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Source: *Political Research Quarterly*, Vol. 50, No. 4 (Dec., 1997), pp. 939-955

Published by: Sage Publications, Inc. on behalf of the University of Utah

Stable URL: <http://www.jstor.org/stable/448994>

Accessed: 06-09-2016 09:04 UTC


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RESEARCH NOTE



Testing Foreign Policy Belief Structures of the American Public in the Post-Cold War Period: Gross Validations from Two National Surveys

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The basic attitudinal structure underlying the American public's foreign policy preferences is assessed by using both exploratory and confirmatory factor analyses on two major post-cold war surveys containing many similarly worded questions—by the Chicago Council on Foreign Relations (CC, 10/94) and the Times Mirror Center (TM, 9/93). Although previous studies had stressed only two or three primary attitudinal factors and usually ignored factor intercorrelations, our exploratory analyses of these data sets consistently yielded at least four distinct and readily interpretable factors, including two correlated “outward-focused” factors (Global Altruism and U.S. Global Interest), a U.S. Domestic issues factor bearing on foreign policy (e.g., jobs protection), and a Military Security factor. Building upon these results, confirmatory factor analyses using LISREL found that a four-factor model provided probabilistically close fits to both the CC and TM data sets and that accuracy of fits declined with various simpler models.

NOTE: This article is a revised version of a presentation originally delivered at the 1995 Annual Meeting of the American Political Science Association in Chicago, Illinois on August 31. The views expressed herein are those of the writers and are not necessarily those of USIA or of the U.S. Naval Academy. All communications regarding this article should be directed to Dr. Alvin Richman, Office of Research, U.S. Information Agency, 301 Fourth Street, SW, Washington, DC 20547. His Internet address is richman@usia.gov.

Political Research Quarterly, Vol. 50, No. 4 (December 1997): pp. 939–955

The American public's views on foreign affairs have been examined extensively during the past two decades. Some studies have attempted to find basic themes or dimensions representing the variety of opinions expressed on different issues. (For recent examples, see Hinckley 1992; Rielly 1995; Times Mirror Center 1993; and Wittkopf 1990.) In contrast to the lack of consistency in attitudes found by Converse (1964), more recent studies have demonstrated that Americans' diverse foreign policy preferences and goals are structured by a relatively small number of distinct attitudinal dimensions (e.g., see Hurwitz and Peffley 1987).

Most previous researchers agree that the public's foreign policy beliefs are multidimensional and cannot be represented adequately by a single "internationalist-isolationist" continuum. However, no consensus exists on the optimum number or nature of the basic attitudinal dimensions. Some researchers have relied on a two-dimensional approach which usually contrasts a militarism dimension with an international involvement dimension (e.g., Wittkopf 1990). Others have documented the need for three or more dimensions to describe adequately the public's foreign policy goals (e.g., Chittick, Billingsley, and Travis 1995).

Differences in identifying useful third and fourth factors presumably stem from differences in sets of questions analyzed as well as from the particular analytic method and interpretation used by the investigators. Most studies of the structure of American attitudes toward foreign affairs have used factor analysis on data obtained from one or more of the quadrennial foreign policy surveys sponsored by the Chicago Council on Foreign Relations (CCFR) between 1974-94. For example, Bardes and Oldendick (1980) analyzed questions from the 1974 and 1978 CCFR surveys—using principal components analysis with orthogonal (varimax) rotation—and found distinct factors representing MILITARISM (including items on military spending and defending our allies' security), a largely altruistic INTERNATIONALISM dimension (e.g., combating world hunger, defending human rights), and AMERICANISM (e.g., protecting jobs of U.S. workers). Howell and Richman (1984) analyzed the 1982 CCFR survey and—using similar analytical techniques—found factors similar to those identified by Bardes and Oldendick, including MILITARY SECURITY, LIBERAL INTERNATIONALISM, and U.S. ECONOMIC SECURITY. Building on the work of Eugene Wittkopf and others, Hurwitz and Peffley (1987) used a confirmatory factor analytic approach to establish three dimensions—MILITARISM, ISOLATIONISM, and ANTICOMMUNISM. Although Hurwitz and Peffley's research used the appropriate analytical approach, their sample involved only a single medium-sized city rather than a representative national sample of the general public.

Chittick, Billingsley, and Travis (1995) have provided the most comprehensive assessment of the relationships of individual questions on different fac-

tors generated on national samples. They factor analyzed a dozen surveys between 1974-86 containing foreign policy "goal" questions (including four national CCFR surveys of the general public) and believe the resulting attitudinal dimensions fall into three basic "domains" of human motivation that produce attitudes toward foreign affairs. These domains are "security" (fear of loss), "prosperity" (hope of gain), and "identity" (identification with others). Each of these domains, they argue, should be represented in factor analytic studies by at least one attitudinal dimension. For example, MILITARISM-NONMILITARISM often emerges as a key dimension in the security domain, and the MULTILATERALISM-UNILATERALISM dimension gauges the extent to which individuals identify with the wider international community. In another very recent effort, Chittick and Billingsley (1995) have updated their previous extensive analyses to include the CCFR data for 1994. To maintain analytical consistency over time, they have continued to use principal components analysis with a varimax rotation which forces all factors to be uncorrelated. Nevertheless, they identify four reasonably interpretable factors which are labeled IDENTITY, PROSPERITY, GLOBAL SECURITY, and NATIONAL SECURITY.

Compounding the effects of differences in theory, methods and data used by different researchers is the fact that significant international events such as the demise of the communist bloc in Eastern Europe and the former U.S.S.R. have diminished some foreign policy goals (e.g., containing communism) and allowed others to emerge more prominently (e.g., protecting the global environment).

Against this background, an unusual opportunity now exists to examine the attitudinal dimensions underlying American foreign policy views in the new, post-cold war period and to test the replicability of the models emerging from exploratory analyses. This opportunity comes from two major U.S. national surveys—one by the Chicago Council on Foreign Relations (CC - October 1994) and the other by Times Mirror Center (TM - September 1993)—which contain a considerable number of similar questions on U.S. foreign policy preferences.¹ These are the first truly post-cold war U.S. surveys devoted almost entirely to foreign policy issues. The fact that they were fielded

¹ The Chicago Council data set together with its documentation is available from the Roper Public Opinion Research Center in Storrs, Connecticut (860-486-4441). Additional information regarding Times Mirror data sets (for the September 1993 survey and a related survey in June 1995) can be obtained from the PEW Research Center (formerly the Times Mirror Center) in Washington, DC. (202-293-3126). The complete question wording and results for the CC (10/94) and TM (9/93) surveys are presented in Richman, Malone, and Nolle (1995), Tables 1-5. This is available by contacting A. Richman, Office of Research, USIA, 301 Fourth St., S.W., Room 352. Washington, D.C. 20547. E-Mail: richman@USIA.gov.

only 13 months apart and yielded similar results on most of their similarly worded questions suggests that any assessments of factorial robustness are not likely to be influenced by significant shifts in attitudes occurring between the dates of the two surveys.²

Past analyses of the CCFR surveys have had a profound impact on our thinking about the structure of foreign policy preferences and how this structure effects support for specific policies. All of these analyses, however, have relied on exploratory factor analyses to establish the dimensions underlying foreign policy preferences; none has extended these exploratory analyses to generate statistically testable models of that attitude structure. Also, past researchers have not had the opportunity to cross-validate their findings at comparable points in time with two major surveys. This paper addresses these and other issues regarding the structure of American post-cold war foreign policy beliefs.

THE CURRENT SURVEYS

The Chicago Council on Foreign Relations (CCFR) survey was fielded in October 1994 and comprised a national sample of 1,492 adults, using personal interviews. It contains 16 *goal* questions (listed in abbreviated form in Table 1), including 10 items that match with *priority* questions in the Times Mirror split sample A (TM-A) and 10 items that match with Times Mirror sample B (TM-B). (Seven of the CCFR goal questions match with priority questions contained in *both* TM-A and TM-B.) Each goal was rated as "very important," "somewhat important," or "not important."

The CCFR survey also contains eight "U.S. Troops" questions, including four which match the TM survey (Using U.S. Troops to defend South Korea, . . . Israel, . . . Saudi Arabia, and . . . the Ukraine), and questions on U.S. defense spending. Various other preference items were added to certain factor analyses for exploratory purposes (e.g., opinions on NATO and NAFTA, participation in U.N. peacekeeping) even though these items do not have counterparts on the TM survey.

The Times Mirror Center (TM) survey, "America's Place in the World," was fielded in September 1993 and comprised a national telephone sample of 2,000 adults. The survey contained two dozen questions gauging the public's *priorities* among various "long-range foreign policy goals" (11 items) and "specific foreign policy problems" (13 items). Each goal or problem was rated as a "top priority," "a priority, but not top priority," or "no priority." No analytical

² Comparison of twelve identical or nearly identically worded questions on the CCFR and TM surveys shows eight instances in which the differences in the first response option is less than 5 percent.

distinction was made between goals and problems because both sets of items are semantically related to foreign policy priorities. Consequently, the goals and problems in TM were viewed as interchangeable “priority” items and as functional equivalents to the “goals” items contained in the CCFR survey.

The Times Mirror employed a split sample with approximately 1,000 respondents in each, who were given identical questionnaires except for a small number of priority items unique to each. Ten of the priority questions in each subsample (TM-A and TM-B) are worded similarly to CCFR goals questions asked in 1994. However, the TM survey lacked two items that have consistently formed a MILITARY SECURITY factor in the past—“Defending our Allies’ Security” and “Maintaining Superior Military Power.” As a way to compensate for this absence and also to explore the factor characteristics of other questions in the TM survey, various “non-priority” questions were added to some of the factor analyses, including items on Defense Spending and Using U.S. Forces to defend different countries.³

RESEARCH PROCEDURES AND FINDINGS

Exploratory Factor Analysis (EFA)

EFA was used to identify the distinct factors and main variable-on-factor loadings obtained from different data sets from the CCFR, TM-A, and TM-B samples. Most of the data sets analyzed contained ten items which all three groups share—seven goal/priority questions, defense spending preference and two U.S. troops/U.S. forces questions. Additional questions unique to each sample were included in most EFA. The maximum size of the data sets analyzed was twenty-five items for the two Times Mirror subsamples and twenty-nine items for the Chicago Council sample.⁴

³ Several different comparisons of the TM-A and TM-B subsamples found them to be statistically similar. Ten Times Mirror questions (seven priority items, Defense Spending and two Using U.S. Forces questions) that are common to both TM-A and TM-B and also match with items on the CCFR survey were analyzed. The frequency distributions, correlation matrices and variable-on-factor loadings of these items produced by TM-A are essentially equivalent to those produced by TM-B.

⁴ Two types of exploratory factor analytical techniques were used—Principal Component (PC) analysis, with orthogonal (varimax) and oblique (oblimin) rotations, and Maximum Likelihood (ML) common factor analysis with oblique rotations. Pearson product-moment correlations were used in all EFA. Questions containing only two response categories (e.g., use of U.S. Forces/Troops items) were recoded so that the “don’t know” and missing responses were placed in a middle category. Missing values and “don’t know” responses to other questions were deleted, using pairwise and listwise criteria at different stages.

The purpose of examining various expanded data sets—and using both Principal Component (PC) and Maximum Likelihood (ML) factor analyses—was to search for possible new factors and to determine the robustness of factor structures, including the consistency of high variable loadings, across different techniques and different combinations of items from the three samples. Our strategy has been to rely on comparisons among a series of factor analyses across multiple data sets—altering the mix of questions on each—rather than trusting a single “best case” analysis. The maximum number of readily interpretable factors extracted was six factors for TM-A, five for TM-B, and four for CC.

A four-factor solution was found to be the most interpretable for both the PC and ML factor analyses of the Chicago Council “goals” questions (the sixteen items noted in Table 1): Global Altruism (GALT), U.S. Global Interest (GINT), U.S. Military Security (MILSEC), and DOMESTIC issues bearing on foreign policy.⁵ Analyses of the expanded CC data sets, which included three U.S. troops questions⁶ and opinion on defense spending, produced no change in this basic factor structure. These same four factors also emerged fairly consistently from the Times Mirror data sets, except that U.S. Economic Security (ECONSEC) and Protect U.S. Society (PROTUS) formed separate factors here, rather than combining into a single DOMESTIC factor as in the CC data sets. Exploratory factor analyses of the CC and TM data sets using oblique rotations showed one other instance in which two factors correlated relatively high (about .30): U.S. Global Interest and Global Altruism. However, these rarely merged into a single GLOBAL issues factor.

Most of the Chicago Council and Times Mirror goal/priority questions exhibit “simple structure,” loading high on one and only one factor. All factor loadings for the four factors produced by the Principal Component analyses and Maximum Likelihood common factor analyses of the Chicago Council goal questions are given in Table 1.⁷ Several questions displayed complex

⁵ The Kaiser-Guttman (K-G) rule is reasonably accurate in recovering factors from data comparable to our Chicago Council data. The K-G rule uses the number of eigenvalues greater than unity (1.0) to determine the appropriate number of factors. In the case of the CCFR goals questions, four factors had eigenvalues greater than 1.0, and their values ranged from 1.11 to 3.65. Consequently, the K-G rule confirmed our decision—based mainly on interpretability—to examine four factors in this exploratory factor analysis.

⁶ Separate analyses of the eight U.S. troops questions contained in the CCFR survey found a three-factor solution to be the most satisfactory both in terms of interpretability and in terms of closeness of fit to the correlational data: Defend Allies (e.g., Western Europe, South Korea), Defend Non-Allied Countries (e.g., the Ukraine), and Intervene in Internal Conflicts (e.g., a civil war in South Africa).

⁷ Results on the Times Mirror data are not reported to conserve space.

TABLE 1

VARIABLE LOADINGS FOR EFA 4-FACTOR MODEL ON CCFR GOAL QUESTIONS
[THREE ANALYSES: ML OBLIQUE (ML)/PC OBLIQUE (PC-1)/PC ORTHOGONAL (PC-2)]¹
(LOADINGS .35 AND ABOVE ARE HIGHLIGHTED USING BOLD TYPEFACE)

Variables	Factors ²			
	GALT ML/PC-1/PC-2	GINT ML/PC-1/PC-2	DOMESTIC ML/PC-1/ PC-2	MILSEC ML/PC-1/ PC-2
Promote Democratic Governments (Dem) ^b	.50/.63/.59	.02/-.10/-.04	.05/.10/.11	.19/-.26/.38
Protect Weak Nations From Foreign Aggression (Foragg) ^b	.66/.69/.59	-.12/-.11/-.02	.01/-.06/-.05	.20/-.31/.43
Promote Human Rights (Humrgh) ^a	.69/.73/.67	-.01/.03/.10	-.02/-.11/-.12	-.05/-.01/.10
Combat World Hunger (Hunger)	.53/.63/.67	.13/.13/.10	.11/.09/.12	-.11/.12/-.07
Improve LDC Living Standards (Ldc) ^a	.55/.72/.72	.18/.06/.05	-.05/.01/-.01	-.15/.23/-.02
Secure Adequate Energy Supplies (Energy) ^{a,b}	-.02/.03/.02	.32/.44/.48	.16/.19/.28	.22/-.32/.34
Improve Global Environment (Envir) ^{a,b}	.16/.32/.45	.62/.57/.59	-.05/.00/.04	-.27/.36/-.26
Prevent Spread of Nuclear Weapons (Nucweap) ^{a,b}	.00/.01/.12	.46/.68/.68	-.03/-.04/.03	.07/.00/.11
Reduce U.S. Trade Deficit (Trdef) ^b	-.04/-.13/-.05	.35/.67/.63	.11/-.02/.07	.07/-.17/.17
Strengthen U.N. (UN) ^{a,b}	.19/.29/.42	.35/.39/.38	.09/.18/.20	.06/.03/.07
Protect U.S. Business Interests (Bus) ^a	.11/.13/.15	-.03/-.10/-.05	.44/.56/.58	.11/-.21/.25
Stop Flow of Drugs into U.S. (Drugs) ^{a,b}	.00/.04/.03	.09/.02/.10	.41/.71/.67	-.01/.20/-.09
Reduce Illegal Immigration (Illimmig) ^{a,b}	-.14/-.15/-.12	.08/.02/.14	.42/.65/.61	.17/-.13/.23
Protect Jobs of U.S. Workers (Wrkrs) ^{a,b}	.03/-.03/.02	-.07/.03/.11	.88/.78/.77	-.18/.05/-.01
Defend Allies' Security (Allies)	.23/.30/.28	.21/.22/.23	-.06/-.05/.04	.49/-.59/.62
Maintain Superior Military Power (Milpwr)	.04/-.01/-.04	.03/.12/.15	.21/.16/.17	.40/-.65/.71

¹The Maximum Likelihood (ML) oblique and the Principal Component (PC) oblique analyses were generated by the authors; the PC orthogonal analysis was drawn from Chittick and Billingsley (1995: Table 1).

²Four factors were obtained and named as follows: Global Altruism (GALT), Global Interest (GINT), U.S. Domestic Issues (DOMESTIC), and Military Security Issues (MILSEC).

a) Also used in Times Mirror data set #TM-A.

b) Also used in Times Mirror data set #TM-B.

characteristics by loading fairly high on more than one factor in the various factor analyses. This complexity tended to vary with the particular mix of questions used in our analyses. The most notable “complex” items were the following: Strengthen U.N. (GINT and GALT), Secure Adequate Energy Supplies (GINT and DOMESTIC in CC data set/ ECONSEC in TM), Reduce U.S. Trade Deficit (GINT in CC/ECONSEC in TM), and Maintain Military Power (MILSEC and DOMESTIC—asked in CC only).

Confirmatory Factor Analysis (CFA)

Using LISREL, CFA tests whether a particular factor model identified as the most empirically robust and theoretically defensible in the exploratory factor analysis stage fits matched data sets from the Chicago Council and Times Mirror surveys (that is, CC-A/TM-A and CC-B/TM-B).⁸ Confirmatory factor models indicate the number and identity of factors and variables to be tested by specifying those variables which should load on each factor hypothesized. On the basis of previous EFA results as well as some preliminary confirmatory analyses, four of the thirteen matched variables are assumed to be “complex” and load on two or more factors.⁹ Each of the other nine variables is hypothesized to load on only one factor in each model. All other factor loadings for a

⁸ CFA is a *restricted* common factor analysis technique in contrast to Maximum Likelihood (ML) analysis in EFA which estimates the common factor model without restricting the variables' factor loadings. All CFA in this study use polychoric correlation matrices for input and weighted least squares (WLS) estimates with weighted data in Lisrel 8.12a runs (Joreskog and Sorbom 1993; Joreskog 1994). A polychoric correlation is appropriate for ordinal categorical variables and is a generalization of the well-known tetrachoric correlation used with dichotomous variables. WLS using polychoric correlations is a useful technique which not only takes into account the noncontinuous nature of our observed variables but also provides a potentially effective way to deal with the non-normal (highly asymmetrical or U-shaped) distributions manifested by some of our variables (see Joreskog 1990; West, Finch, and Curran 1995). Listwise deletion was used to eliminate “don't knows” and missing values of three-category variables. “Don't knows” and missing values for two-category variables were recoded and placed into a middle category. After listwise deletion of “don't knows” the N was 884 (weighted to correct for demographic biases) for the Times Mirror subsample #A (TM-A) and 915 (weighted) for TM-B. The weighted N for the CC data after listwise deletion was 1,204. Different sets of variables were selected from this sample to form the bases for direct comparisons with TM-A and TM-B; consequently, these different subsets of variables were called CC-A and CC-B to reflect their matching with TM-A and TM-B respectively.

⁹ The thirteen matched variables in each CC/TM comparison include seven of the goal/priority questions contained in both the TM-A and TM-B data sets, three goal/priority questions unique to each set, and three non-goal questions related to MILITARY SECURITY (that is, defense spending, defending South Korea, and defending Israel).

given variable are “constrained” to be zero. Factors are allowed to be correlated. Factor loadings and factor correlations estimated under the assumptions and constraints of the models are assumed to generate the relationships among the observed variables (see Joreskog and Sorbom 1989: 75). Consequently, examination of the discrepancies between the correlations implied by the model and the correlations observed in the data provide us with evidence of the adequacy or “closeness of fit” of the models to the data. Although chi-square and its associated degrees of freedom are often used to construct a measure of “closeness of fit,” this test statistic is known to vary strongly with sample size. Consequently, an alternative measure of fit is used to facilitate our assessments: The Root Mean Square Error of Approximation (RMSEA).¹⁰ These RMSEAs and their associated p-values guide us not only on the adequacy of the basic replication but also on a series of CFA’s used to test models of different levels of complexity on the CC data set—from the basic four-factor model suggested by EFA to the most parsimonious and hypothetical one-factor model.

Since the CC data produce the most parsimonious factor outcome and have a long track record, they provide our point of departure. Testing a variant of the basic four-factor model produced by the Chicago Council data and cross-validating this model on the Times Mirror data sets requires using a set of matched questions that load on each of the four factors—Global Altruism (GALT), U.S. Global Interest (GINT), U.S. Domestic issues (DOMESTIC), and Military Security (MILSEC). This replication depends on successfully converting the results of our exploratory analyses into a fully testable model yielding statistically valid parameter estimates. This effort provides a stringent benchmark because our model postulates a relatively simple structure which explicitly disallows a host of small loadings deemed irrelevant. Our confirmatory factor analysis of the sixteen Chicago Council goal questions includes four items judged to be “complex” based on previous exploratory factor analyses of the CC and TM data: UN (allowed to load on GINT and GALT), Energy (GINT and DOMESTIC), Trdef (GINT and DOMESTIC), and Milpwr (MILSEC and DOMESTIC). Even with these complex variables, the resulting model is relatively simple in light of the many other potential loadings which have

¹⁰ This measure, originally developed by Steiger and Lind (Steiger 1990), is a measure of the discrepancy per degree of freedom for the model and is an estimate of the error of approximation. Browne and Cudeck (1993) provide an excellent statistical overview of this measure and its interpretation. Larger values of RMSEA imply poorer fit. Models having a RMSEA value of .05 or lower are regarded as providing a close fit. P-values of RMSEA give the probability that RMSEA could have a value equal to or less than 0.05 for the model being tested. Higher p-values indicate a greater probability that RMSEA could have a value less than 0.05. Thus, p-values of .05 or greater indicate a probabilistically close fit.

been eliminated because they are constrained to be zero. Analysis of this model produces an RMSEA value of .054 (p-value of .086), which indicates that this model clearly represents a probabilistically *close* fit to the data. Because this relatively parsimonious model has been tested and found to be fully consistent with the data, the factor loadings derived from it are presented in Table 2. All loadings are statistically significant except the one for UN on GALT.¹¹ Moreover, all of the factor intercorrelations (not shown in the table) are statistically significant and range from a low of .21 to a high of .71. These test statistics and parameter estimates demonstrate that our transition from an exploratory mode to a confirmatory mode has been successful. Variations on this benchmark model are the bases for all of our remaining CFA analyses.

TABLE 2

VARIABLE LOADINGS FOR CFA 4-FACTOR MODEL ON CCFR GOAL QUESTIONS
(LISREL ESTIMATES, WLS. FOUR COMPLEX VARIABLES. RMSEA = .054; P = .086)

Variables	Factors ¹			
	GALT	GINT	DOMESTIC	MILSEC
Dem	.71			
Foragg	.73			
Humrgh	.78			
Hunger	.72			
Ldc	.72			
Energy		.36	.33	
Envir		.75		
Nucweap		.73		
Trdef		.41	.16	
UN	.06	.62		
Bus			.62	
Drugs			.71	
IllImmig			.64	
Wrkrs			.93	
Allies				.85
Milpwr			.36	.29

¹ Four factors were tested: Global Altruism (GALT), Global Interest (GINT), U.S. Domestic Issues (DOMESTIC), and Military Security (MILSEC).

¹¹ The UN on GALT loading, unlike the UN on GINT loading, fails to exceed twice its standard error in this analysis; consequently, this UN on GALT parameter is considered statistically insignificant. Because the UN on GALT relationship is prominent in the previous literature, we are wary of dismissing it prematurely. Thus, the UN on GALT parameter is estimated in our subsequent analyses, even though the linkage of UN to GALT remains weak in those analyses.

As noted above, the Times Mirror *priority* questions to be matched with Chicago Council *goal* questions do not include items on Defending Allies' Security (Allies) and Maintaining Superior Military Power (Milpwr) which form the Military Security dimension (MILSEC) in the factor analyses of the CCFR data. Because of this, two additional analyses are necessary to determine whether other available matching military items can be used to replace Allies and Milpwr. In this case, TM questions on Using U.S. Forces to defend South Korea (ForKor) and Israel (ForIsr) match two CCFR questions (TroopsKor and TroopsIsr), while another question on defense spending (Defop) is also available in both surveys. The first analysis successfully added these three military variables to the sixteen-question goal set model while the second analysis successfully deleted the two goal questions, Allies and Milpwr, which lack counterparts in the TM survey. In the second analysis, four variables are assumed to be complex: UN (GINT, GALT), Energy (GINT, DOMESTIC), Trdef (GINT, DOMESTIC) and Defop (MILSEC, DOMESTIC, GINT). This produces an RMSEA of .049 ($p = .562$)—a *close* fit which clearly allows us to proceed with confidence to the actual replication detailed below.

Each of the Times Mirror split samples used for replication, TM-A and TM-B, contains ten priority questions and three military questions (Defop, ForKor, and ForIsr) having counterparts on the CCFR survey. The four-factor model provides *close* fits to each of the matched data sets (CC-A/TM-A and CC-B/TM-B). RMSEA values and p-values are shown below for the four-factor model having the dimensions GALT, GINT, DOMESTIC and MILSEC:

	RMSEA	P-value
CC-A ¹²	.046	0.795
TM-A	.049	0.571
CC-B ¹³	.044	0.925
TM-B	.042	0.936

¹² The CC-A and TM-A matched data sets contain three complex variables: UN (loads on GINT and GALT), Energy (GINT, DOMESTIC) and Defop (MILSEC, DOMESTIC, GINT). See Table 3A. In addition, the loadings for Troops/Forces items are constrained to be equal within each data set. This equality constraint provides a test of the hypothesis that these variables are statistically equivalent and allows us to get proper estimates for all parameters in each data set. The resulting model for each data set has 56 degrees of freedom.

¹³ In the case of the CC-B and TM-B data sets, Dem and Foragg replace Humrgh and Ldc on GALT while Trdef replaces Bus. As a result, the CC-B and TM-B matched data sets contain four complex variables: UN (loads on GINT and GALT), Energy (GINT, DOMESTIC), Trdef (GINT, DOMESTIC) and Defop (MILSEC, DOMESTIC, GINT). The resulting model for each data set has 54 degrees of freedom.

The foregoing results definitely support the overall adequacy of the four-factor model. Because the models are statistically good fits to the data, their parameter estimates can be compared with confidence. The variable loadings for the CC-A and TM-A analyses are fairly similar (when their differences are tested in terms of their standard errors) for 15 of the 17 cases included in the four-factor model (Table 3A). Similarly, in the CC-B/ TM-B analyses, 17 of the 18 cases produced fairly similar loadings in the four-factor model (data not shown).¹⁴ Collectively, these results imply a high degree of similarity in the factor loadings in the Chicago Council and Times Mirror data sets. The close fits of these models together with this similarity of the factor loadings suggest that the models are quite robust.

TABLE 3A
VARIABLE LOADINGS FOR CFA 4-FACTOR MODEL ON CC-A/TM-A DATA SETS
(LISREL ESTIMATES, WLS. THREE COMPLEX VARIABLES)

Variables	Factors (CC-A/TM-A) ¹			
	GALT	GINT	DOMESTIC	MILSEC
Humrgh	.62/.75			
Ldc	.69/.52			
UN	-.24/.05	.83/.35		
Envir		.74/.76		
Nucweap		.67/.49		
Energy		.28/.10	.39/.38	
Bus			.64/.14	
Drugs			.69/.65	
IllImmig			.70/.60	
Wrkrs			.90/.78	
Defop		-.28/-.28	.41/.37	.29/.25
TroopsKor				.77/.77
TroopsIsr				.77/.77

¹ See Table 3B.

¹⁴ In the CC-A/TM-A comparisons, the loadings of UN on GINT and Bus on DOMESTIC were dissimilar (that is, the tests of the differences in their loadings between the two samples exceeded the 3.06 critical ratio suggested by a Bonferroni adjustment applied to the standard .05 level of significance), whereas similar loadings were obtained in the 15 other cases (Table 3A). In the CC-B/TM-B comparisons, the loadings of Envir on GINT were dissimilar, whereas similar loadings were obtained in the seventeen other cases. A Bonferroni adjustment systematically increases the critical ratio in terms of the number of planned comparisons between the two samples and thus reduces the risk of finding significant differences which are actually false (Alt 1982).

Furthermore, statistical comparisons of the parallel factor intercorrelations produced by the Chicago Council and Times Mirror data sets also show considerable similarity between the samples. In the four-factor model for CC-A/TM-A, only one correlation among the six-factor intercorrelations differs significantly between the two samples (GALT \times GINT: .83 in CC-A and .46 in TM-A—see Table 3B). In the four-factor model for CC-B/TM-B, none of the six-factor intercorrelations differs significantly between the two samples (data not shown).

TABLE 3B
FACTOR INTERCORRELATIONS

	Factors (CC-A/TM-A) ¹			
	GALT	GINT	DOMESTIC	MILSEC
GALT	1.0	.83/.46	.06/-.08	.30/.27
GINT		1.0	.35/.29	.24/.13
DOMESTIC			1.0	.01/-.06
MILSEC				1.0

¹ Four factors were tested: Global Altruism (GALT), Global Interest (GINT), U.S. Domestic issues (DOMESTIC), and Military Security (MILSEC).

The substantial intercorrelations among some of these factors raise questions about the prevailing practice of assuming independence (that is, zero correlation) among factors. Furthermore, several of these factor intercorrelations are substantively important in their own right. For example, the clearly positive link between GINT and DOMESTIC is certainly consistent with the notion that self-interest in foreign affairs may be promoted on both the domestic and international levels. At the same time, the strong positive link between GALT and MILSEC suggests that support for security measures may be prompted by altruistic motives as well as self-interest. The finding that GINT has consistently higher correlations with DOMESTIC than does GALT further supports the notion that GINT and GALT are distinct factors and that combining them into a single GLOBAL factor to produce a 3-factor model (GLOBAL, DOMESTIC, and MILSEC) obscures their different linkages to another factor. Although combining factors to form simpler models may seem reasonable, there would be a clear interpretative loss in this case. The question of the statistical adequacy of imposing certain simpler models on these data is examined next.

Because the CCFR surveys have been major sources for studying foreign policy preferences over the years, the CC data set alone is used to test alternative models. Examination of RMSEA's and their p-values for different factor models applied to the sixteen goals in the 1994 survey shows a tradeoff of reduced closeness of fit (i.e., lower accuracy) accompanying reduced model

complexity (i.e., fewer factors).¹⁵ The four-factor model is the only one retaining a probabilistically *close* fit to the data (RMSEA = .054, $p = .086$ on 94 df). None of the simpler models meet the established criteria.¹⁶ These results reinforce our previous evidence that the four-factor model provides a robust representation of the diversity in American foreign policy preferences. Furthermore, the cross-validated statistical robustness of the four-factor model can be coupled with a clearly differentiated and theoretically meaningful interpretation for each of the four factors.

SUMMARY AND CONCLUSIONS

A fairly consistent, readily interpretable attitudinal structure was found to underpin the American public's foreign policy preferences. This attitudinal structure, which was initially indicated by exploratory factor analyses (EFA) and subsequently tested by confirmatory factor analyses (CFA), was found to be replicable across two recent surveys taken by the Times Mirror Center (TM, 9/93) and the Chicago Council of Foreign Relations (CC, 10/94).

Our exploratory analyses of the TM and CC data sets consistently yielded at least four distinct factors. These include two correlated but distinct *outward-focused* factors (Global Altruism and U.S. Global Interest), two correlated, often merging *domestic-focused* factors (Economic Security and Protect U.S.), and a Military Security factor.¹⁷ These structures have more dimensions than those found in earlier studies which stressed only two or three primary attitudinal factors and usually ignored factor correlations.

Building upon these EFA results, our CFA tested a basic four-factor model on matched data sets from the Times Mirror and Chicago Council surveys and found that this model fits very well to the two data sets and also produces statistically similar loadings and factor intercorrelations in most instances. Furthermore, our CFA suggested that the accuracy (that is, the closeness of

¹⁵ These less complex, or simpler, models were generated by a systematic reduction of the number of factors used to explain the data. Reduced model complexity means that fewer parameters are estimated; therefore, by definition, these simpler models have increased degrees of freedom (df).

¹⁶ For example, the three-factor model (GLOBAL, DOMESTIC, and MILSEC) has an RMSEA of .062 ($p < .001$ on 98 df). Neither of the estimable two-factor models produces an RMSEA lower than .063 or has a p -value greater than .001. The one-factor model generates the largest RMSEA of .077 ($p < .001$ on 104 df).

¹⁷ A number of measures representing the first three factors (Global Altruism, U.S. Global Interest, and U.S. Domestic Issues) were re-tested on a June 1995 Times Mirror survey. We found hardly any change since 1993 in factor structure and little change in the priorities accorded the various measures.

fit) of the models declines as we move from the relatively complex four-factor model to the simpler three-factor and two-factor structures. Moreover, simpler models obscure some important differential linkages found among the factors in the four-factor model.

Knowing the basic dimensions underlying a set of items enables us to substitute a few basic constructs for a large number of opinion items. Knowledge about the American public's attitude structure on foreign affairs allows us to organize and make greater sense of the findings yielded by seemingly disparate items in the Chicago Council survey. Thus, the trends and fluctuations of individual CC questions between 1974 and 1994 can be studied to see whether recent changes in potentially diverse items actually form a pattern. An interesting example comes from the CC *goal* questions relating to Global Altruism (GALT): Among the ten goal questions used fairly regularly between 1974 (or 1978) and 1994, five load highly on GALT (Ldc, Humrgh, Dem, Foragg, and Hunger). All five GALT items recorded twenty-year low points in 1994, including three statistically significantly below previous lows (Ldc, Humrgh, and Foragg)! As a group, the GALT goals averaged 32 percent "very important" in 1994—down about 10 points from all previous Chicago Council surveys. With one exception (Hunger), the measures on the GALT dimension yielded the lowest-rated goals on the 1994 Chicago Council survey.

In contrast to Global Altruism, most measures involving concern with U.S. Domestic issues have risen above pre-1990's levels. This dimension contains the top two ratings on the 1994 CC survey, Drugs and Wrkrs, as well as the highest group average (73 percent "very important" for the four main DOMESTIC goal items in 1994). U.S. Global Interest (e.g., Nucweap, Envir, UN) has the highest ratings among the three strictly foreign policy dimensions (average of 62 percent "very important" for the five GINT goal items). The Military Security dimension (i.e., defending our allies' security, maintaining our military power) averaged 45 percent "very important" on the 1994 CC survey—nearly midway between Global Altruism and U.S. Global Interest (Richman 1996).

These findings demonstrate the substantive loss and confusion that might come from combining two or more of these dimensions to produce a simpler model of the American public's attitude structure on foreign affairs. Also, our CFA showed that the GALT and GINT dimensions, while highly correlated, possess distinctive features that are obscured by combining them into a single GLOBAL factor to produce a three-factor model (GLOBAL, DOMESTIC and MILSEC). Furthermore, attempting to combine all non-MILSEC dimensions into a single factor to contrast with a MILSEC factor is clearly not warranted because a CFA on the fourteen non-military CC goal questions confirmed that all three factors (GALT, GINT, DOMESTIC) are required to insure a close fit to those data (data not shown).

These conclusions are conditioned by two broad methodological issues which warrant mention—the input/output dependence in all factor analyses and the selection of appropriate constraints for the models used in CFA.

(1) The product of any factor analysis must bear some resemblance, conceptually, to the characteristics of the input data. If certain concepts are not represented in the input data, they will not be reflected in the factor output. For example, the new post-cold war factor which we called GINT may be explained partly by the fact that new post-cold war questions were introduced by the Chicago Council in 1990 (Envir, Nucweap), rather than by the emergence of new, post-cold war attitude dimensions. (2) Our tests to assess the various n-factor models systematically varied the number of factors; but these tests retained, whenever possible, the same level of item complexity and the same types of factor definitions. Although this strategy is a reasonable one, it is important to note that models with any given number of factors might be improved by freeing additional variable loadings or removing other constraints within the models. Consequently, it is indeed theoretically possible for a two-factor model with a lot of complex variables to outperform a three-factor model with no complex variables.

Although these are important issues, they should not obscure the fact that our current analyses have been built on statistically testable models which make sense of a variety of outcomes. It is our hope that future researchers will rigorously test these models with new data to assess their general utility for gauging the causes and correlates of American foreign policy beliefs.

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Received: July 15, 1996

Accepted for Publication: June 17, 1997