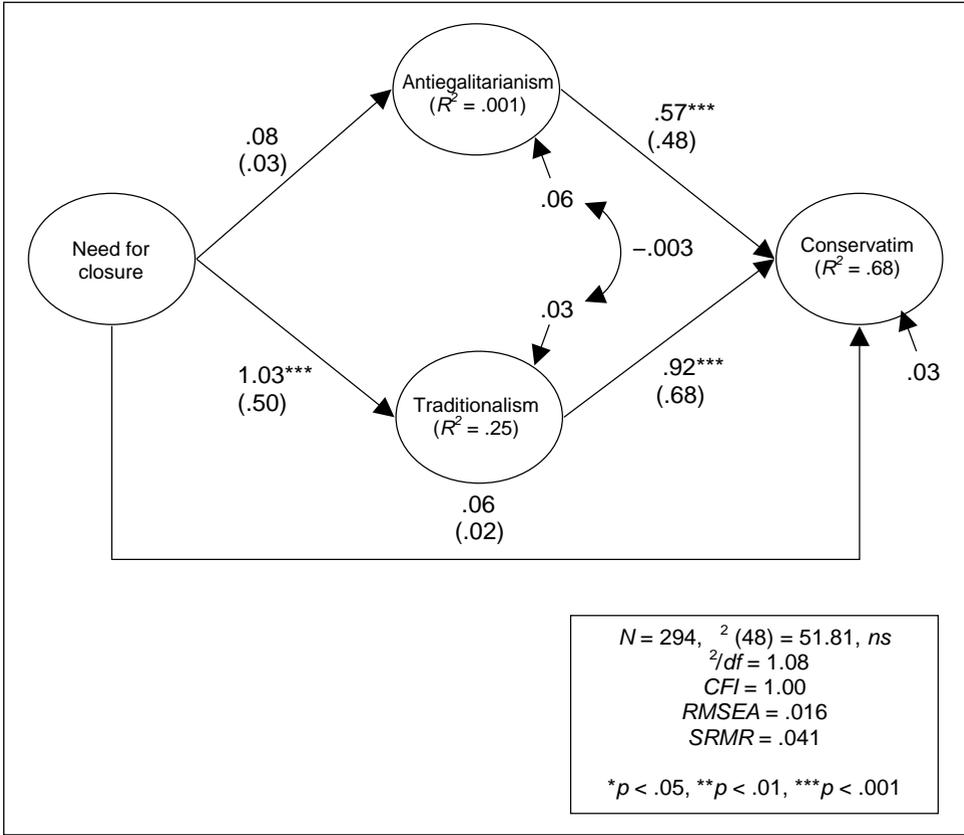


Figure 2. Final latent-variable model for egalitarianism and traditionalism as mediators of the relationship between need for closure and general conservatism, Study 2. Unstandardized estimates are shown, with standardized estimates for structural coefficients in parentheses; tests on parameter estimates are based on robust standard errors. Factor loadings for latent variables are not shown.

significantly reduced the model's fit, $\Delta\chi^2(1) = 7.91, p < .01$.

In line with our second hypothesis, the indirect effect of the need for closure on conservative identification was also stronger via traditionalism than via antiegalitarianism. While the indirect effect of the need for closure via antiegalitarianism was indistinguishable from zero ($IE = .04, \zeta = .32, p > .50$; standardized $IE = .02$), its indirect effect via traditionalism was strong and highly significant ($IE = .95, \zeta = 2.60, p < .001$; standardized $IE = .34$). A test on the difference between these two indirect effects was conducted using the same method employed in Study 1.¹⁰ The difference between the indirect

effects via each value was .91, with a 95% confidence interval ranging from .16 to 1.65. As such, we can conclude that the indirect effect of the need for closure is stronger via traditionalism than antiegalitarianism. Thus, the results of Study 2 conceptually replicate Study 1 using different operationalizations of the tradition and equality dimensions.

Study 3

In Study 1, we used two items asking about ideology in the context of economic and social issues to operationalize conservatism; this was done in the absence of items asking about political

identification *in general*. However, bidimensional models suggest that positions on economic and social matters relate differently to the two basic sociopolitical dimensions: while conservatism in the domain of economics relates most closely to opposition to equality and its antecedent motives, conservatism in the realm of social issues relates most strongly to support for tradition and its antecedents. As such, we might expect conservatism in the social realm to be the more important conduit for the effects of need for closure on general conservatism. In Study 3, we explore this possibility by using *separate* indices of conservatism in the economic and social realms as our mediators and an additional measure of *general* conservative identification as our dependent variable. In the present context, our hypotheses imply that the need for closure should predict social conservatism more strongly than economic conservatism, and that social conservatism should serve as a more powerful mediator of the relationship between need for closure and generalized conservative identification.

Method

Participants. The data for this study came from a survey of undergraduates enrolled in psychology courses at the University of Minnesota ($N = 306$). All participants were recruited and compensated in the same fashion as Study 1; again, participants read and signed a consent form before completing the survey individually. The sample consisted of 123 men and 166 women, with 17 respondents not indicating their gender. The mean age was 19.8 ($SD = 2.45$).

Measures. Our measures are described next. All measures were recoded to run from 0 to 1; the descriptive statistics refer to the recoded variables.

Need for cognitive closure. This was assessed with a 14-item version of the Need for Closure Scale (Pierro & Kruglanski, 2006). Items included "I prefer to decide on the first available solution rather than to ponder at length what decision I

should make" and "I get very upset when things around me aren't in their place." All items used a response scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Higher scores indicate greater need for closure ($\alpha = .82$; $M = 0.46$, $SD = 0.14$).

Economic and social conservatism. These were assessed using the economic and social self-placement items used in Study 1. Participants originally responded to both items on a 7-point scale ranging from 1 (*very liberal*) to 7 (*very conservative*), so higher responses indicate greater conservatism ($M = 0.48$, $SD = 0.27$, for economic conservatism; $M = 0.40$, $SD = 0.28$, for social conservatism).

General conservatism. The key dependent variable was operationalized using a single item: "How would you describe your *general* political outlook?" This item used the same response scale as the economic and social items; higher scores indicate greater conservatism ($M = 0.44$, $SD = 0.26$).

Results

As in Studies 1 and 2, all structural equation models were estimated with Mplus 4.2 (Muthén & Muthén, 2006), using MLR estimation and raw data as input. A measurement model for the need for closure was generated by creating three item-parcels consisting of the first five scale items, the next four scale items, and the final five scale items. The metric for the need for closure factor was set by constraining the loading for the first parcel to 1. Since we had access only to single-item measures of each, economic conservatism, social conservatism, and general conservatism were entered directly as observed variables. In the structural model, economic and social conservatism were regressed on need for closure, while general conservatism was regressed on economic conservatism, social conservatism, and the need for closure. The disturbances for economic and social conservatism were also allowed to covary. Estimates from this model are displayed in Figure 3; factor loadings are not shown. The fit of the model was good, $\chi^2(6) = 16.22$, $p = .01$, $\chi^2/df =$

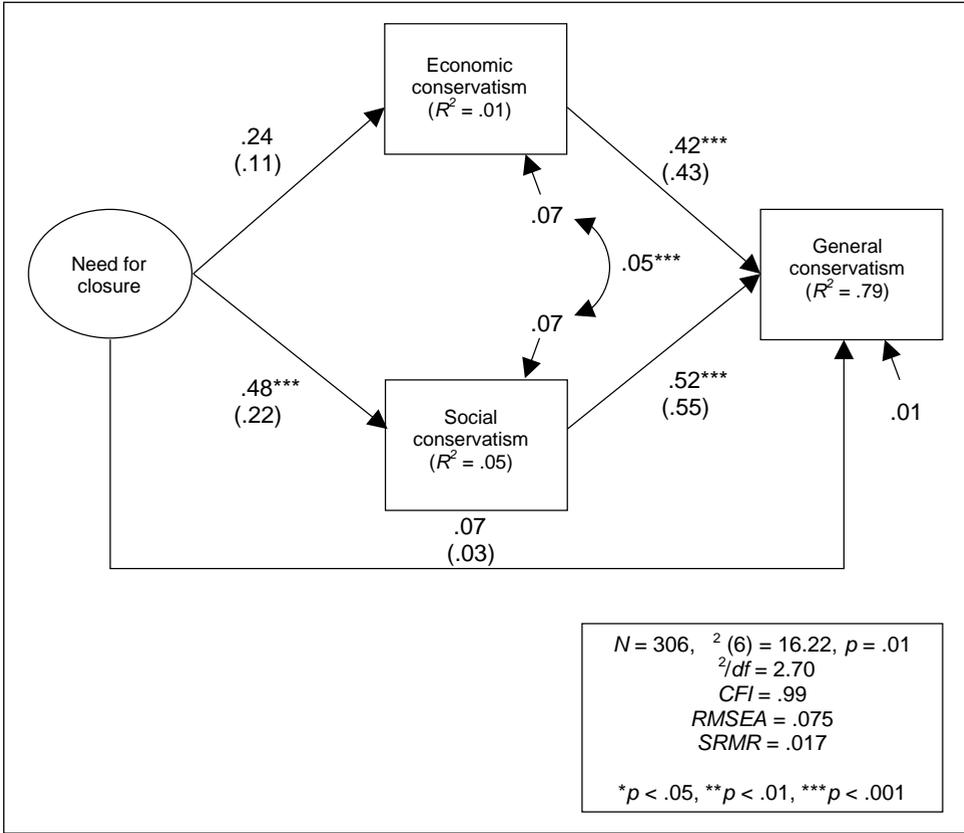


Figure 3. Final latent-variable model for economic and social conservatism as mediators of the relationship between need for closure and general conservatism, Study 3. Unstandardized estimates are shown, with standardized estimates for structural coefficients in parentheses; tests on parameter estimates are based on robust standard errors. Factor loadings for latent variables are not shown.

2.70, CFI = .99, RMSEA = .075, SRMR = .017. In the measurement model for need for closure, all unconstrained loadings had standardized values in excess of .70 and were significant at the $p < .001$ level.

Turning to the structural model, both social and economic conservatism predicted greater general conservative identification ($ps < .001$), though the effects of social conservatism were slightly stronger (i.e., $\beta = .52$ vs. $\beta = .42$). Moreover, net of economic and social conservatism, need for closure had no significant direct effect on general conservatism ($\gamma = .07$, $p > .20$). The other estimates replicate the results of Studies 1 and 2. These effects were somewhat

weaker than in Studies 1 and 2, given the greater error of prediction added by the use of observed rather than latent endogenous variables. Nevertheless, consistent with our first hypothesis, the direct effect of the need for closure on social conservatism was strong and significant ($\gamma = .48$, $p < .001$; standardized $\gamma = .22$), but its direct effect on economic conservatism was weaker and nonsignificant ($\gamma = .24$, $p > .10$; standardized $\gamma = .11$). Confirming this result, constraining the direct effects of the need for closure on economic and social conservatism to equality significantly reduced the model's fit, $\Delta\chi^2(1) = 4.20$, $p < .05$.

Consistent with our second hypothesis, the indirect effect of the need for closure on general conservative identification was also stronger via social conservatism than economic conservatism. While the indirect effect of the need for closure via economics was not statistically different from zero ($IE = .10$, $z = 1.45$, $p > .10$; standardized $IE = .05$), its indirect effect via social conservatism was stronger and significant ($IE = .25$, $z = 3.09$, $p < .01$; standardized $IE = .12$). A test on the difference between these two indirect effects was conducted using the same method employed in the first two studies.¹¹ This indicated that the difference between the indirect effects via each value was 0.15, with a 95% confidence interval ranging from 0.02 to 0.29. As such, we can conclude that the indirect effect of the need for closure is stronger via social conservatism than economic conservatism.

Thus, with its disaggregation of economic and social conservatism, Study 3 furnishes additional convergent evidence for our hypotheses. As predicted, the need for closure predicted conservatism more strongly in the social than the economic domain, and social conservatism more strongly mediated the relationship between need for closure and general conservative identification.

General Discussion

In recent years, studies have found the *need for cognitive closure* to be a robust predictor of conservatism (Jost et al., 2009; Jost et al., 2003). Nevertheless, not much is known about the processes that mediate this relationship. Importantly, bidimensional models of values, attitudes, and beliefs suggest that two motivational pathways contribute to conservatism: a process rooted in competitive social ranking that leads to conservatism via opposition to equality; and a process rooted in concern for order that leads to conservatism via support for tradition and convention. Our argument is that the epistemic motive inherent in the need for closure is functionally closer to the social motives associated with the tradition pathway. As such, we hypothesized (a) that the need for closure would have stronger

relationships with tradition-linked constructs than with equality-linked constructs; and (b) that tradition-linked constructs would be better mediators of the relationship between the need for closure and conservatism than equality-linked constructs. In three studies, we found a consistent pattern of support for these hypotheses and our broader argument about how need for closure relates to conservative identification.

In turn, our findings provide a more detailed picture of how epistemic motivation relates to support for system-justifying ideological positions. Above all, they imply that while there may be multiple paths to conservatism, the need for closure does not work equally through all of them. In all studies, measures of support for tradition and orientation toward equality alike are positively related to conservative identification. However, only the tradition-linked constructs seem to align with epistemic needs and serve as a conduit for the relationship between the need for closure and conservatism. While antiegalitarianism is clearly a basis of conservatism, it does not appear to be one through which needs for closure has ideological consequences. Nevertheless, equality-linked constructs may align with other motives thought to govern conservatism. For example, certain facets of dispositional agreeableness—namely, ones linked to compassion as opposed to politeness—relate to opposition to equality (Hirsh, DeYoung, Xu, & Peterson, 2010; Sibley & Duckitt, 2008). Similarly, variables related to threat—as opposed to uncertainty—may link up more closely with the equality dimension (Jost et al., 2007).

Our results also point toward several future avenues of research. First, our analyses are correlational and cross-sectional, limiting causal inferences about the relationships among the variables we consider. In general, epistemic variables like the need for closure are commonly assumed to be prior to variables with greater sociopolitical content, such as SDO, RWA, core values, and general conservative identification (Jost et al., 2003; see also Duckitt & Sibley, 2009). Future studies will need to examine this assumption using alternative designs, most likely longitudinal ones.

Second, it is worth noting that slightly different patterns of mediation contributed to the results in each of our three studies. Specifically, in Studies 2 and 3, the tendency for tradition-linked constructs to be stronger mediators was almost entirely a function of the fact that need for closure is a stronger predictor of tradition-linked constructs. In contrast, in Study 1, the asymmetry in indirect effects was also driven by a more pronounced difference in the extent to which tradition- and equality-linked concerns—specifically, RWA and SDO—predict conservatism. Thus, while differences in the relationships between need for closure and various mediators appear to universally contribute to the asymmetric indirect effects we find here, variation in the degree to which tradition- and equality-linked constructs relate to conservatism may also play a role in some circumstances. Future work will need to more closely examine why this is more the case with respect to RWA and SDO versus other operationalizations of the tradition and equality dimensions.

Third, with other recent findings, our framework suggests a wider range of possibilities about how the need for closure might relate to various aspects of conservative identification. For example, latent-class analyses indicate that while some individuals conceptualize ideological self-placement in terms of both the economic policy and social policy facets of ideology, other groups of individuals rely solely on one or the other of these policy dimensions (Feldman & Johnston, 2013; Weber & Federico, 2013). Given that the traditionalism dimension highlighted by bidimensional models relates primarily to social policy attitudes (see Duckitt & Sibley, 2009), we might expect the need-for-closure/tradition pathway evident in our data to be less relevant among individuals who define their left/right identity solely in terms of economic concerns. As such, future analyses will need to look at whether our pattern of results differs across groups for whom conservative identification has varying meanings.

Fourth, future research should further examine the potential epistemic significance of opposition to equality. In this respect, we would

caution against the conclusion that opposition to equality can *never* satisfy the need for closure. Rather, we would predict that in certain contexts *both* traditionalism and opposition to equality may align with the need for closure. One such context might be provided by situations in which the individuals under study—or the groups they identify with—are in positions of power. For individuals with power, the motives associated with opposition to equality may also provide certainty by protecting existing advantages (Federico, Hunt, & Fisher, 2013). Thus, a logical next step will be to look for differences in the direct and indirect effects of epistemic motivation across individuals and groups differing in social power.

Another type of context in which both pathways may line up with the need for closure would be one in which opposition to equality is overwhelmingly normative—in other words, where the “tradition” is to endorse inequality. In these cases, opposition to equality would itself satisfy the social motive to preserve accepted, traditional forms of order. Indeed, this alignment was present in the early modern West, when the terms “left” and “right” developed their contemporary political meaning and the pursuit of equality clearly implied a rejection of traditional conceptions of social order (see Jost et al., 2009; Jost et al., 2003; Lipset & Rokkan, 1967). In a context such as this, epistemic motivation would have presumably related to both tradition and equality. However, as notions of social and political equality have become conventional and central to the self-image of Western societies, opposition to equality has become less capable of providing epistemic closure. In the present era, one may need to compare individuals from societies differing in their levels of individualism/collectivism and power distance to detect a different pattern. For example, the need for closure may relate to both support for tradition and opposition to equality in contexts where the individual is more strongly defined in terms of social ties and roles in a broader social hierarchy (Hofstede, 1980; Schwartz, 2004). Future work will need to examine this possibility.

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Notes

1. We are not proposing that the need for closure and support for tradition are identical constructs—on the contrary, we are suggesting that the *general* need to perceive an orderly and stable social reality may be more strongly associated with *specific* ideological orientations with contents that best tap these themes (Federico & Goren, 2009; Jost et al., 2007).
2. To ensure the robustness of our results, we also ran the analyses from all three studies using averaged composites for all variables. Bootstrap-based resampling techniques were then used to conduct multiple-mediator analyses (Preacher & Hayes, 2008). These analyses produced indirect-effect results substantively identical to the ones reported here; they are available upon request.
3. The covariances were between the first and third SDO item parcels and between the second and third SDO item parcels and the economic-conservatism item. These last two covariances are consistent with the finding that SDO is a strong influence on attitudes toward economic equality, apart from its influence on general conservatism (Duckitt & Sibley, 2009).
4. We follow the notational convention of using γ to refer to direct effects of exogenous variables on endogenous variables and β to refer to direct effects of endogenous variables on other endogenous variables (Mueller, 1996).
5. When general conservatism was regressed on need for closure alone in a separate model run, the need for closure had a strong, positive relationship with conservatism ($\gamma = .41, p < .001$). This confirms the usual finding about the relationship between these two variables (e.g., Jost et al. 2003) and suggests that the unusual negative relationship between these two variables in the full model was due to a suppression effect (Cohen, Cohen, West, & Aiken, 2003).
6. Specifically, the parameter was set equal to $(p1 * p2 - p3 * p4)$, where $p1$ = direct effect of need for closure on RWA, $p2$ = direct effect of RWA on conservatism, $p3$ = direct effect of need for closure on SDO, and $p4$ = direct effect of SDO on conservatism.
7. SDO appears to have two factors: *opposition to equality*, which relates to a system-justifying support for inequality; and *group-based dominance*, which reflects social identity motives that are not always antiegalitarian or conservative in their implications (especially among members of low-power groups; see Jost & Thompson, 2000; Kugler, Cooper, & Nosek, 2010). If so, then the inclusion of the group-based dominance items from the SDO scale may be diluting potential indirect effects of the need for closure via SDO. To check on this possibility, we reran the analysis reported in Figure 1 using only the eight opposition to equality items to construct item parcels for SDO. This model produced results substantively identical to those reported here.
8. In the 2006 CPS, the response rate was 11.6%. Although low by historical standards, this rate is similar to those reported for other recent surveys (Pew Research Center for the People and the Press, 2004). All response rates are American Association for Public Opinion Research (AAPOR) standard definition Response Rate 1 (RR1).
9. While the overall reliability of this need for closure scale is low relative to conventional standards—due largely to the small number of items employed—the latent-variable component of the structural equation models reported in the following lines correct for the estimation bias introduced by measurement error.
10. The constraint parameter was set equal to $(p1 * p2 - p3 * p4)$, where $p1$ = direct effect of need for closure on traditionalism, $p2$ = direct effect of traditionalism on conservatism, $p3$ = direct effect of need for closure on antiegalitarianism, and $p4$ = direct effect of antiegalitarianism on conservatism.
11. The constraint parameter was set equal to $(p1 * p2 - p3 * p4)$, where $p1$ = direct effect of need for

closure on social conservatism, $p2$ = direct effect of social conservatism on general conservatism, $p3$ = direct effect of need for closure on economic conservatism, and $p4$ = direct effect of economic conservatism on general conservatism.

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