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*A Hierarchical Model of Attitude Constraint**

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A central question to students of mass behavior is the degree to which citizens are capable of abstract ideological thought. This question has been structured, for the past two decades, by the debate between Converse, who found very little evidence of constrained belief systems, and revisionists, who criticize his measures and assumption of unidimensionality. Yet very little attention has been paid to Converse's operationalization of constraint, which estimates consistency between specific issues, rather than, as his conceptualization requires, consistency between abstract principles and concrete issue positions. The authors use a multiple indicator LISREL model to estimate a hierarchical model of constraint and find that individuals' concrete policy attitudes are, in fact, constrained by their abstract beliefs.

There is no question that the topic of ideological constraint is, and has long been, central to the political behavior subfield. Surveys of electoral behavior literature (e.g., Asher, 1984; Kinder, 1983; Niemi and Weisberg, 1984) inevitably include major treatments of the constraint research. Further, the importance of this topic is certainly warranted, for it has profound implications both at the macro level, where it speaks to the positive and normative dimensions of democratic theory, and at the micro level, where it addresses questions of mass sophistication and the extent to which individuals can make rational and consistent choices.

For almost two decades, the central figure in the constraint debate has been Philip E. Converse, whose "The Nature of Belief Systems in Mass Publics" (1964) defined, conceptualized, and estimated the properties of mass ideology. His treatment of the subject—rich, theoretical, and persuasive—quickly became the cornerstone of the ideology literature. In the piece, he defined a belief system (ideology) as a "configuration of ideas and attitudes in which the elements are bound together by some form of constraint or functional interdependence" (p. 207). This definition, as we will see, has become the standard and accepted one, employed by most who discuss ideologies.

Central to a belief system, then, is the criterion of constraint, which Converse considered a necessary element of any ideology. In a sense, constraint implies a consistency between component idea elements in an

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ideology. Yet, Converse was clear in his contention that constraint involves more than mere "issue constraint," or a consistency between *concrete* issue positions (e.g., a correspondence between support for affirmative action programs and support for job training programs). Perhaps more importantly, constraint also connotes "ideological constraint," or a correspondence between these concrete views and more *abstract* or fundamental beliefs. Thus, he defined constraint as that which results when specific attitudes and beliefs are derived from

> some superordinate value or posture toward man and society, involving premises about the nature of social justice, social chance, "natural law," and the like. Thus a few crowning postures—like premises about survival of the fittest in the spirit of social Darwinism—served as a sort of glue to bind together many more specific attitudes and beliefs, and these postures are of prime centrality in the belief system as a whole. (Converse, 1964, p. 211)

When one can successfully predict an individual's specific attitudes from a knowledge of the individual's superordinate or abstract attitudes (or vice versa), it may be said that the individual exhibits a pattern of constraint.

Based on averaged tau-gamma (correlation) coefficients which estimate the consistency of attitudes toward *specific* policy statements, Converse found little consistency between issue areas. The correlations were sufficiently low, both in an absolute sense and relative to those of an elite sample, to lead Converse to the conclusion that the data demonstrate "remarkably low levels of cohesion or internal integration among the mass public" (Converse, 1975, p. 84). Even more damaging evidence came from an analysis of Converse's panel study data, which indicated that not only did respondents exhibit little consistency between issue items, but, further, they exhibited remarkably little stability in their answers to the *same* questions over time, which led Converse to label such "random" survey responses "nonattitudes."

This conclusion, together with the methodology employed to derive it, quickly became the conventional wisdom in the electoral behavior literature. The 1964 article and its predating works[1] established a paradigm which has been extraordinarily influential in the field. Importantly, while Converse's original findings of ideological bankruptcy have come under sharp attack over the past decade, scholars have accepted his definition of belief systems, his use of the correlation coefficient between specific attitudes as the appropriate measure of constraint, and his findings as a baseline against which to assess changes in belief systems over the years.

Nowhere is this wholesale acceptance of Converse's conceptualization and methodology more apparent than in the research of Nie and Andersen (1974), who argued that because the correlations between issue positions increased for much of the mass public in the middle 1960s (relative to Converse's findings during the 1950s), the electorate has become more

[1] See, for instance, Campbell, Gurin, and Miller (1954) and Campbell et al. (1960).

constrained in its belief system over the years. This finding provoked a response from researchers (Sullivan, Piereson, and Marcus, 1978; Bishop, Tuchfarber, and Oldendick, 1978) who presented findings indicating that this increase in constraint levels was artifactual and due to the new question wordings and formats employed by Nie and Andersen. What is important about this debate, for our purposes, is that it has focused on the alleged changes in the correlation between specific issue attitudes over time; it has *not disputed the use of this correlation as an operationalization of constraint*. In short, the basic arguments of Converse have been accepted by a generation of scholars as a "normal science" which sets the research agenda, the parameters of debate, the standard assumptions, and the appropriate methodologies for students of electoral behavior.

This almost unconditional acceptance of his conceptualization and methodology is somewhat surprising, for, by Converse's (1964) admission, ideologies are extraordinarily difficult to study:

> Belief systems have never surrendered easily to empirical study or quantification. Indeed, they have often served as primary exhibits for the doctrine that what is important to study cannot be measured and that what can be measured is not important to study. (P. 206)

Despite the acknowledged difficulties inherent to the study, scholars like Nie and Andersen have used precisely the same techniques to investigate changes in constraint through the years.

In the past decade, however, scholars have begun to take a more critical look at the conventional wisdom, underscoring both its methodological and conceptual flaws. These revisions provide a number of diverse explanations for the unflattering picture of the electorate which Converse presented.

Several, for instance, have argued that Converse's inability to find evidence of ideological constraint may be due to his use of a correlation coefficient—a statistic which can measure response consistency only on a single—liberal to conservative—dimension. Luttbeg (1968), Miller and Levitan (1976), and Weisberg and Rusk (1970), among others, have suggested that sophisticated ideologies are often multidimensional.[2] Luttbeg, for instance, subjected Converse's correlation matrix to a factor analysis. While an absence of ideology would produce a solution with many factors capable of explaining only a small proportion of the variance, Luttbeg found the opposite (i.e., several factors explaining a great deal of variance), thereby suggesting the prevalence of multidimensional ideologies.[3] One of the implications

[2] Conover and Feldman (1981) even argued that ideologies are *nondimensional*, not simply multidimensional.

[3] A different, but related, argument holds that, whether ideologies are unidimensional or multidimensional, they cannot be measured validly with techniques that aggregate and obscure individual patterns of ideological structure, such as correlation coefficients. Lane (1962), Marcus, Tabb, and Sullivan (1974), and others have demonstrated the existence and viability of

of this research, of course, is that correlation analysis, which is insensitive to ideological structures more complex than liberalism-conservatism, is inappropriate as an analytical or measurement tool, at least as conventionally employed.

Another revisionist criticism of the "Michigan perspective" has been leveled by Achen (1975), Erikson (1979), and others[4] who have questioned the reliability of the instruments used by Converse and his colleagues to estimate levels of constraint. Achen, for instance, reacted to Converse's panel study by attributing the alleged randomness of responses to the large amount of random measurement error in the survey items. The low intra-item correlations between panel waves, Achen argued, had been attenuated by the poor reliability of the questions employed. And, when Achen corrected for attenuation, he demonstrated that over-time correlations increase substantially, at times approaching 1.0. Further, he argued that measurement error also attenuates the correlations between issue items at the same point in time. In short, question measurement error depresses both over-time and inter-item consistency, a finding replicated, in large part, by Erikson using a different measurement model.

A Different Approach

The vitality of the SRC-revisionist debate attests to the richness of Converse's original work, as well as to the importance of the subject. The revisionist work over the past two decades has contributed greatly to our awareness of some of the more troublesome aspects of Converse's design, especially the problems associated with measurement error and with the structure of ideological dimension(s). Yet, while these revisionist criticisms are cogent, they do not address the basic problems underlying Converse's procedure for operationalizing ideology. Specifically, of particular concern to us is the inability of Converse to design estimation procedures appropriate to his conceptualization of constraint. Central to his definition of constraint is a requirement that individuals be capable of forming linkages between abstract "crowning postures" and specific attitudes and beliefs. Yet, Converse's estimate is derived from correlations between *specific* attitudes, thereby failing to capture the important relationships which span the various levels of abstraction.

For the most part, revisionist studies have not dealt with this inability to

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these personal belief systems. While acknowledging the contribution of these studies, we have decided to investigate the aggregate pattern of constraint which is shared by individuals. A study of common ideological structures allows us to speak more directly to the questions of shared ideologies and mass-elite communication, questions which motivated Converse's original study.

[4] See, for example, Asher (1974) and Hagner and McIver (1980).

measure inter-level ideology (i.e., ideological constraint).[5] Rather, they tend to address narrower problems with the SRC work. Revisionists who analyze measurement error (e.g., Achen, 1975) or study changes in constraint over time (e.g., Nie and Andersen, 1974), for example, tend to focus on the bivariate correlations between attitudes on specific issues. One problem with this traditional operationalization is that it shifts the focus away from Converse's original emphasis on abstract attitudes as the organizing principles in mass belief systems. It perpetuates, in other words, the SRC tradition of measuring constraint only at the specific level. By following Converse's operationalization, such researchers have focused more narrowly on "issue constraint," or the relationship between pairs of specific issues. Under this narrower formulation, we cannot really speak of an issue being constrained by an ideology unless we adhere to the assumption that a single, simple ideological dimension constrains attitudes on all specific issues.

On the other hand, analysts using data reduction techniques (e.g., Luttbeg, 1968; Weisberg and Rusk, 1970) have tried to overcome these problems associated with the traditional operationalization. By employing factor analysis or multidimensional scaling procedures, they seek to isolate some underlying factors or dimensions that are assumed to account for the correlations between concrete political attitudes. In one sense, this procedure is closer to Converse's original conceptualization of ideological constraint. The resulting factorial structure consists of a few superordinate constructs which are related to several concrete attitudes.

Nevertheless, the problems associated with this methodology are just as serious as those encountered using the traditional approach. Researchers use as their input data a matrix of correlations between measures of concrete political attitudes which are not corrected for measurement error. More important, these researchers rely exclusively on measures of political attitudes at the same level of abstraction. The factorial structure that emerges is only *inferred* from the concrete measures, and is often more dependent on the technique and on the particular variables included in the analysis than on theoretical considerations.

We propose to solve many of the major problems of past research by measuring attitudes at different levels of abstraction in order to estimate directly the links between general and specific idea-elements. The belief

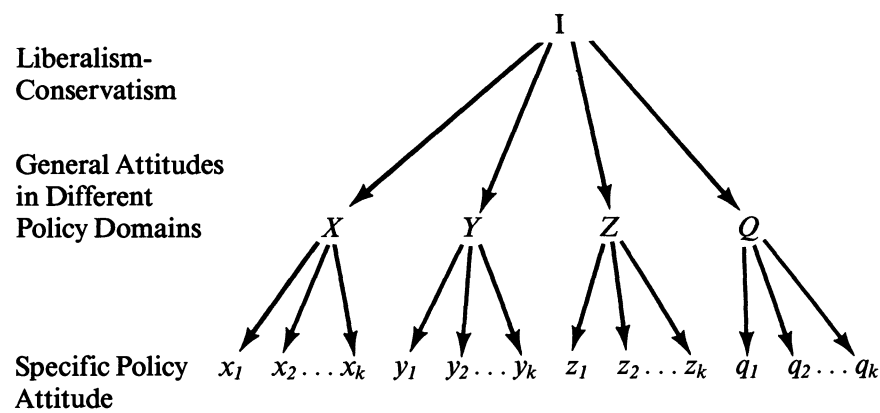
[5] Some studies have investigated the hierarchical structure of ideologies, and with positive results. Lane (1962), for instance, intensively interviewed 15 working-class males and found all to have *some* hierarchical integration to their attitudes. Conover and Feldman (1984) employed a *Q* sort methodology on 59 subjects to uncover evidence for a schematic model of political organization. Such findings, obtained from diverse and innovative methods, encourage us to investigate hierarchical constraint using more conventional survey techniques applicable to large samples.

structure we have in mind resembles the "hierarchical" model of ideological constraint depicted in Figure 1. This pyramidal structure is organized with more abstract attitudes at the top of the belief system and more specific attitudes subsumed under the general ones. The most central elements in the figure are abstract beliefs about the appropriate role of government in different policy domains (X, Y, Z, and Q). These beliefs are assumed to constrain more specific preferences for concrete government actions in more defined areas of public policy (x's, y's, z's, and q's). Finally, the more general attitudes are assumed to be partially—but not totally—a function of liberalism-conservatism (I) at the apex of the hierarchy.

In keeping with Converse's conceptualization of constraint, we assume that causation flows from the abstract to the specific, so that when an individual is faced with the question of what government should do in a given instance, his or her preference will be based, in part, on more general

FIGURE 1

Hierarchical Model of Constraint



I=position on liberalism-conservatism dimension
X=general attitude in race domain
Y=general attitude in economic domain
Z=general attitude in foreign policy domain
Q=general attitude in social-moral domain
x_1 to x_k=specific attitudes in civil rights policy
y_1 to y_k=specific attitudes in economic policy
z_1 toz_k=specific attitudes in foreign policy
q_1 toq_k=specific attitudes in social-moral policy

principles. This model thus assumes a degree of deductive political reasoning, from abstract beliefs to more specific political preferences.

At the same time, such deductive processes are not *central* to our argument. Our intention is to estimate constraint or consistency between abstractions and specific applications. Such consistency is demonstrated by significant correlations between different levels of our model in Figure 1. Thus, while we agree with Converse that such constraint is *likely* to be deductive, a finding that correlations are due to *inductive* processes would not negate any demonstration that belief systems are constrained.

Further, it should be pointed out that the figure is not intended to represent a developmental model. We make no assumptions about whether abstract beliefs are acquired first, from socialization, or whether concrete attitudes are acquired first, from experience. Our argument is that, at a particular point in time, individuals tend to use general principles to derive specific attitudes.

Measuring constraint according to the hierarchical model should enable us to surmount many of the problems that have plagued previous research. First, and most important, we will directly estimate ideological constraint as a relationship between political attitudes at different levels of abstraction, thus bringing the study of mass belief systems back to Converse's original conceptualization. Second, elements in the hierarchy have been measured with multiple indicators, allowing us to correct estimates of constraint for attentuation due to measurement error. Third, the hierarchical model is consistent with the revisionist argument in that it does not assume that political attitudes are totally a function of a single (liberal-conservative) dimension. Rather, general attitudes in different domains are assumed to be only partially constrained by liberalism-conservatism in our model.

Sampling and Measurement

In order to test this new model of ideological constraint, we conducted a survey of adults living in Minneapolis and St. Paul, Minnesota, during the fall and winter of 1981–82. An independent random sample ($N = 331$) was selected from the Minneapolis and St. Paul city directories, which list all households in the Twin Cities. To ensure that respondents as well as households were selected randomly, interviewers were instructed to interview the person in the household whose birthday fell closest to the current date. If the designated individual was unwilling to participate, interviewers followed specific guidelines to another household from the same block.

Approximately 25 student interviewers were recruited and trained by the authors at the University of Minnesota. Each conducted several practice interviews before going into the field, and the process on interviewing was

closely supervised. Overall, our sample appears to be fairly representative of the Twin Cities population, despite a slight oversampling of males and highly educated respondents.[6]

To estimate constraint following the hierarchical model, it is necessary to measure political attitudes at different levels of abstraction. To assess ideological predisposition, at the apex of the pyramid, we used the standard SRC measure of liberal-conservative self-placement.[7]

At the intermediate level, abstract beliefs about the proper role of government were assessed in four policy domains found to be distinct in previous research: economic, foreign policy, social-moral, and racial spheres (Knoke, 1979; Weisberg and Rusk, 1970; and Miller and Levitan, 1976). Because general political beliefs have largely been ignored in SRC election studies, it was necessary to design several new questions (see Appendix) to measure the beliefs. Questions at this level of abstraction were designed to tap attitudes regarding the extent and direction of government involvement in a given policy sphere. For example, in the economic sphere, four different questions were aimed at assessing the extent to which an individual felt that government should be responsible for providing economic assistance to the disadvantaged (items B1 to B4 in the Appendix). Similarly, in the foreign policy domain (items C1 and C2 in the Appendix), respondents were asked what general posture the government should assume in dealing with other countries (whether it should be tough or "tender-

[6] Census figures for the Twin Cities area (1980) demonstrate that our sample is reasonably representative of the population. Seven percent of the Twin Cities residents are black. Our sample included 6 percent black respondents. The median income is $15,000 in the population; the sample median category is $15,000 to $17,500. We did slightly oversample males (53 percent and 46 percent in the sample and population, respectively) and the well-educated (respective sample and population percentages for educational categories: less than high school, 10 and 19; high school, 23 and 38; some college, 30 and 20; and college degree, 37 and 23).

[7] Several recent studies have questioned the use of liberal-conservative self-identification in research on mass belief systems. Levitan and Miller's (1979) analysis, for example, suggested that an individual's ideological location has only the most tenuous issue or policy basis. Moreover, Conover and Feldman (1981) explored the affective and symbolic content of the SRC self-placement scale. We feel that these self-placement measures have both policy *and* affective components. On the one hand, we assume that, like many other policy attitudes, liberalism-conservatism does have an evaluative as well as an affective basis. Indeed, Converse's notion of constraint allows for either an affective or a cognitive linkage between idea-elements. Our use of the self-placement measure, therefore, is not inconsistent with the findings of these authors. On the other hand, we also argue, below, that Levitan and Miller measured only the direct impact of liberalism-conservatism on specific policy attitudes, which may account for the weak relationships between them. Our hierarchical model suggests that global measures of liberalism-conservatism should be more highly correlated with more abstract political attitudes that connote a broader policy meaning about the appropriate role of government in a given domain.

minded"; whether it should push its own view or take the views of other nations into account). Specific actions and particular nations are not mentioned in the questions.

Concrete items (part II of the Appendix), on the other hand, are much less hypothetical and much more specific. They seek to determine one's preference for relatively specific government actions (e.g., defense spending); one's support for more defined areas of public policy (e.g., job training, health care, busing, and so forth); and one's support for programs targeted to more specific groups (e.g., blacks, women, homosexuals, and others).

The format of a majority of the questions is identical. Respondents are presented with a two-sided statement and asked to place their own position on a seven-point scale. Spending questions measured at the specific level (i.e., items marked with an asterisk in the Appendix) asked respondents whether the government is spending "too much," "about the right amount," or "too little" on different problems in the country.

Methods

To estimate the hierarchical model, we used Jöreskog's (1973) method for the analysis of covariance structures (LISREL). The LISREL model has become an especially attractive procedure for estimating multiple-indicator models among survey analysts, and several recent applications have appeared in the political science literature (see Knoke, 1979, Dalton, 1980, and Sullivan, Piereson, and Marcus, 1982, for examples).

In using LISREL, the analyst must specify two sets of equations. First, the observed variables (in this case, political attitude questions) are linked to latent variables (or true attitudes), in a measurement model similar to a factor model found in psychometrics.[8] Second, the causal relationships between these latent variables are specified through a set of simultaneous equations as in a standard path analysis or econometrics model. By analyzing the covariances among all the observed political attitudes, we can simultaneously obtain estimates of, first, the epistemic correlations between true attitudes and their respective indicators and, second, estimates of the relationships between theoretical constructs. The latter coefficients became our estimates of constraint, which are corrected for measurement error.

[8] Our procedure employs a confirmatory approach to estimating measurement models and is, therefore, to be preferred to the exploratory techniques of factor analysis and multidimensional scaling used by some revisionist scholars (Luttbeg, 1968; Weisberg and Rusk, 1970). In exploratory factor analysis, for example, the initial solution is rotated to achieve a "simple" structure, with factors loading principally on some unobserved factors, but not on others. In the exploratory case, the constraints imposed to make the initial solution identifiable and the statistical criteria used to define the rotation procedure are more or less arbitrary (Gorsuch, 1974). By contrast, in the confirmatory approach, the analyst specifies a priori the variables which are not linked to particular constructs.

Findings

Most of the theoretical constructs in the analysis are measured with several empirical indicators.[9] The estimated epistemic correlations between indicators and true attitudes at different levels of abstraction are presented in Table 1. Judging from the healthy size of the coefficients, all of the indicators appear to be fairly reliable measures of the theoretical constructs and play a significant role in defining them.

Our attention can, therefore, be directed to the estimated model of ideological constraint in Figure 2, which presents the relationships between true attitudes at different levels of abstraction.[10] The overall fit of the model to the data is quite good.[11] The χ^2 goodness-of-fit statistic is 756.6. The χ^2 to degrees of freedom ratio is 2.61.[12] When constraint is measured as the relationship between general and specific idea-elements in a belief system, the level of attitudinal consistency is much higher than previous studies

[9] General racial attitudes and social-moral attitudes, as well as liberalism-conservatism were measured with a single indicator. In the LISREL analysis, therefore, the epistemic correlations between these measures and their respective constructs were constrained to equal 1.0, which is equivalent to assuming that these constructs were measured without error. Originally, we had also included the following items in the questionnaire to tap general racial and social-moral attitudes. Racial: "Some people believe that members of different races and nationalities have different characteristics because they were born that way. Others believe that races and nationalities have different characteristics because of differences in experience and in how they live their lives. What about your opinion? Do you think that races and nationalities differ because they were born that way, or because they have different experiences?" Social-moral: "Some people think that if most humans are left alone, they will be good citizens. Others think that most humans need a firm hand and should be told what to do to be good citizens. What about your opinion? Do you think that most citizens should be left alone, or that they need a firm hand?" These items proved to be poor indicators of the theoretical constructs they were designed to measure. We suspect that their level of abstraction was too high. Neither question specifically asks what the role of government should be in these areas. In the racial domain, future investigations might include items used by Carmines and Stimson (1980) regarding segregation and general racial attitudes.

[10] Our use of LISREL, a confirmatory factor model, allows us to impose substantively meaningful constraints in the structural model as well as the measurement model. Consistent with the hierarchical model in Figure 1, linkages between liberalism-conservatism and specific attitudes are constrained to equal 0. The same can be said for linkages between general and specific attitudes *across* policy domains, which, with the exception of economic and racial domains, are assumed to be independent. The goodness-of-fit statistics, reported below, determine whether the sample data are in fact consistent with the imposed constraints.

[11] The goodness-of-fit statistic is based upon the "fit" of the measurement model in Table 1 as well as the structural model in Figure 2.

[12] Because the value of χ^2 for LISREL models estimated for large samples typically increases to the point where virtually all models are rejected at conventional probability levels, Wheaton et al. (1977) suggested a relative chi-square (χ^2/df) with a ratio of about 5 or less as "beginning to be reasonable." As is usually the case in analyzing covariance structures, it is possible to continue making minor improvements in the fit of the model to the data by

TABLE 1

Epistemic Correlations between Indicators and Factors in Hierarchical Model of Constraint

Theoretical Construct	Indicator	Epistemic Correlations	Construct R^2
Liberalism-conservatism	Liberal-conservative self-placement	1.00[a]	
General racial attitudes	Minority aid	1.00[a]	.09
General economic attitudes	Help poor	.60	.32
	People don't want to work	.54	
	Expect from government	.64	
	Government services	.72	
General foreign policy attitudes	International empathy	.47	.49
	International flexibility	.56	
General social-moral attitudes	Government influences morals	1.00[a]	.01
Specific racial policy attitudes	Busing	.59	.71
	Affirmative action	.61	
	Spend, blacks	.67	
Specific welfare policy attitudes	Disadvantaged need assistance	.61	.95
	Spend, welfare	.63	
	Spend, job training	.37	
Health policy attitudes	Medical insurance	.72	.60
	Spend, health	.51	
Urban policy attitudes	Spend, urban problems	.54	.17
	Spend, crime rate	.56	
	Spend, drug addiction	.61	
Foreign policy attitudes	Defense spending	.85	.59
	Spend, military arms	.74	
	Relations with Russia	.38	
Social-moral policy attitudes	Women's role	.54	.19
	Abortion	.72	
	Homosexuality	.73	

NOTE: Coefficients are standardized, estimated by full-information maximum likelihood. Estimates were computed from LISREL IV.

[a]Epistemic correlations of single-indicator constructs were fixed at 1.00.

suggest. All of the coefficients, except one, are both statistically significant (beyond the .001 probability level) and generally quite healthy in magnitude. In sum, the data are quite consistent with the hierarchical model: specific policy positions are constrained by more general beliefs concerning the government's role in particular policy domains. And these abstract beliefs are constrained, in part, by a more global liberal-conservative ideology.

While the primary intention of our study is to assess the *level* of constraint between general and specific elements, the particular configuration displayed in Figure 2 also merits some attention. It is clear, for example, that attitudes concerning social-moral policies and the government's role in that area stand quite apart from the rest of the configuration: they are not a part of the "umbrella" of attitudes formed by liberalism-conservatism and general elements in the other three domains.[13] Nevertheless, specific social-moral attitudes *are* constrained by more abstract judgments in the same policy sphere.

We also find that, consistent with other studies of public opinion, racial and economic attitudes are not entirely independent. For example, attitudes toward specific civil rights policies are influenced not only by general racial attitudes (beta = .64), but by general economic beliefs (beta = .46) as well. The latter link is in keeping with recent studies which suggest that whites' opposition to busing and affirmative action programs often stems from a belief that these policies constitute economic assistance to blacks (Kinder and Sears, 1981; Feldman, 1983). Similarly, the connection between general racial attitudes and specific positions on welfare policies is consistent with the often-noted tendency for attitudes toward public welfare to be closely intertwined with racial attitudes (Dawson, 1973), due, in part, to the common perception that many of the recipients of these programs are blacks (Sennett and Cobb, 1972).

The model in Figure 2 is also quite useful for illustrating some of the fallacies of prior research of mass belief systems. We can, for example,

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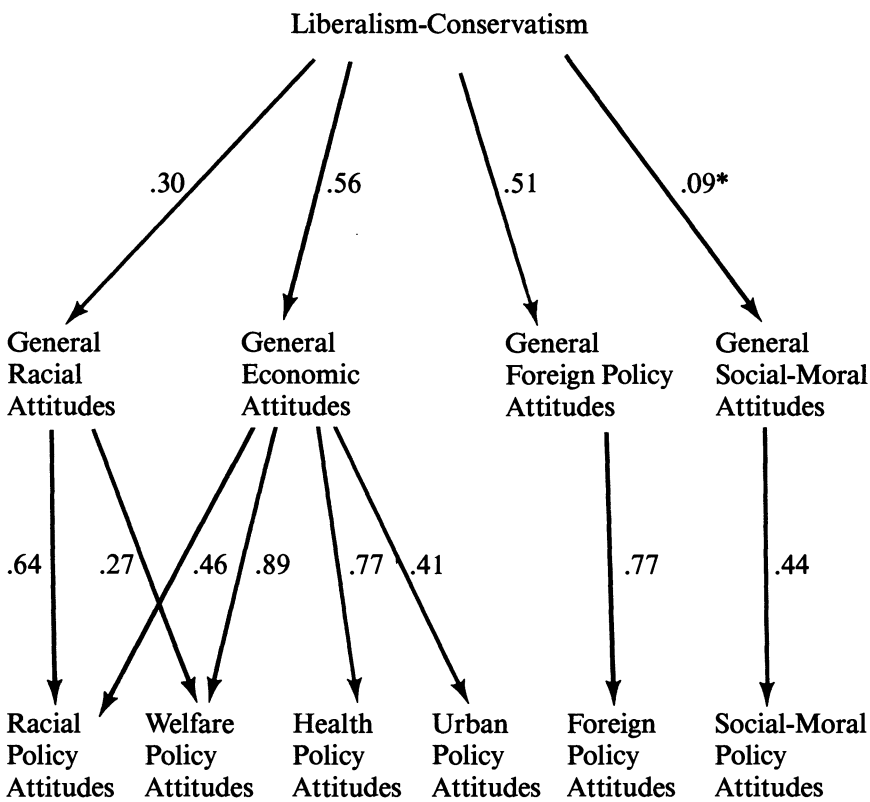
experimenting with alternative specifications in either the measurement or structural models. We have resisted this temptation because we see little benefit to be gained in increasing the complexity of our parsimonious model. Its overall goodness-of-fit is already quite respectable, which suggests that any improvements guided by the residual matrix of the LISREL program (i.e., deviations between the observed correlation matrix and the correlations produced by the LISREL model) would be trivial ones (see Bentler and Bonett's [1980] discussion on assessing the goodness-of-fit of covariance structures).

[13] Our finding that general attitudes on race, foreign policy, and economic domains are constrained by liberalism-conservatism should not be interpreted to mean that, consistent with Converse's operationalization, these attitudes line up along a single left–right dimension. A substantial proportion of the variance of these true general attitudes remains unexplained by liberalism-conservatism. The estimates of the ψ (psi) coefficients of the LISREL model indicating the errors in equations predicting general attitudes from liberalism-conservatism range from .51 (foreign policy) to .56 (economics) to .91 (race). Thus, the general policy domains can be said to be substantially independent of each other and liberalism-conservatism, as revisionist authors have contended.

FIGURE 2

Structural Model of Hierarchical Constraint



NOTE: Coefficients are standardized betas estimated by full-information maximum likelihood. Estimates were computed with LISREL IV.

*Non-significant at .05 level.

Chi-square = 756.6, df = 290; chi-square /df = 2.61.

demonstrate that the traditional method of measuring constraint as a relationship between pairs of specific attitudes will typically underestimate the true level of constraint in a given population. The coefficients in our model may be interpreted as path coefficients which give the direct impact of general attitudes on more specific ones. Wright (1934) showed that the zero-order correlations between different variables can be computed by multiplying the coefficients of all the paths that connect those variables. In our model, specific attitudes in different policy areas are related only

through their common dependence on more abstract idea-elements. This means that to reach one specific (true) attitude from another, it is necessary to travel through one or more general beliefs. Because the zero-order correlation between issue pairs is the product of several path coefficients smaller than 1.0, measures of constraint under the traditional operationalization will tend to be fairly small. Further, as the number of connecting paths between specific attitudes in independent domains increase, the corresponding zero-order correlations can be expected to diminish, as say, between foreign policy attitudes and social attitudes, which are related only through liberalism-conservatism. To summarize, it should be clear that even if levels of constraint, as measured here, are high, the correlations between specific attitudes can be expected to be much lower.

A similar logic leads us to question the findings of several recent studies which suggest that global measures of liberalism-conservatism have only the most tenuous connection to policy preferences. After finding small correlations between ideological location and policy preferences, for example, Levitan and Miller (1979) were prompted to search for other, non-issue-based meanings of liberalism-conservatism (see also Conover and Feldman, 1981, who explored the affective content of liberalism-conservatism). Our results suggest that the connection between such global measures and specific issue concerns is low because the relationship is an indirect one, mediated by attitudes at an intermediate level of abstraction, i.e., by general beliefs about the role of government in a given policy domain. Our results also suggest that liberalism-conservatism is defined more clearly by some policy domains than by others.

Conclusions

We have posited a model of constraint that is more faithful to Converse's original argument and found, using such a hierarchical model, strong evidence that individuals are, in fact, highly consistent. As a rule, specific policy attitudes are constrained by more abstract beliefs regarding the role of government in such policy areas. And these abstractions are, in part, constrained by one's self-placement along the liberal-conservative continuum.

It is important to note that our intention has not been to test a fully specified *theory* of mass belief systems. We make no claims to have included in our model all possible antecedents of specific or general political attitudes. Rather, our purpose has been to correct a shortcoming in much prior research on constraint by first *measuring* general attitudes and then estimating the linkages between these and specific policy positions. We see our research as demonstrating the general utility of a hierarchical approach to the study of belief systems.

Our hierarchical model, in addition to being more faithful to the original conceptualization of constraint, allows us to address many of the objections raised over the past two decades by revisionist scholars. Using a multiple-indicator approach, for instance, allows us to correct for attenuation due to the unreliability of the measures. Further, because we do not assume ideological unidimensionality, we allow for belief systems of greater complexity. Yet, our focus has been on *shared* belief systems, whose existence should facilitate mass-elite communication, using a research design which is appropriate for large sample investigation.

Our findings are in line with previous revisionist studies which argue that a new portrait of the mass public is warranted. The tone of Converse's essay was clearly pejorative; there, and in subsequent works, he described an electorate lacking in ideological capabilities. But we find evidence contrary to this claim. Our respondents demonstrated an integrated belief system which should permit them to link abstract principles to specific applications. According to Converse, such an ability is functional in the political world, for it permits an individual to make certain political decisions which are based upon personal convictions. Such persons are able to pursue their principles in the form of specific policy demands made upon political elites. Further, such linkages are economical, for they enable citizens to attach new issues to an existing set of ideological principles and, as a result, to derive a policy position which is based on ideological premises. In sum, given the consistency demonstrated by our respondents, we see a need to attribute a great deal more sophistication to the mass public than has heretofore been attributed.

Implicit in Converse's conclusions is an argument that, if mass-elite communication takes place in this country, it does so only at a very rudimentary level. The electorate is unable to follow elite campaign discourse, especially if the rhetoric rests on ideological principles. Accountability, consequently, is muted. To the extent that elites offer consistent positions based on some underlying ideological theme, the masses will not have the capacity to recognize such themes and will, as a result, be less likely to make sense out of the government's behavior.

It is understandable, given Converse's methodology and operationalization of constraint, how he came to such conclusions. Our results, based on a fundamentally different approach, suggest a less pessimistic view of mass-elite communication is warranted. Although it may be true that most individuals do not exhibit perfect consistency from one concrete issue to the next, it is likely that most members of the mass public *are* capable of deducing logical issue positions from more abstract beliefs. Thus, when parties or candidates talk of the need to treat the disadvantaged more humanely and compassionately and deduce that more lenient welfare poli-

cies are, consequently, preferable, our data show that many individuals are fully capable of understanding the logical argument which is being offered. By the same token, the electorate seems to have the capacity for understanding the connections between, say, civil rights policies and more abstract statements regarding the nature of minorities. In short, our analysis leads us to conclude that masses and elites do share a common ideological structure and that, consequently, the two groups can communicate with one another. As a result, citizens should have the capacity to participate meaningfully in a republican system—a system in which the public is expected to hold political elites accountable.

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APPENDIX

Twin Cities Survey Items

I. *General Political Attitudes*

A. *Racial Domain*
   1. Minority Aid (CPS, 1980 Cross Section Survey, V1062)

B. *Economic Domain*
   1. Help Poor: We often hear that it is important to be charitable and to help those who cannot help themselves. Some people believe that private charities are enough to help the poor and that the government should stay out of the matter. Others believe that citizens will not give enough to private charities to help the poor and that the government should set up programs to help them. What about your opinion? Do you think private charities are enough, or that we need government programs?
   2. Expect from Government: Some people feel that many people depend on the government for too much help these days, that people expect too much from the government. Others feel that many of our problems are too hard to solve ourselves and that we need the government to help us out. What about your opinion? Do you think that we expect too much from the government, or that our problems are so big only government can solve them?
   3. People Don't Want to Work: Now I'd like to ask you a few questions about the causes of unemployment. I'll be reading you a list of things that some people feel have helped cause unemployment. For each thing I read, please tell me how important you feel it has been in causing unemployment. Once again, just tell me whether you think it is an extremely important cause, at point number one; a not very important cause, at point number 7; or some point in between. The first is, "Welfare and unemployment benefits are so high that many people don't want to work." Would you say this is an extremely important, or a not very important cause of unemployment?
   4. Government Services (CPS, 1980 Cross Section Survey V291)

C. *Foreign Policy Domain*
   1. International Empathy: Some people think that in dealing with other nations our government should only promote our own point of view strongly. Others think that the

government should be understanding and try to see other nations' point of view. Do you think our government should promote our own view strongly, or try to see others' views as well?

2. International Flexibility: Some people think that in dealing with other nations our government should be strong and tough. Suppose these people are at one end of this scale—at point number 1. Others think that our government should be understanding and flexible. Suppose these people are at the other end—at point number 7. What about your opinion? Do you think our government should be strong and tough, or understanding and flexible?

D. *Social-Moral Domain*

1. Government Influences Morals: Some people think that many people are being immoral and so our government ought to influence the country's morals more tightly than it now does. Others think that the government should not get involved in questions of morals, that it should be left up to the individuals. What about your opinion? Do you think the government should try to influence morals, or that it should leave morals up to individuals?

II. *Specific Political Attitudes*

Note: An asterisk precedes government spending items.

A. *Racial Policy*

1. Busing: Some people feel that the government in Washington should see to it that white and black children go to the same schools. Others claim that this is not the government's business. Where would you place yourself on this scale?
2. Affirmative Action: Some people say that blacks should be given special consideration when applying for jobs and promotions to make up for past discrimination. Other people say that the individual's ability or experience should be the *only* consideration in hiring or promoting people. Where would you place yourself on this scale?
3. *Spend, Blacks: Are we spending too much, too little, or about the right amount on improving the conditions of blacks?

B. *Economic/Welfare Policy*

1. Disadvantaged Need Assistance: Some people feel that America is the land of opportunity and that we can all live comfortably if we are only willing to work hard. Others feel that hard work isn't enough and that lots of people are disadvantaged and need special assistance. What about your opinion? Do you think hard work is enough, or that lots of people need special assistance?
2. *Spend, Welfare: Are we spending too much, too little, or about the right amount on welfare?
3. *Spend, Job Training: Are we spending too much, too little, or about the right amount of job training?

C. *Economic/Health Policy*

1. Medical Insurance: There is much concern about the rapid rise in medical and hospital costs. Some feel there should be a government insurance plan which would cover all medical and hospital expenses. Others feel that medical expenses should be paid by individuals, and through private insurance like Blue Cross. Where would you place yourself?
2. *Spend, Health: Are we spending too much, too little, or about the right amount on improving and protecting the nation's health?

D. *Economic/Urban Policy*
   1. *Spend, Urban Problems: Are we spending too much, too little, or about the right amount on solving the problems of the big cities?
   2. *Spend, Crime Rate: Are we spending too much, too little, or about the right amount on halting the rising crime rate?
   3. *Spend, Drug Addiction: Are we spending too much, too little, or about the right amount on dealing with drug addiction?

E. *Foreign Policy*
   1. Defense Spending: Some people believe that we should spend much less money for defense. Suppose these people are at one end of the scale at point number 1. Others feel that defense spending should be greatly increased. Suppose these people are at the other end, at point 7. Where would you place yourself on this scale?
   2. *Spend, Military Arms: Are we spending too much, too little, or about the right amount on the military, armaments, and defense?
   3. Relations with Russia: Some people feel it is important for us to try very hard to get along with Russia. Others feel it is a big mistake to try too hard to get along with Russia. Where would you place yourself on this scale?

F. *Social-Moral Policy*
   1. Women's Role: Recently, there has been a lot of talk about women's rights. Some people feel that women should have an equal role with men in running business, industry, and government. Others feel that women should not generally have equal leadership roles and that even if they want to work they should still have primary responsibility for running the home and family. What is your opinion on this issue?
   2. Abortion: Abortion has been in the news a lot lately. Some people feel that the government should not regulate abortions at all and that women should be allowed to have them whenever they choose. Others feel that abortion is wrong and should never be allowed under any circumstances. And of course, many people have opinions in between. What is your opinion on this issue?
   3. Homosexuality: Some people feel that homosexuals should be allowed to do anything they want without government interference as long as they do so in private and do not harm anyone. Others feel that homosexuality is wrong and that the government has an obligation to try to prevent it, even if it is private. What is your opinion of this issue?

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