

CIVIC CULTURE AND DEMOCRACY: THE QUESTION OF CAUSAL RELATIONSHIPS

EDWARD N. MULLER *University of Arizona*

MITCHELL A. SELIGSON *University of Pittsburgh*

A causal model of relationships between structural properties of states, civic culture attitudes of the general public, and change in level of democracy is tested with cross-national data. The model permits inferences about the possibility of unidirectional or reciprocal causation between civic culture attitudes and democracy, controlling for macrosocietal variables such as economic development, income inequality, and subcultural pluralism. Most civic culture attitudes do not have any significant impact on change in democracy. One of them, interpersonal trust, appears clearly to be an effect rather than a cause of democracy. The exception is the percentage of the general public that prefers gradual reform of society instead of revolutionary change or intransigent defense of the status quo. Support for gradual reform has a positive impact on change in democracy, and it is unrelated to a country's years of continuous democracy—findings that support the hypothesis of a unidirectional civic culture effect on democracy.

An important unresolved question in the study of democratization is whether attitudes of the general public have a major causal effect on the establishment and stability of democratic regimes. The theory of civic culture proposed by Almond and Verba (1963) and further elaborated by Inglehart (1988, 1990) postulates that the viability of democratic institutions is affected powerfully by attitudes such as belief in one's ability to influence political decisions, feelings of positive affect for the political system, and the belief that other citizens are basically trustworthy. Countries with high levels of these civic culture attitudes are expected to be more likely to adopt and sustain democracy over time than countries with low levels, regardless of socioeconomic factors such as level of economic development. An alternative possibility is that civic culture attitudes are an *effect* rather than a cause of democracy. According to this line of argument, democracy typically is established for reasons other than civic culture attitudes of the general public, and the successful persistence of democracy over time is likely to cause increases in levels of civic culture attitudes because high levels of subjective political competence, pride in the political system, and interpersonal trust are a rational, learned response to the experience of living in a country that has a stable democratic regime (e.g., see Barry 1978, 50–52; Schmitter and Karl 1991, 82–83).

The hypothesis that democracy causes civic culture would seem a priori to be as plausible as the hypothesis that civic culture causes democracy. If so, causal models of the relationship between civic culture attitudes and democracy should be formulated to take into account the possibility of reciprocal causation between these variables.¹ Until recently, it has been difficult to assess the relevance of attitudes of the general public for the establishment of stable democratic regimes because of lack of sufficient cross-

national data on attitudes. The pioneering study in this regard was conducted by Inglehart (1988, 1990), who was the first to compile data on attitudes of the general public for a sample of countries that was large enough to permit multivariate statistical analysis of the relative influence on democratization of micro political culture attitudes as compared with macro socioeconomic factors. Inglehart's causal model is grounded, however, in the assumption of unidirectional causation—that civic culture has an effect on democracy and that democracy does not have an effect on civic culture.

Inglehart's model consists of four variables: (1) a country's level of economic development in 1950, as measured by its gross national product (GNP) per capita; (2) the percentage of the labor force employed in the tertiary sector (no date given), which is interpreted as an indicator of the size of the middle class; (3) a composite measure of civic culture over 1981–86 that reflects an average for the general public of its level of life satisfaction, interpersonal trust, and lack of support for revolutionary change; and (4) a country's years of continuous democracy from 1900 to 1986. The model stipulates that economic development is a predetermined variable (which may have causal effects on the other three variables) and that the percentage of the labor force in service occupations (the tertiary sector) and the average level of civic culture are intervening or mediating variables, caused by variation in level of economic development, which, in turn, are causes of variation in a country's years of democracy. Estimates of the effects of the predetermined and intervening variables on democracy showed that economic development had no significant direct effect, that the labor force in services variable had a direct effect of +.36, and that the civic culture variable had a direct effect of +.74 (Inglehart 1990, 44). These results led Inglehart to

infer "that over half of the variance in the persistence of democratic institutions can be attributed to the effects of political culture alone" (p. 46). And he concluded more generally that this evidence "tends to confirm the basic thesis of *The Civic Culture*" (p. 48).

If Inglehart's causal inferences are valid, explanations of democratization that emphasize political culture attitudes must be given primacy over explanations that emphasize the importance of macro socioeconomic conditions. The problem is that the possibility of an effect of years of continuous democracy on civic culture attitudes is ignored. A proponent of the alternative hypothesis that democracy causes civic culture attitudes could reasonably argue that the supposed "effect" of civic culture on democracy is really an effect of democracy on civic culture. Indeed, because of the fact that a country's years of continuous democracy are calculated from 1900 up to the time of the measurement of the civic culture attitudes during 1981–86, this means that the temporal status of the *years of continuous democracy* variable is *prior* to the civic culture measurements. It would thus be more straightforward and plausible to interpret a strong association between civic culture 1981–86 and years of democracy 1900–1986 as reflecting the possibility of a strong causal effect of the persistence of democratic institutions on a country's level of civic culture.

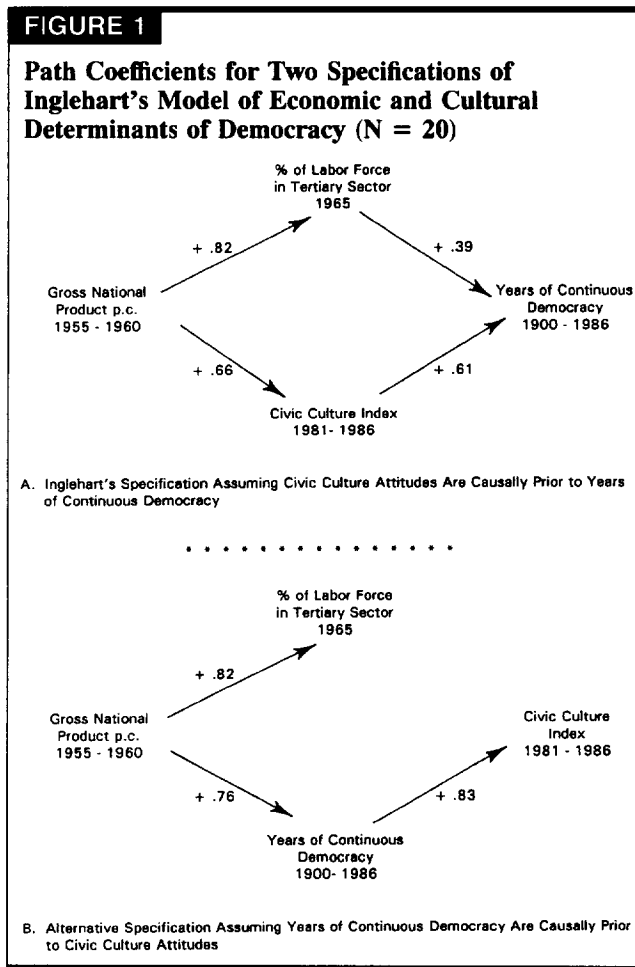
A second problem with Inglehart's analysis involves the conceptualization of civic culture, defined operationally by a composite index of life satisfaction, interpersonal trust, and lack of support for revolutionary change. Since life satisfaction is not a component of the civic culture concept originally proposed by Almond and Verba and since Inglehart does not provide a theoretical justification for why life satisfaction should be assumed to be part of a unidimensional syndrome of civic culture attitudes, one could argue that life satisfaction should be analyzed separately from interpersonal trust and lack of support for revolutionary change. Moreover, since these latter variables also are conceptually distinct and cannot be assumed on definitional or empirical grounds to be unidimensional, it would be useful to analyze them separately, too. Therefore, the more appropriate measurement strategy would be to "unpack" the composite index of civic culture and test hypotheses using each of the attitudinal variables separately.

A potential third problem is that Inglehart's model may be subject to specification error. Inglehart assumes that the percentage of the labor force in service occupations is the only relevant macrosocietal determinant of democracy apart from level of economic development. Given the fact that the *labor force in services* variable has never been included previously in cross-national macro research on determinants of democracy, this strong assumption seems dubious. Omitted variables for which a compelling case can be made theoretically, following the analysis of Dahl (1971), include income inequality and subcultural

pluralism. Empirically, research focusing specifically on the stability of democracy over time has found that the extent to which income is distributed unequally is an extremely powerful negative influence that mediates the positive effect of economic development (Muller 1988). And research on determinants of cross-national variation in level of democracy has found that subcultural pluralism is one of the relevant noneconomic influences (Bollen and Jackman 1985). Income inequality and subcultural pluralism may thus be relevant omitted causes that could affect the estimates of causal influence in Inglehart's model.

Although we are critical of Inglehart's model specification and measurement procedures, we share his concern with assessing the relevance of attitudes of the general public for the establishment of stable democratic regimes. The step that needs to be taken now is to formulate a research design that enables one to address more effectively the question whether unidirectional or reciprocal causal relationships may obtain cross-nationally between civic culture attitudes and democracy, controlling for the influence of macrosocietal determinants. We shall test an alternative causal model in which the dependent variable is change in a country's average level of democracy from the 1972–80 period to the 1981–90 period. If civic culture attitudes have significant effects on change in democracy, such that high levels of civic culture attitudes are associated with increases in democracy and low levels are associated with decreases in democracy, then at least the possibility of civic culture causing democracy will be supported. By contrast, if civic culture attitudes do not have significant effects on change in democracy, then one can be skeptical about claims that civic culture attitudes are an important cause either of transitions from authoritarian rule to democracy or of the persistence of democracy over time. The possibility of a causal effect of democracy on civic culture attitudes will be taken into account by including a country's long-term experience of democracy in the model as a predetermined variable that could have an influence on civic culture attitudes independent of other macro socioeconomic conditions.

We begin our analysis by testing for causal relationships between civic culture attitudes and democracy using Inglehart's sample of primarily European (or European-heritage) countries. Then we test an alternative causal model with an expansion of Inglehart's data set. We have collected measurements of system affect (as inferred from attitudes about societal change) and interpersonal trust (elements of civic culture common to the conceptualizations of both Almond and Verba and Inglehart) from representative surveys conducted during 1990–91 of urban populations in the six Central American states: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama (see Appendix B). These data are added to the measurements used by Inglehart from surveys conducted during 1981–86 (see Appendix A).



CAUSAL MODELS OF ECONOMIC AND CULTURAL DETERMINANTS OF DEMOCRATIZATION

Estimates of causal path coefficients for versions of Inglehart's model of economic and cultural determinants of democracy are shown in Figure 1. The measure of civic culture is a composite index of life satisfaction, interpersonal trust, and opposition to revolutionary change constructed for 20 countries with information on all three variables.² The results obtained for model A closely reproduce those reported by Inglehart (1990, fig. 1-6).³ In this model, the index of civic culture measured with data from 1981 to 1986 is assumed to have a unidirectional effect on a country's years of continuous democracy since 1900. Given that assumption, the path coefficients indicate that civic culture attitudes are by far the most important determinant of years of continuous democracy, that the percentage of the labor force in service occupations (the tertiary sector) has a much smaller direct effect on years of continuous democracy, and that the influence of level of economic development is entirely mediated by civic culture and the percentage of the labor force in services.

Model B shows the results when the temporal

ordering of civic culture and years of democracy is corrected so that years of continuous democracy from 1900 to 1986 precedes civic culture attitudes observed for 1981 to 1986. This model shows strong support for the alternative hypothesis that the experience of stable democracy produces high levels of civic culture. When the civic culture index is regressed on years of continuous democracy, percentage of the labor force in services, and economic development, only *years of continuous democracy* has a statistically significant effect.⁴ Moreover, when *years of continuous democracy* is regressed on labor force in services and economic development, only GNP per capita has a significant effect.⁵ Model B thus corresponds to a very different pattern of causal inference than model A. From his estimates for model A, Inglehart concluded that "economic development per se does not necessarily lead to democracy. Only insofar as it brings appropriate changes in social structure and political culture does it enhance the viability of democratic institutions" (1990, 44). By contrast, if one makes a single change in the causal ordering of the variables, a change that reflects more correctly the temporal ordering of the measurements, one then finds that economic development enhances the viability of democratic institutions directly and that social structure is irrelevant. Moreover, the effect of economic development on civic culture attitudes becomes indirect, transmitted through the influence of economic development on producing stable democracy.

As they stand, we believe that model B is more defensible than model A, but neither model addresses the possibility of a causal effect of civic culture on change in level of democracy—the question that is at the heart of the civic culture thesis. If civic culture attitudes of the general public are a relevant determinant of democratization, then high levels of civic culture should produce increases in a country's level of democracy and low levels of civic culture should inhibit the development of democracy. In other words, civic culture attitudes should have a positive effect on change in level of democracy over time.

Currently, the most widely used indicators of the extent to which a country's political system is democratic or repressive are the ratings of political rights and civil liberties on seven-point scales developed by Raymond D. Gastil for Freedom House and reported annually since 1972. The political rights and civil liberties scales are based on check-lists that cover 11 and 14 different criteria, respectively (see Gastil 1991); and they appear to have good reliability as suggested by very high correlations between them and other conceptually similar measures available for particular years only (cf. Bollen 1986, 588; Banks 1986; Coppedge and Reinicke 1991). We use the average political rights and civil liberties ranking, converted to a scale of 0-100, as an index of a country's level of democracy in a given year and then compute a mean level of democracy score over two intervals, 1972-80 and 1981-90 (see Appendix A).

The regression equations reported in Table 1 test for the possibility of an effect of civic culture attitudes

TABLE 1

Effects of Civic Culture Attitudes and Macrosocietal Variables: European-oriented Sample

INDEPENDENT VARIABLES	EQUATIONS EXPLAINING LEVEL OF DEMOCRACY, 1981-90					
	1.1	1.2	1.3	1.4	1.5 ^a	1.6
Intercept	37.98	64.98	30.22	95.30	69.06	58.62
Level of democracy, 1972-80	+ .60* (.17)	+ .75* (.10)	+ .69* (.11)	+ .16 (.18)	+ .34* (.17)	+ .52* (.20)
Civic culture index, 1981-86 ^b	+ .05 (.54)	—	—	—	—	—
Level of life satisfaction, 1981-86	—	-5.16 (3.34)	—	—	—	—
% interpersonal trust, 1981-86	—	—	+ .06 (.23)	—	—	—
% support revolutionary change, 1981-86	—	—	—	-2.45* (.73)	-.68 (.88)	—
ln% support revolutionary change, 1981-86	—	—	—	—	—	-6.50 (7.01)
Adjusted R ²	.58	.74	.71	.76	.54	.63
Number of cases	20	24	23	21	20	21
	1.7	1.8 ^c	1.9	1.10 ^c	1.11	1.12
Intercept	35.44	38.09	-11.15	-34.19	-22.06	113.52
Level of democracy, 1972-80	+ .76* (.13)	+ .80* (.14)	+ .68* (.10)	+ .64* (.10)	+ .84* (.25)	+ .21* (.11)
% defend society against subversives, 1981-86	-.38 (.31)	-.69 (.44)	—	—	—	—
% support gradual reform, 1981-86	—	—	+ .64* (.28)	+ .99* (.33)	+ .61* (.29)	+ .58* (.17)
Years of continuous democracy, 1900-1986	—	—	—	—	-.033 (.17)	—
% labor force in tertiary sector, 1965	—	—	—	—	+ .20 (.56)	—
Gross national product per capita, 1955-60	—	—	—	—	-.0068 (.0072)	—
Top 20% income share, 1970-80	—	—	—	—	—	-1.79* (.37)
Ethnolinguistic fractionalization, 1960-65	—	—	—	—	—	-.15* (.06)
Adjusted R ²	.64	.65	.70	.74	.67	.90
Number of Cases	21	20	21	20	21	19

Note: Entries are unstandardized regression coefficients (standard errors in parentheses).

^a South Africa excluded.

^b Mean of life satisfaction, interpersonal trust, and opposition to revolutionary change.

^c Norway excluded.

* $p \leq .05$, one-tailed.

on change in democracy from the 1972-80 interval to the 1981-90 interval. The dependent variable is a country's mean annual level of democracy during 1981-90; and since a country's mean annual level of democracy during 1972-80 is included in the equation, the effects of the civic culture variables are effects on change in democracy, that is, the level of current democracy *independent* of its previous level.

The equations in the upper panel of Table 1 test for

effects on change in democracy of the composite civic culture index and each of its components analyzed separately.⁶ Equation 1.1 shows that the composite index of civic culture has no significant effect on change in level of democracy. (Indeed, the coefficient on the composite index is smaller than its standard error.) Thus, if one uses only the composite index of civic culture, the causal inference of model B is supported: democracy has a strong positive effect on

the development of civic culture attitudes and civic culture attitudes have no effect on democracy.

When the civic culture index is unpacked, however, one finds that the components have different effects on change in democracy. Equation 1.2 shows that life satisfaction, which is conceptually distinct from Almond and Verba's notion of civic culture, has a negative effect on change in democracy. But the coefficient on life satisfaction is not sufficiently larger than its standard error to be statistically significant at the .05 level for a two-tailed test (or a for a one-tailed test), so we cannot reject the null hypothesis of no effect. Equation 1.3 shows that interpersonal trust has no significant effect on change in democracy. By contrast, Equation 1.4 shows that the percentage of the general public in favor of revolutionary change does have a significant negative effect (the expected direction) on change in democracy.

Inspection of the distribution of scores on support for revolutionary change in Inglehart's European-oriented sample reveals the presence of an extreme outlier: South Africa (see Table A-1). Support for revolutionary change in this country is at the 25% level, almost twice as great as the other relatively high scores of 14%, 13%, and 12% for Portugal, Argentina, and Mexico, respectively. South Africa also has the lowest levels of democracy for both intervals and the most negative change, so it is obviously a potentially influential case. Equation 1.5 shows that when South Africa is deleted, the coefficient on support for revolutionary change is radically reduced in size to a nonsignificant value that is smaller than its standard error. However, since there is neither a good theoretical reason for deleting South Africa nor any reason to suspect that the score of 25% is due to measurement error, deletion of South Africa is arbitrary. A preferable remedy is to reduce the influence of South Africa's extreme score by logging the scores on the revolutionary change variable. Equation 1.6 shows that across all cases in the European-oriented sample, logged (base e) revolutionary change has no significant effect on change in democracy. So one may conclude that the significant negative effect of revolutionary change in equation 1.4 is an artifact of the extreme distance between South Africa's score and the other scores.⁷ Consequently, analysis of the components of the civic culture index only reinforces the inference that civic culture attitudes do not have a causal effect on democracy.

There is still one more avenue to explore, however, with the available cross-national data on civic culture attitudes. Support for revolutionary change is one of three options that respondents were asked to choose between in describing their attitude about social change (see Appendix A). The other choices were to defend the status quo against subversive forces or to improve society gradually by reforms. The problem with using support for revolutionary change as an indicator of a civic culture attitude is as follows. First, one has to ask what kind of civic culture attitude is being measured by support for revolutionary change. Although Inglehart (1988, 1990) does not address this

question, it is presumably system affect: support for revolutionary change implies a strong rejection of the existing political system and a preference for achieving societal change by the use of force and violence. Since violent rebellion has hardly ever resulted in the establishment of a democratic regime and since high levels of political violence are incompatible with stable democracy support for revolutionary change clearly is an attitude that is not supportive of democratic political institutions (Huntington 1984, 213-14; Powell 1982, 168-70). But lack of support for revolutionary change does not necessarily imply support for democratic institutions. Respondents who do not favor revolutionary change may prefer the option of defending their society against subversive forces. This kind of extremely conservative attitude about societal change implies support for repression of dissent, which could inhibit a country from establishing or maintaining a high level of democracy. Thus, the expected inverse relationship between support for revolutionary change and democratization will be weakened by the fact that people who oppose revolutionary change may not necessarily support democracy. Indeed, as can be seen from the distribution of scores on the defend society against subversives option (see Table A-1), sizable minorities of them endorse this conservative option; and this kind of attitude implies support for repressive measures by the state to suppress dissent, which would hinder democratization.

The *support for gradual reform* option is the attitude about societal change that in our view is most unambiguously supportive of democratic procedures. We assume that citizens who support democratic norms and institutions will prefer the gradual improvement of society by reforms over either revolutionary change or intransigent defense of the status quo. Therefore, we think that the system affect component of the civic culture concept is measured best by the percentage of the general public that supports gradual reform. A high level of support for gradual reform among the general public necessarily implies relatively low levels of support for the radical option of revolutionary change and the conservative option of defending society; a low level of support for gradual reform necessarily implies that either or both support for revolutionary change and intransigent defense of the status quo are relatively high. Therefore, we hypothesize that support for gradual reform will have a positive effect on change in democracy and that this positive effect will be much sharper than the negative effects of support for revolutionary change and defending the status quo.

The regression equations in the lower panel of Table 1 take the other attitudes about societal change into account. We focus first on the percentage of the general public that favors defending society against subversive forces. We expect that this attitude about societal change will have a negative but relatively weak effect on change in level of democracy. Equation 1.7 shows support for our hypothesis. Norway, however, is an extreme outlier (see Table A-1). An

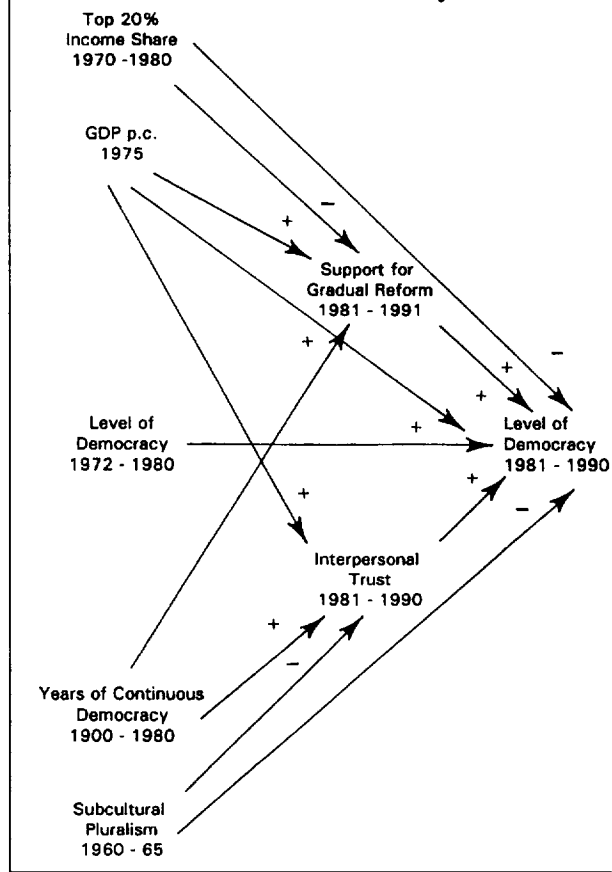
unusually large proportion (49%) of the Norwegian general public favors defending society against subversive forces. This seems odd given the fact that only 16% of Swedes and 28% of Danes expressed support for the *defend society* option, so one might wonder if Norway's exceptionally high score is a result of measurement error. Therefore, equation 1.8 reestimates equation 1.7, with Norway excluded. Although the coefficient on *defend society* with Norway deleted almost doubles in size, it still is not significant for a one-tailed test (the t-ratio is -1.57). Thus, despite the possibility of measurement error in the Norwegian case, the negative relationship between support for intransigent defense of the status quo and change in democracy remains weak and nonsignificant.

Equations 1.9–12 include support for gradual reform as a determinant of change in level of democracy. In equation 1.9, the coefficient on support for gradual reform is positive and statistically significant, which supports our hypothesis. Although inspection of the distribution of scores on support for gradual reform does not reveal any extreme outliers (see Table A-1), Norway has the lowest score (49%). The relatively low level of support for gradual reform in Norway is due to the very large proportion of Norwegians who favor defending the status quo against subversive forces. If this is a reflection of measurement error, then inclusion of Norway may exert a downward bias on the regression coefficient for the support for gradual reform variable. Norway is therefore excluded in equation 1.10. As expected, the coefficient on gradual reform is larger (by approximately 50%) with Norway deleted, and its t-ratio is 3.0 instead of 2.29 with Norway included. Thus, exclusion of Norway favors our hypothesis even more strongly.

In equations 1.11 and 1.12, we introduce macrosocietal variables and retain Norway, since it would be arbitrary to exclude Norway on the suspicion of measurement error without having examined the actual wording in Norwegian of the question on attitude about societal change. Equation 1.11 shows that none of the macrosocietal variables in Inglehart's model has a significant effect on change in democracy, whereas the positive effect of support for gradual reform remains significant. Equation 1.12 includes income inequality (see Appendix B) and an indicator of the concept of subcultural pluralism, the index of ethnic and linguistic fractionalization (Taylor and Hudson 1971; tbl. 4.15, col. 3; original scores expressed as fractions between 0 and 1 are multiplied by 100). These two macrosocietal variables were omitted from Inglehart's model, but they have significant negative effects on change in democracy, as expected.⁸ The coefficient on support for gradual reform remains significant when income inequality and ethnolinguistic fractionalization are taken into account. The results of equations 1.11 and 1.12 thus show that the positive effect of support for gradual reform on change in democracy is not a spurious reflection of macrosocietal causes.

FIGURE 2

An Alternative Causal Model of Economic and Cultural Determinants of Democracy



An Alternative Macro-Micro Causal Model

An alternative to Inglehart's causal model of economic and cultural determinants of democracy is shown in Figure 2. The important differences between Inglehart's model (Figure 1, model A) and ours are as follows. First, Inglehart's dependent variable (years of continuous democracy) is a predetermined independent variable in our model. This avoids the untenable assumption that civic culture attitudes measured in the 1980s cause previous years of continuous democracy. Our dependent variable is change in a country's average level of democracy from 1972–80 to 1981–90, that is, level of democracy during the 1980s independent of level of democracy during the 1970s. It is plausible to assume a priori that level of civic culture attitudes in the 1980s could be a cause of change in level of democracy from the 1970s to the 1980s. And the possibility of a reciprocal causal effect of experience of democracy on civic culture attitudes is incorporated into our model by inclusion of the *years of continuous democracy* variable as an antecedent cause of civic culture attitudes.

Second, the concept of civic culture is measured only by attitude about societal change and interpersonal trust. Life satisfaction (which is neither an attitude of specifically political culture nor a compo-

ment of Almond and Verba's conceptualization of civic culture) is excluded. Also, instead of combining civic culture attitudes into a composite measure, we allow for the possibility that the relationships between these variables and change in democracy might differ in magnitude and significance. Furthermore, we replace support for revolutionary change with support for gradual reform because we think that the latter attitude about societal change is a much more unambiguous indicator of the kind of system affect that is most conducive to democracy.

Third, the percentage of the labor force employed in the tertiary sector is not included in our model because (1) we are skeptical about its validity as a proxy for the size of the middle class, (2) there is no evidence from large-sample quantitative cross-national research to indicate that it is a relevant determinant of variation in level of democracy, and (3) it is irrelevant either as a predictor of years of continuous democracy in model B (see Figure 1) or as a predictor of change in level of democracy (see equation 1.11). Instead, the alternative model includes—in addition to level of economic development—income inequality and subcultural pluralism, the two macrosocietal variables that we hypothesize are relevant causes of democratization omitted from Inglehart's model (equation 1.12 supports this hypothesis). Income inequality and subcultural pluralism are predicted to have negative effects on change in level of democracy. Also, support for gradual reform is expected to be higher in countries with lower levels of income inequality, while interpersonal trust is expected to be higher in homogeneous than in heterogeneous societies. And we include the possibility that level of economic development may have a positive effect on each of these civic culture attitudes.

Fourth, we treat the macrosocietal variables that are antecedent in time to level of democracy in 1981–90 as predetermined variables. Since our sample is limited by the small number of cases with information on civic culture attitudes, it is inappropriate for addressing the question of causal relationships between the macrosocietal variables, and this question is not relevant to our concern with linkages between structural characteristics of societies, civic culture attitudes, and democracy. The macroeconomic variables—income inequality and gross domestic product (GDP) per capita—are measured for the 1970s (see Appendix A). The ethnolinguistic fractionalization indicator of subcultural pluralism is available only for 1960–65. *Years of continuous democracy* is Inglehart's index dated to 1980. This variable should be highly correlated with level of democracy over 1972–80, as well as with the predetermined macroeconomic variables; but we do not expect it to have a direct influence on change in level of democracy that is independent of the other determinants of change in level of democracy.

The hypotheses to be tested are represented by the arrows of causation between the predetermined macrosocietal variables, the civic culture attitudes, and change in level of democracy. Support for Inglehart's

(1988, 1990) assumption that civic culture attitudes are a powerful unidirectional determinant of democracy will be found if support for gradual reform and/or interpersonal trust have strong effects on change in level of democracy, while long-term experience of democracy (years of continuous democracy, 1900–1980) does not have an effect on civic culture attitudes. Support for the hypothesis of reciprocal causation between civic culture and democracy, which Almond (1980) argues was the original hypothesis of *The Civic Culture* (Almond and Verba 1963), will be found if long-term experience of democracy has a positive effect on civic culture attitudes, and civic culture attitudes, in turn, have positive effects on change in level of democracy. Support for Barry's (1978) hypothesis that civic culture attitudes are primarily an effect rather than a cause of democracy will be found if long-term experience of democracy has a positive effect on civic culture attitudes and civic culture attitudes have no effect on change in level of democracy.

For the sake of simplicity, our causal model entails the assumption that there is no simultaneous causal effect of level of democracy during 1981–90 on civic culture attitudes during 1981–91. The validity of this assumption can be tested, however. If we find evidence of an effect of a civic culture attitude on change in democracy, then we will test for the possibility that the effect on change is inflated by simultaneity bias.

Determinants of Change in Level of Democracy

During the 1980s democracy expanded dramatically in the world. Many countries either inaugurated a democratic regime for the first time or else reestablished democratic rule after a previous lapse, and countries that had previously established stable democratic rule maintained it. Our data set—limited as it is mainly to European, North American, and Latin American countries—nevertheless reflects the global trend of the decade (see Appendix A). Four countries in our sample (Argentina, Greece, Spain, and Portugal) established stable democracy during the 1980s. In this group, the mean level of democracy during the 1970s had ranged from 42 to 68, and the mean level of democracy during the 1980s increased to a range of between 79 and 92. A fifth country, Honduras, came close to reaching the upper quarter of the democracy range (75 to 100), as its mean score changed from 43 over the 1970s to 73 over the 1980s. In addition to these instances of substantial gains in democratization, 16 countries maintained a high, stable mean level of democracy in the range of 83 to 100, with change in the range of less than ± 10 points. Only 6 countries did not either achieve or maintain a relatively high level of democracy. One of them, Panama, registered a gain in mean level of democracy of more than 10 points, but in this instance the change was from a very low level of democracy during the 1970s (20) to a relatively low level during the 1980s (39). The other five countries that remained at intermediate-to-low mean levels of democracy during the 1970s and

TABLE 2

Effects of Civic Culture Attitudes and Macrosocietal Variables: Expanded Sample

INDEPENDENT VARIABLES	EQUATIONS EXPLAINING LEVEL OF DEMOCRACY, 1981-90					
	2.1	2.2	2.3	2.4 ^a	2.5 ^b	2.6
Intercept	-18.29	88.22	94.12	104.55	80.45	93.13
Level of democracy, 1972-80	+.57* (.19)	+.38* (.17)	+.32* (.15)	+.32* (.14)	+.32* (.14)	+.32* (.13)
% support gradual reform, 1981-91	+.61* (.30)	+.63* (.25)	+.56* (.26)	+.53* (.24)	+.75* (.30)	+.62* (.22)
% interpersonal trust, 1981-91	+.17 (.25)	+.14 (.24)	—	—	—	—
Years of continuous democracy, 1900-1980	-.07 (.15)	-.10 (.14)	—	—	—	—
Top 20% income share, 1970-80	—	-1.68* (.52)	-1.54* (.52)	-1.65* (.50)	-1.56* (.50)	-1.60* (.39)
Gross domestic product per capita, 1975	+.0028* (.0016)	-.0003 (.0015)	-.0006 (.0020)	-.0003 (.0014)	-.00008 (.00144)	—
Ethnolinguistic fractionalization, 1960-65	-.23* (.11)	-.15 (.10)	-.18* (.09)	-.17* (.09)	-.15* (.09)	-.17* (.08)
% labor force in services, 1977	—	—	-.03 (.31)	—	—	—
% protestant population, 1964	—	—	-.06 (.08)	—	—	—
Adjusted R ²	.77	.85	.85	.85	.86	.87
Number of cases	27	25	25	26	24	25

Note: Entries are unstandardized regression coefficients (standard errors in parentheses).

^a Greece included.

^b Norway excluded.

* $p \leq .05$, one-tailed.

1980s were El Salvador, Guatemala, Mexico, Nicaragua, and South Africa, where slight decreases occurred. The largest decrease was in South Africa, which declined from a mean democracy score of 34 over the 1970s to a mean of 27 over the 1980s.

We use the expanded sample of 27 countries to test the hypotheses of our alternative causal model. Inclusion of the six Central American countries substantially increases variation on the measures of democracy, since, with the exception of Costa Rica, these countries have low-to-intermediate scores on level of democracy during 1972-80 and 1981-90, and no years of continuous democracy from 1900 to 1980. Variation on the macroeconomic variables is also increased substantially, especially in regard to GDP per capita, since all of the Central American countries have lower levels of this indicator of economic development than any of the countries in Inglehart's sample.

The predictions of the alternative causal model about determinants of change in level of democracy are tested by the regression equations reported in Table 2.⁹ Equation 2.1 includes all of the explanatory variables except for income inequality, which is omitted because of missing data for Greece and Luxembourg. First, in regard to the civic culture attitudes, the coefficient on support for gradual reform is posi-

tive as expected and statistically significant. By contrast, the coefficient on interpersonal trust is not significant. These results are consistent with the findings from Inglehart's smaller European-oriented sample of no effect of interpersonal trust on change in democracy (equation 1.3) but a positive effect of support for gradual reform (equations 1.9-12). Variation in the percentage of the general public with high interpersonal trust thus appears to be irrelevant for democratization; whereas democratization is facilitated by the extent to which the general public favors gradual reform.¹⁰ Second, in regard to the macrosocietal variables, *years of continuous democracy* does not have a significant direct effect on change in level of democracy, as we expected; but the coefficients on GDP per capita and ethnolinguistic fractionalization are significant and in the expected direction. The finding of a significant positive effect of level of economic development on change in democracy for the expanded sample differs from the finding of no effect for the European-oriented sample (see equation 1.11). This difference appears to be due to the fact that the expanded sample has greater variation in level of economic development than the European-oriented sample.¹¹

Equation 2.2 includes income inequality. The coefficient on this variable is negative as expected; and it

is more than three times as large as its standard error (t-ratio of -3.23), indicative of a strong inverse influence of income inequality on change in level of democracy. Also, when income inequality is taken into account, the coefficient on GDP per capita is reduced effectively to zero. There is a strong negative correlation between GDP per capita and income inequality ($r = -.838$); and the results of equation 2.2 indicate that income inequality is the variable with direct causal influence on democratization, while the effect of GDP per capita is indirect through its association with income inequality. This inference appears to be valid, despite the high correlation between these variables. If multicollinearity were a serious problem, then both of the parameter estimates would be imprecise and nonsignificant because their standard errors would be high. This is clearly not the case in regard to equation 2.2, however, since the coefficient on income inequality is much higher than its standard error. Another consequence of multicollinearity (if it is a problem) is that parameter estimates are unstable in the face of slight variations in the data matrix due to addition or deletion of observations or variables. This possibility is addressed in equations 2.3–5, which also focus on other concerns.

The two obviously irrelevant variables, interpersonal trust and years of continuous democracy, are deleted in equation 2.3; and we add two omitted variables, the percentage of the labor force in service occupations and the percentage of the population that is Protestant.¹² This equation is a test for the possibility of omitted-variable bias. The labor force in services variable was excluded a priori for the reasons given in our discussion of the alternative causal model (see Figure 2). Also, although Protestantism historically has been associated positively with a country's level of democracy (see Bollen and Jackman 1985), we do not think that Protestantism is relevant for explaining change in democracy from the 1970s to the 1980s because by this time all Protestant countries were stable democracies and the Catholic Church had become quite supportive of democracy. The results of equation 2.3 support our assumptions about the irrelevance of the labor force in services and Protestantism, since these variables do not have significant effects on change in level of democracy. Moreover, inclusion of them in the equation does not alter the pattern of effects observed in equation 2.2 for the highly correlated variables, income inequality, and GDP per capita.

Equation 2.1 was estimated across the full sample of 27 cases, but equation 2.2 could be estimated for only 25 cases because Greece and Luxembourg are missing data on income inequality for circa 1970–80. Equation 2.4 addresses the question of whether the absence of these cases affects the parameter estimates. Since income distribution in Luxembourg has never been measured to our knowledge, it is not possible to include that case. But in the case of Greece it is possible to substitute a 1957 measurement of the share received by the upper quintile of households

(49.5%) reported by Paukert (1973). We observe that when the circa 1960 income inequality score for Greece is included, the coefficient on income inequality is significant and the coefficient on GDP per capita is not significant, just as in equations 2.2 and 2.3. Also, support for gradual reform again has a significant positive effect on change in democracy. Thus missing data does not seem to be affecting the parameter estimates.

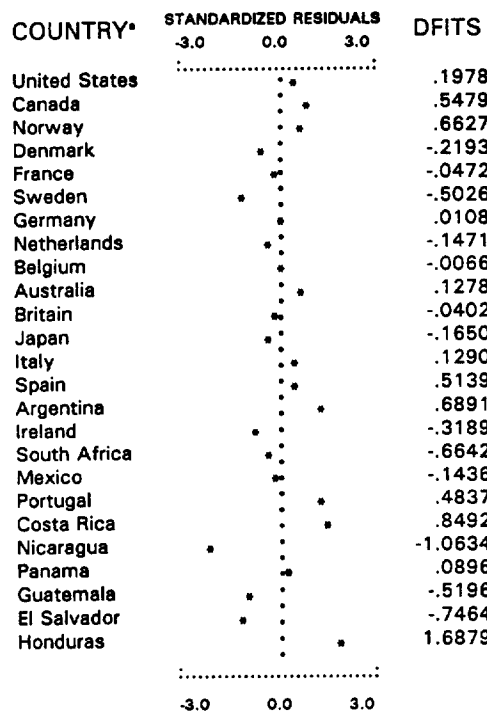
Equation 2.5 tests for the possibility that the parameter estimates could be affected by the case of Norway, where the comparatively very low score on support for gradual reform may be a reflection of measurement error. When Norway is deleted, the coefficient on gradual reform is higher than in the equations that include Norway (as expected), but the difference is relatively slight; and the other parameter estimates are quite similar. The possibility of measurement error in the Norwegian case thus has no significant influence on the results.

The irrelevant *GDP per capita* variable is deleted in equation 2.6, which is the best "trimmed" equation for predicting change in democracy from the 1970s to the 1980s. It explains 87% of the variance in change in level of democracy. The coefficients on the explanatory variables appear to be reliable estimates, since they are all more than twice their standard error and do not appear to be sensitive to multicollinearity, omitted variable bias, or measurement error. The most interesting substantive finding is the positive effect of the percentage of the general public that supports gradual reform on change in level of democracy, which supports the inference that variation in civic culture, at least as measured by this kind of attitude, may have causal influence on democratization. Now we need to address the question of whether the magnitude of this effect might be inflated by the possibility of a simultaneous reciprocal effect of level of democracy during 1980–90 on level of support for gradual reform during 1981–91. For level of democracy during 1981–90 to have an effect on level of support for gradual reform during 1981–91, a significant positive correlation must obtain between these variables. But that is not the case. The correlation between support for gradual reform during 1981–91 and level of democracy during 1981–90 is very close to zero ($r = +.058$). Therefore, the assumption that we made of no simultaneous reciprocal causation is supported.

Another important question to address in regard to the trimmed equation is the robustness of the direct effects of support for gradual reform, income inequality, and ethnolinguistic fractionalization on change in level of democracy. Given the relatively small number of cases even in the expanded sample, it is possible that the ordinary least squares (OLS) parameter estimates could be unreliable due to nonnormal residuals reflecting the presence of outliers, otherwise influential cases, and heteroscedastic distributions on the variables. Diagnostics can be used to detect the presence of specific cases that might be unusually influential. And there are alternative esti-

FIGURE 3

Casewise Plot of Standardized Residuals from Equation 2.6 and DFITS Index



Note: Countries are listed in descending order of 1975 gross domestic product per capita.

mation techniques that correct for violations of OLS assumptions.

A casewise plot of the standardized residuals from equation 2.6 is shown in Figure 3 along with each country's DFITS value. Velleman and Welsch suggest

that for small samples, a case with a DFITS value greater than three times the absolute magnitude of the square root of the ratio of parameters to cases is potentially influential (1981, 236-37). This cutoff point for equation 2.6 is 1.34. The only case with a DFITS value above 1.34 is Honduras (1.69). An alternative criterion is a change in fit greater than the absolute magnitude of the standard error (1.0) of fitted values (see Moon and Dixon 1992, 208). In addition to Honduras, Nicaragua has a DFITS value (-1.06) that exceeds this criterion.¹³ These cases have the highest standardized residuals (2.04 and -2.06, respectively); but they are not severe outliers and in fact are relatively well predicted, since their residuals are very close to the range of ±2. The other cases are quite well predicted by equation 2.6.

The equations reported in Table 3 compare the OLS results for 2.6 (col. 1) with a variety of alternative estimation methods. First, we calculate the coefficients and their standard errors by bootstrapping, a nonparametric method of estimation that does not depend on the distributional assumptions of OLS (see e.g., Dietz, Frey, and Kaloff 1987; Golden 1993). The bootstrapped estimates derived from 200 replications are reported in equation 3.1. They are either identical or very similar to the OLS estimates. Second, we adjust for the possibility of heteroscedasticity by using a heteroscedasticity-consistent covariance matrix to calculate standard errors of the OLS regression coefficients (see Moon and Dixon 1992). The standard errors calculated by this method are reported in equation 3.2. They are quite similar to the OLS standard errors. Third, we use the *least absolute error* method for calculating "robust" estimators that are insensitive to nonnormal residuals (see, e.g., Dietz, Frey, and Kaloff 1987; Moon and Dixon 1992). The least absolute error estimators are reported in equation 3.3. Here we observe that the coefficients on

TABLE 3

Tests of Robustness of the Coefficients for the Trimmed Equation 2.6

INDEPENDENT VARIABLES	EQUATIONS EXPLAINING LEVEL OF DEMOCRACY, 1981-90				
	2.6	3.1 ^a	3.2 ^b	3.3 ^c	3.4 ^d
Intercept	93.13	90.97	93.20	110.93	126.67
Level of democracy, 1972-80	+.32* (.13)	+.32* (.13)	+.32* (.11)	+.29* (.06)	+.25* (.12)
% support gradual reform, 1981-91	+.62* (.22)	+.65* (.21)	+.62* (.17)	+.42* (.10)	+.51* (.20)
Top 20% income share, 1970-80	-1.60* (.39)	-1.60* (.41)	-1.60* (.37)	-1.67* (.18)	-1.99* (.36)
Ethnolinguistic fractionalization, 1960-65	-.17* (.08)	-.17* (.08)	-.17* (.06)	-.13* (.04)	-.21* (.07)

Note: Entries are unstandardized regression coefficients (standard errors in parentheses). N = 25.

^a Ordinary least squares with bootstrapped estimates (200 replications).

^b Heteroscedasticity-consistent covariance matrix.

^c Least absolute error estimators.

^d Bounded influence estimators.

*p ≤ .05, one-tailed.

TABLE 4

Regressions of Civic Culture Attitudes: Expanded Sample, 1981–91

INDEPENDENT VARIABLES	EQUATIONS EXPLAINING % SUPPORT GRADUAL REFORM			EQUATIONS EXPLAINING % INTERPERSONAL TRUST		
	4.1	4.2	4.3 ^a	4.4	4.5	4.6
Intercept	72.30	83.0	86.51	44.56	29.51	32.07
Level of democracy, 1972–80	+.09 (.14)	+.09 (.15)	+.03 (.13)	–.09 (.16)	–.13 (.16)	—
Years of continuous democracy, 1900–80	+.02 (.10)	–.02 (.10)	+.03 (.09)	+.28* (.11)	+.35* (.11)	+.18* (.05)
Top 20% income share, 1970–80	—	–.17 (.47)	–.17 (.40)	—	+.27 (.51)	—
Gross domestic product per capita, 1975	–.0016 (.0011)	–.0019 (.0013)	–.0015 (.0011)	–.0014 (.0012)	–.0007 (.0014)	—
Ethnolinguistic fractionalization, 1960–65	+.04 (.08)	+.04 (.09)	–.01 (.07)	–.07 (.09)	–.09 (.09)	—
Adjusted R ²	–.04	–.08	–.11	.20	.31	.31
Number of Cases	27	25	24	27	25	25

Note: Entries are unstandardized regression coefficients (standard errors in parentheses).

^aNorway excluded.

p ≤ .05, one-tailed.

support for gradual reform and ethnolinguistic fractionalization are reduced somewhat; but since these coefficients are still much larger than their standard errors, the differences are inconsequential substantively. Fourth, we use bounded influence estimators that reduce the influence of cases with high DEFFITS values (see Moon and Dixon 1992). The bounded influence estimators reported in equation 3.4 are slightly smaller than the OLS estimators for support for gradual reform and ethnolinguistic fractionalization, and they are somewhat higher for income inequality and ethnolinguistic fractionalization. But again there are no substantive differences. In sum, the results of equations 3.1–4 indicate that the OLS parameter estimates of equation 2.6 are robust.

Determinants of Civic Culture Attitudes

We now turn to the question of the influence of democracy on civic culture attitudes. The predictions of the alternative causal model about determinants of civic culture attitudes are tested by the regression equations reported in Table 4. These equations assume that there are no simultaneous causal relationships between support for gradual reform and interpersonal trust. That assumption is supported by the fact that these variables are uncorrelated both in the full extended sample ($r = -.153$, $N = 27$) and in the extended sample of 25 cases with information on all variables ($r = -.122$).

The first prediction equation for support for gradual reform (equation 4.1) is estimated across all 27 cases and excludes income inequality because of missing data. None of the macrosocietal variables have significant effects on support for gradual re-

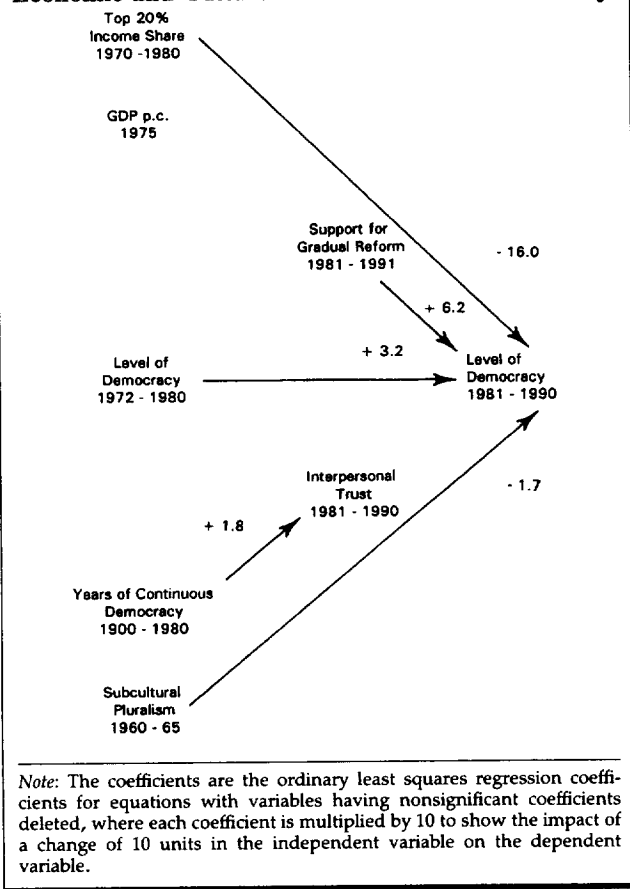
form. This is because there are no significant bivariate correlations between any of the macrosocietal variables and support for gradual reform.¹⁴ Equation 4.2 shows that the macrosocietal variables also do not have significant effects on support for gradual reform when income inequality is included as a predictor. Again, this reflects the absence of significant bivariate association between the macrosocietal variables and support for gradual reform.¹⁵ Equation 4.3 excludes Norway due to the possibility of measurement error, but deletion of Norway has no appreciable effect on the results.

Interpersonal trust, by contrast, is correlated significantly and positively with level of democracy (1972–80) and years of continuous democracy (1900–80) in the full extended sample;¹⁶ and it is correlated significantly and positively with these variables and significantly and negatively with income inequality in the extended sample of 25 cases.¹⁷ Equations 4.4 and 4.5 show that in the multivariate context the only significant predictor of interpersonal trust is years of continuous democracy. Equation 4.6 is the trimmed equation (nonsignificant variables deleted) for interpersonal trust estimated across the sample with information on all the variables in the causal model.

Estimates of Causal Impact

Figure 4 shows the estimates of causal impact for our causal model of relationships between macrosocietal structural variables, civic culture attitudes of the general public, and democracy.¹⁸ The results of testing this model of change in level of democracy do not support the argument that civic culture attitudes are the most important determinant of democratization.

FIGURE 4
Coefficients for the Alternative Causal Model of Economic and Cultural Determinants of Democracy



For this sample, the most important determinant is income inequality, which has a strong negative effect on change in level of democracy; that is, an increase of 10 percentage points in the size of the upper-quintile income share is associated with a decrease of 16 points in level of democracy. The other macroeconomic variable—level of economic development as measured by GDP per capita—has no direct effect on change in level of democracy. Since there is a strong inverse correlation between GDP per capita and the size of the upper quintile income share, economic development is relevant to democratization indirectly, through its association with income inequality. The other structural variable that is directly relevant to democratization—ethnolinguistic fractionalization—has a small negative effect on change in level of democracy; that is, an increase of 10 points in a country's level of ethnolinguistic fractionalization is associated with a decrease of only 1.7 points in its level of democracy.

Our argument about the importance of analyzing the two civic culture attitudes separately is strongly supported. The percentage of the general public that supports gradual reform is empirically unrelated to the percentage with high interpersonal trust; and these variables also have very different relationships

with democracy. Support for gradual reform has a positive effect on change in level of democracy (i.e., an increase of 10 percentage points in the general public supporting gradual reform is associated with an increase of 6.2 points in a country's level of democracy) and is unrelated to long-term experience of democracy. The findings regarding support for gradual reform thus support the hypothesis of a unidirectional effect of civic culture on democracy. By contrast, the findings regarding interpersonal trust support the hypothesis of a unidirectional effect of democracy on civic culture. This is because interpersonal trust is unrelated to change in level of democracy but long-term experience of democracy has a positive effect on interpersonal trust; that is, an increase of 10 years of continuous democracy is associated with an increase of 1.8 percentage points in the proportion of the general public with high interpersonal trust.

CONCLUSION

We addressed the question of the relevance of attitudes of the general public for the establishment of stable democratic regimes by testing a causal model of macrosocietal and microattitudinal determinants of change in level of democracy. The model was designed to enable us to draw inferences about the possibility of unidirectional or reciprocal causation between civic culture attitudes and democracy. Although our sample of countries for testing the model is restricted to a maximum of 27 cases with data on civic culture attitudes, it nevertheless contains reasonably large variation on change in democracy that corresponds to the global trend of the 1970s and 1980s. So, despite its limitations, our data set affords an opportunity to go beyond speculation and actually test hypotheses about the relative importance of civic culture attitudes for democratization.

Interpersonal trust is one kind of civic culture attitude that has been assumed by many scholars to be an important attitudinal prerequisite of the establishment of stable democracy (e.g., Almond and Verba 1963; Dahl 1971; Inglehart 1988, 1990). However, we found that variation in the percentage of the general public with a high level of interpersonal trust is unrelated to change in a country's level of democracy. Low levels of interpersonal trust thus do not appear to be an impediment to democratization: Argentina, Portugal, and Spain registered substantial increases in level of democracy from the 1970s to the 1980s despite relatively low interpersonal trust levels of 21%, 28%, and 35%, respectively; and Belgium, France, and Italy were able to maintain high levels of stable democracy despite low interpersonal trust levels of 29%, 26%, and 27%, respectively. Relatively high levels of interpersonal trust also do not necessarily promote democratization. Neither Guatemala nor Panama were able to move above intermediate levels of democracy despite above-average interpersonal trust levels of 40% and 43%, respectively. (The

average level of interpersonal trust for all 27 countries was 39%.)

Interpersonal trust is not unrelated to democracy, however. A country's long-term experience of democracy (as measured by its years of continuous democracy since 1900) is estimated to have a positive effect of moderate magnitude on the percentage of the general public with a high level of interpersonal trust. In our view, this is not surprising. Democracy works in practice through the peaceful collective action of groups of citizens; and because peaceful collective action is grounded in a spirit of cooperation, the institutional opportunities for peaceful collective action afforded by democratic regimes could be expected to promote relatively high levels of interpersonal trust.

Although interpersonal trust appears to be a product of democracy rather than a cause of it, there is one kind of attitude that supports the civic culture thesis. This is the percentage of the general public that prefers to change society by gradual reform instead of changing it by revolutionary action or defending it staunchly against subversive forces. Support for gradual reform has a positive effect on change in level of democracy, and it is unrelated to long-term experience of democracy. Thus the strong assumption made by Inglehart (1988, 1990) of a unidirectional causal effect of civic culture on democracy is supported in this instance.

There is an interesting implication of the fact that support for gradual reform not only is not a function of prior experience of democracy but also is not associated with any of the other structural variables in our causal model. The level of support for gradual reform in a country is independent of (and so is not constrained by) its level of economic development, the extent to which income is distributed unequally, and the subcultural heterogeneity of its population. Therefore, a high level of support for gradual reform could compensate for the presence of levels of these structural variables that are not conducive to democratization. A case in point is Honduras. Honduras has the lowest level of economic development of all the countries in our sample, and it has the highest level of income inequality. But in Honduras, 85% of the general public prefers gradual reform to revolutionary change or defending the status quo, which is the highest level of support for gradual reform of all the countries in our sample. It is possible that the very high level of support for gradual reform among the Honduran general public could have had a strong or even decisive influence on the transition from authoritarian rule to democracy in this country whose prospect for democracy from the perspective of macroeconomic preconditions was quite poor.

Although support for gradual reform appears to be an important civic culture attitude because it can promote democratization even in countries that lack conducive structural properties, nevertheless, in evaluating the civic culture theory one must keep the following caveats in mind. First, the magnitude of the positive effect of support for gradual reform on

change in democracy is relatively small in comparison with the magnitude of the negative effect of income inequality. Second, the other variables included by Inglehart under the rubric of civic culture do not have statistically significant effects on change in democracy.¹⁹ Thus, overall, the results of our analysis of causal linkages between levels of civic culture attitudes and change in level of democracy are not supportive of the thesis that civic culture attitudes are the principal or even a major cause of democracy.

Our conclusion about the causal relevance of civic culture attitudes for democracy is thus at odds with Inglehart's (1988, 1990) conclusion. Since we are confident that our findings are robust statistically, we doubt that relationships more supportive of the civic culture thesis will be found with larger and more geographically diverse samples. However, it is certainly possible that the single-item indicators of civic culture attitudes used by us and by Inglehart are too crude and that stronger causal relationships might be found with potentially more reliable multiitem indexes.

The single most important explanatory variable in our causal model of determinants of democratization is not an attitude of the general public but rather a macroeconomic variable—*income inequality*. The size of the income share of the richest quintile of households in a country was found to have a relatively strong negative effect on change in level of democracy from the 1970s to the 1980s. The transitions from authoritarian rule to stable democracy (so far) in Argentina, Portugal, and Spain appear to have been facilitated by the existence of relatively egalitarian distributions of income (upper-quintile income shares in the range of 41% to 50%). By contrast, the continuation of relatively low levels of democracy during the 1970s and 1980s in El Salvador, Guatemala, Mexico, Nicaragua, Panama, and South Africa has gone hand-in-hand with extremely inegalitarian distributions of income (upper-quintile income shares in the range of 57% to 61%). We think that there is a compelling causal logic for why high levels of income inequality would make it difficult to sustain a high mean level of democracy for very long. High levels of income inequality are likely to produce either a high level of rebellious political conflict (Muller and Seligson 1987) or else the perception among elites of a threat of rebellious political conflict and lower-class revolution. Therefore, executive or military coups to quell mass rebellion and preserve elite privileges are likely to occur in countries with inegalitarian distributions of income that attempt to establish democracy.²⁰

In future macro-micro research designs a useful new direction to take may be to shift the focus at the micro level from attitudes of the general public to attitudes of elites. Since elites have greater opportunity and ability than the general public to influence the kind of regime a country will have, their attitudes should be given special emphasis in political culture models. Dahl (1971) attributes great importance to the attitudes of political activists and leaders as a cause of the establishment and stability of democracy. Higley

and Burton (1989) make the even stronger argument that the single critical determinant of the stability of democratic regimes is consensus among elites in general on support for democratic institutions and values.

Empirical support for an emphasis on elite attitudes is provided by the pioneering study of Gibson (1988), which is limited however to secondary analysis of relatively old data collected in the mid-1950s for only a single country, the United States. Gibson tested a causal model of relationships between attitudes of political tolerance in the general public, political tolerance of elites, and repressive political legislation of state governments. He found statistical support for the inference that variation in the extent of repressive legislation against communists during the late 1940s and 1950s was an inverse function of the level of elite political intolerance and that the level of political intolerance among the general public was not directly relevant (although it was highly correlated with the level of elite intolerance). In the context of the causal model tested here, an important open question is whether change in the repressiveness of the political system, as measured by change in level

of democracy, is affected by the level of support for gradual reform among the general public when variation in elite support for gradual reform is taken into account.²¹ Thus, a final caveat in regard to the civic culture thesis is that we do not know whether the apparent positive influence on change in democracy of support for gradual reform among the general public is a genuine effect or is a spurious reflection of association between general public attitudes and elite attitudes, which might be the operative causal variable.

APPENDIX A: DATA

Scores on the democracy, macroeconomic, and civic culture variables are reported in Table A-1 for the 27 countries with information on attitudes about social change and interpersonal trust. The countries are listed in descending order of their level of gross domestic product per capita in 1975. The six Central American countries all have gross domestic product per capita scores below that of Portugal, the poorest country in Inglehart's European-oriented sample,

TABLE A-1

Scores on Level of Democracy, Macroeconomic Variables, and Civil Culture Attitudes

Country	Level of Democracy, 1981-90	Level of Democracy, 1972-80	Top 20% Income Share, 1970-80	GDP per Capita, 1975	% Support Revolutionary Change, 1981-91	% for Gradual Reform, 1981-91	% Defend Society against Subversives, 1981-91	% Interpersonal Trust, 1981-91
European-oriented sample								
U.S.A.	100.00	100.00	41.4	10197	5.0	73.0	22.0	41.0
Canada	100.00	100.00	40.5	10147	5.0	74.0	21.0	49.0
Luxembourg	100.00	95.56	—	8949	5.0	70.0	25.0	32.0
Norway	100.00	100.00	37.8	8580	2.0	49.0	49.0	60.0
Denmark	100.00	100.00	38.6	8374	3.0	69.0	28.0	52.5
France	91.67	93.67	43.9	8358	9.0	72.0	19.0	25.5
Sweden	100.00	99.11	39.4	8351	4.0	80.0	16.0	57.0
Germany	92.59	97.22	42.6	8067	3.0	59.0	38.0	32.0
Netherlands	100.00	100.00	39.6	8031	3.0	71.0	26.0	45.0
Belgium	100.00	100.00	37.9	7917	7.0	72.0	21.0	29.0
Australia	100.00	100.00	43.0	7739	4.0	73.0	23.0	48.5
Britain	100.00	100.00	39.6	7082	5.0	72.0	23.0	43.0
Japan	100.00	92.81	39.3	6518	3.0	71.0	26.0	42.5
Italy	98.15	90.04	45.2	5685	8.0	73.0	19.0	27.0
Spain	91.67	53.59	41.1	5478	8.0	82.0	10.0	35.0
Argentina	78.70	41.78	50.3	4214	13.0	77.0	10.0	21.0
Ireland	100.00	96.44	39.4	4157	4.0	76.0	20.0	42.0
S. Africa	26.85	34.44	58.0	4095	25.0	54.0	21.0	29.0
Greece	87.04	68.44	—	3770	9.0	63.0	28.0	50.0
Mexico	53.70	55.44	60.9	3586	12.0	77.0	11.0	18.0
Portugal	90.74	62.89	49.1	3057	14.0	74.0	12.0	28.0
Central America								
Costa Rica	100.00	100.00	49.8	2646	.5	71.0	28.5	45.1
Nicaragua	35.19	38.89	59.0	2461	10.1	72.7	17.2	31.9
Panama	38.98	20.19	60.8	2417	7.8	65.0	27.2	43.4
Guatemala	50.93	57.26	56.5	1717	3.1	78.5	18.4	39.9
El Salvador	56.48	63.04	58.7	1482	3.3	82.3	14.4	35.4
Honduras	73.15	42.74	63.5	895	.9	85.0	14.1	50.4

which dramatically increases the variability on gross domestic product per capita.

The measurements of mean level of democracy over 1981–90 and 1972–80 are given in columns 1 and 2. These scores are derived from annual Freedom House rankings of political rights and civil liberties, converted to a scale of 0–100 (see Freedom House publications *Freedom at Issue*, Jan./Feb. 1990 and *Freedom Review* 22, no. 1 [1990]; see also Gastil 1986, 1988).²² The 1980s were a decade of expansion of democracy throughout the world, and our sample of primarily European and Latin American states reflects this trend. The expansion trend began in the late 1970s with transitions from authoritarian to democratic rule in Portugal and Spain. In Latin America, where almost all states were governed by authoritarian regimes in the mid-1970s, there was an extraordinary shift to democracy in the 1980s, so that by 1990 almost all Latin American states were under democratic rule or close to it. The old European and European-heritage democracies (plus Japan) in our sample maintained very high levels of democracy during the 1970s and 1980s; the Southern European states Portugal and Spain increased their level of democracy substantially from the 1970s to the 1980s; and the level of democracy in two Latin American states, Argentina and Honduras, also increased substantially. Declines in democracy of five points (rounded) or more occurred only in El Salvador, Germany, Guatemala, and South Africa.

Scores on the macroeconomic variables are listed in the third and fourth columns of Table A-1. Income inequality is measured by the size of the income share received by the upper quintile of households, averaged for circa 1970 and circa 1980.²³ Greece and Luxembourg are missing data on income inequality. Economic development is measured by real gross domestic product per capita in 1975 (Summers and Heston 1988).

Data on attitude about societal change are listed in Table A-1, columns 5–7. The percentage of respondents in each country who chose the first of three options is listed in the column 5, the percentage that chose the second option is listed in the column 6, and the percentage that chose the third option is listed in the column 7. The options were presented as follows:

On this card are three basic kinds of attitudes concerning the kind of society we live in. Please choose the one that best describes your own opinion:

1. The entire way our society is organized must be radically changed by revolutionary action.
2. Our society must be gradually improved by reforms.
3. Our present society must be valiantly defended against all subversive forces.

Support for revolutionary change among the general public is very low in most of the countries in our sample. It is below the 10% level in 20 countries, marginally above 10% in four countries (Nicaragua, Mexico, Argentina, and Portugal), and reaches a level of 25% only in the case of South Africa. Support for gradual reform is quite high in Honduras (85%), El

Salvador (82.3%), Spain (82%), and Sweden (80%); it is comparatively low in Panama (65%), Germany (59%), South Africa (54%), and Norway (49%). Support for defending the status quo against subversive forces ranges from a low of 10% in Argentina and Spain to highs of 38% and 49% in Germany and Norway, respectively.

Table A-1, column 8 is the percentage of respondents who believe that most people in their country are either fairly or very trustworthy. There is considerable cross-national variation in levels of interpersonal trust. Interpersonal trust is highest in the Scandinavian countries (Denmark, Norway, and Sweden), where the level of trust in one's compatriots ranges between 52.5% and 60%. The lowest levels of interpersonal trust are found in Argentina, France, and Mexico, where one-quarter or less of the general public think that others in their country are fairly or very trustworthy.

APPENDIX B: THE CENTRAL AMERICAN PUBLIC OPINION PROJECT

The Central American Public Opinion Project of the University of Pittsburgh²⁴ was designed to measure the opinion of Central Americans on a wide variety of issues and included the interpersonal trust and system affect questions used here. The samples drawn from each country were designed to be representative of the urban population.²⁵ The decision to focus on urban areas was made in order to avoid the high cost of interviewing in rural areas, which, in these countries, are often not easily accessible.

Country samples were of area probability design. In each country, the most recent population census data were used. Within each stratum, census maps were used to select, at random, an appropriate number of political subdivisions (e.g., districts), and within each subdivision, the census maps were used to select an appropriate number of segments from which to draw the interviews.²⁶ Within the household, all voting-age residents were eligible for selection, and one was chosen at random (using either the "next birthday system" or a sex/age quota system).

Costa Rica was designated as the country for the pilot test of the survey items. That sample was gathered in fall 1990. The surveys in the other five countries were then conducted during the summer of 1991 and the winter of 1991–92. The design called for samples of at least 500 up to a maximum of 1,000 respondents from each country. The sample sizes for each country are as follows: Guatemala, 904; El Salvador, 910; Honduras, 566; Nicaragua, 704; Costa Rica, 597; and Panama, 500.

Notes

An earlier version of this paper was presented at the 1993 meeting of the Midwest Political Science Association, Chicago, and as a public lecture in Managua, Nicaragua that same

year sponsored by the Centro de Educacion para la Democracia. We are grateful for the helpful comments that we received at these presentations. We also would like to thank Hortense Dicker, coordinator of the Nicaragua Education for Democracy Project of the American Federation of Teachers, for her assistance in arranging the lecture in Managua.

1. In responding to Barry's counterhypothesis, Almond emphasizes that in *The Civic Culture* the relationship between civic culture and democracy was conceptualized as entailing reciprocal causation: "political culture is treated as both an independent and a dependent variable, as causing structure and as being caused by it" (1980, 29).

2. Inglehart's article reports the number of cases as 24 (1988, 1219); but his book reports the number of cases as 22 (1990, 45). From the data reported in the book we find only 20 countries with scores on all three components of civic culture. These are the first 21 countries listed in Table A-1, except for Mexico (which is missing information on life satisfaction). We constructed the composite civic culture index by (1) subtracting scores on the support for revolutionary change variable from 100 so that scores are the percentage who oppose revolutionary change, (2) multiplying life satisfaction scores (originally on a 0-10 scale) by 10 so that the range of the scale is the same as for opposition to revolutionary change and interpersonal trust (0-100), and (3) computing the mean of the three variables. Gross national product per capita is the average for 1955 and 1960 if data are available for both years; otherwise it is either 1955 or 1960. Gross national product per capita and the percentage of the labor force in the tertiary sector in 1965 are from the data tape for the second edition of *The World Handbook of Social and Political Indicators* (Taylor and Hudson 1972).

3. Inglehart used LISREL to estimate path coefficients, whereas we use ordinary least squares regression. The path coefficients are standardized regression coefficients or beta weights.

4. The coefficient on years of continuous democracy is +.16 with a standard error of .04 (t-ratio of 3.83), the coefficient on labor force in the tertiary sector is -.16 with a standard error of .20 (t-ratio of -.81), and the coefficient on GNP per capita is +.0018 with a standard error of .0025 (t-ratio of .74). When the nonsignificant variables are trimmed from the equation, the standardized regression coefficient of +.83 for years of continuous democracy is the same as the bivariate correlation between years of continuous democracy and civic culture.

5. The coefficient on labor force in the tertiary sector is 1.40 with a standard error of 1.08 (t-ratio of 1.30) and the coefficient on GNP per capita is +.024 with a standard error of .013 (t-ratio of 1.85). The coefficient on GNP per capita is significant at the .05 level for a one-tailed test.

6. The number of cases for the separate components of the civic culture index is greater than 20 because an additional five countries have information on one or two (but not all three) of the components. Austria and Switzerland have information on life satisfaction only, Finland and Hungary have information on life satisfaction and interpersonal trust, and Mexico has information on interpersonal trust and support for revolutionary change. Thus the number of cases is 24 for life satisfaction, 23 for interpersonal trust, and 21 for support for revolutionary change.

7. South Africa's logged support for revolutionary change score is 3.22, and the other countries with support for revolutionary change of 10% or more have logged scores of 2.64 (Portugal), 2.56 (Argentina), and 2.48 (Mexico). The negative effect of support for revolutionary change washes out when logged scores are used because in contrast to the decline in level of democracy experienced by South Africa, the other countries with high logged scores that are close to that of South Africa experienced either substantial increases in democracy (Portugal and Argentina) or little change (Mexico).

8. The number of cases is 19 because Greece and Luxembourg are missing data on income inequality.

9. Since level of democracy 1972-80 is included in these equations, the effects of the other independent variables on level of democracy 1981-90 are effects on change in democ-

racy (i.e., the level of current democracy independent of its previous level).

10. We also tested for the possibility that support for revolutionary change might have a negative effect on change in level of democracy. If support for gradual reform is replaced by support for revolutionary change in equation 2.1, the coefficient on support for revolutionary change is -.27, and its standard error is .76; support for revolutionary change thus has no significant effect on change in democracy in the larger sample, even with the extreme score of South Africa included. Alternatively, if logged support for revolutionary change is used, the coefficient on this variable is extremely small relative to its standard error (-.22 and 6.60, respectively). These findings for the larger sample reinforce our conclusion from the results of equations 1.5 and 1.6 that variation in the level of support for revolutionary change has no significant effect on change in level of democracy; and they thus support the assumption of our alternative causal model that the attitude about social change relevant for democratization is support for gradual reform rather than support for revolutionary change.

11. If equation 2.1 is estimated only for the 21 cases in the European-oriented sample, the coefficient on GDP per capita in 1975 is not significant (.05 level, one-tailed test), whereas the coefficients on support for gradual reform and ethnolinguistic fractionalization remain significant. Therefore, it must be the difference in variation of GDP per capita between the two samples that is responsible for the different effects instead of differences in model specification or in the indicator of level of economic development (GDP vs. GNP) or its timing (1975 vs. 1955-60).

12. Data on the percentage of the labor force in services for 1977 is from Taylor and Jodice 1983 vol. 1, tbl. 6.3. Data on the percentage of the population that is Protestant circa 1964 is from Taylor and Hudson 1972, tbl. 4.16.

13. If equation 2.6 is reestimated with Honduras deleted, adjusted R-squared increases to .90 and all of the coefficients on the explanatory variables remain significant at the .05 level (one-tailed) and are greater than twice their standard error. If Nicaragua is deleted, adjusted R-squared is approximately the same (.88), and the explanatory variables again remain significant and greater than twice their standard error. The only notable consequence of deleting Honduras is that the coefficient on income inequality becomes 5, instead of 4 times its standard error, while the only notable consequence of deleting Nicaragua is that the coefficient on ethnolinguistic fractionalization becomes 3 instead of 2 times its standard error. Thus these cases do not appear to be substantively influential.

14. The correlations for N = 27 between support for gradual reform and level of democracy, 1972-80; years of continuous democracy, 1900-1980; GDP per capita 1975; and ethnolinguistic fractionalization 1960-65 are -.116, -.150, -.283, and +.007, respectively.

15. The correlations for N = 25 between support for gradual reform and level of democracy, 1972-80; years of continuous democracy, 1900-1980; top 20% income share; GDP per capita 1975; and ethnolinguistic fractionalization 1960-65 are -.129, -.189, +.191, -.320, and -.025, respectively.

16. The correlations for N = 27 between interpersonal trust and level of democracy, 1972-80; years of continuous democracy, 1900-1980; GDP per capita, 1975; and ethnolinguistic fractionalization, 1960-65 are +.351, +.480, +.222, and -.196, respectively.

17. The correlations for N = 25 between interpersonal trust and level of democracy, 1972-80; years of continuous democracy, 1900-1980; top 20% income share; GDP per capita 1975; and ethnolinguistic fractionalization, 1960-65 are +.397, +.582, -.347, +.294, and -.188, respectively.

18. Since the determinants of level of democracy, 1981-90, are measured by scales that range theoretically from zero to one hundred, their relative importance can be compared using the OLS regression coefficients from equation 2.6. Since none of the predetermined macrosocietal variables are correlated significantly with support for gradual reform, no impact coefficients for them are shown. The impact coefficient for the

effect of years of continuous democracy on interpersonal trust is the OLS regression coefficient from equation 4.6.

19. In addition to interpersonal trust, life satisfaction (analyzed for the European-oriented sample only) and support for revolutionary change (analyzed for the European-oriented sample and the extended sample) were found to be irrelevant to change in level of democracy.

20. Muller (1988) found a very strong relationship between income inequality and the likelihood of a country maintaining stable democracy during 1961–80 for a sample of 33 countries but no significant relationship between income inequality and the likelihood of a country inaugurating democracy during 1945–61 for a sample of 27 countries. In regard to the latter sample, only four of these countries had relatively egalitarian distributions of income (an upper quintile share of 50% or less). Three of them did inaugurate democracy (Italy, Malaysia, and West Germany) and one did not (Chad). By contrast, among the 13 countries with very inegalitarian distributions of income (an upper quintile share of 55% or more), six did not inaugurate democracy (Colombia, Gabon, Iraq, Madagascar, Mexico, and Senegal) but seven did inaugurate it (Brazil, Costa Rica, Guatemala, Jamaica, Lebanon, Panama, and Peru). The absence of a relationship between income inequality and the likelihood of inaugurating democracy is therefore due primarily to the fact that a majority of the countries with very inegalitarian distributions of income nevertheless did attempt to establish democratic regimes. Most of them were unsuccessful, however, as breakdowns of democracy due to military coup and/or civil war occurred in Brazil, Lebanon, Guatemala, Panama, and Peru. Thus the inauguration of democracy may be facilitated by relatively low levels of income inequality, although there can be exceptions—perhaps especially if a country is very poor, like Chad. High levels of income inequality do not necessarily appear to inhibit the inauguration of democracy; however, they do make it unlikely that a country will maintain a high, stable level of democracy for very long.

21. There are several cases in our sample that suggest the possibility that the level of elite support for gradual reform might be as important as (or even more important than) the level of support for gradual reform in the general public. The countries with the lowest levels of support for gradual reform are Norway, South Africa, and Germany, where gradual reform is supported by 49%, 54%, and 59% of the general public, respectively. In the case of Norway, the comparatively very low level of support for gradual reform is due to an unusually high level of support for defending the status quo against subversive forces, which could of course reflect measurement error. Alternatively, in a stable democracy like Norway, elite support for gradual reform might be much higher than the level found in the general public. In Germany, the relatively low level of support for gradual reform among the general public also is due to a relatively high level of support for defending the status quo against subversives; and the stability of German democracy also might depend more on elite attitudes. In the case of South Africa, the very low level of support for gradual reform in the general public coincided with a low level of democracy during the 1970s that declined to an even lower level in the 1980s; but South Africa currently is in the process of attempting to establish a democratic regime. We doubt that support for gradual reform among the general public recently has undergone any sudden, dramatic increase. Rather, our guess is that there must be considerably greater support for gradual reform among South African elites than among the general public and that elite preference for gradual reform over revolutionary change or staunch defense of the status quo is the driving force behind the movement for democracy in South Africa, which also could have the effect of gradually raising the level of support for gradual reform among the general public. Thus, if we had information on elite support for gradual reform, it is possible that this variable could have an independent positive effect on change in level of democracy that might be stronger than that of support for gradual reform in the general public

and consequently would provide stronger support for the role of attitudes as a determinant of democratization.

22. In *Freedom in the World*, ratings listed for years 1973–82 are for the previous year, and ratings listed for 1983 to 1987 are for the current year (Gastil 1986, tbl. 6; idem 1988, tbl. 6).

23. The sources of these data are the World Bank (Ahluwalia 1976; World Bank 1979, 1984, 1989, 1990); the United Nations Economic Commission for Latin America (Comisión Económica para América Latina 1983); the Organization for Economic Development and Cooperation (Sawyer 1976); and the International Labor Organization (Lecaillon et al. 1984)—W, U, O, and I, respectively. Data for circa 1970 encompass the interval 1964–74, and data for circa 1980 encompass the interval 1975–84. If multiple observations were available, the one for the year closest to the midpoint of the interval was used. The sources and years (with circa 1970 and circa 1980 scores in parentheses in the case of averages) are as follows for each country: Argentina, W:70 (no data for circa 1980); Australia, average of W:66–67 (38.8) and W:75–76 (47.1); Belgium, average of W:74–75 (39.8) and W:78–79 (36.0); Canada, average of W:69 (41.0) and W:81 (40.0); Costa Rica, average of U:70 (50.6) and U:80 (49.0); Denmark, W:81 (no data for circa 1970); El Salvador, average of U:70 (50.8) and U:80 (66.6); France, average of W:70 (46.9) and W:79 (40.8); Germany, average of O:70 (45.6) and W:78 (39.5); Guatemala, average of U:70 (58.8) and U:80 (54.1); Honduras, average of U:70 (67.7) and U:80 (59.3); Ireland, W:73 (no data for circa 1980); Italy, average of W:69 (46.5) and W:77 (43.9); Japan, average of W:69 (41.0) and W:79 (37.5); Mexico, average of W:69 (64.0) and W:77 (57.7); Netherlands, average of W:67 (42.9) and W:81 (36.2); Nicaragua, average of U:70 (60.0) and U:80 (58.0); Norway, average of W:70 (37.3) and W:82 (38.2); Panama, average of U:70 (61.2) and U:80 (60.3); Portugal, W:73–74 (no data for circa 1980); South Africa, I:65 (no data for circa 1980); Spain, average of W:74 (42.2) and W:80–81 (40.0); Sweden, average of W:72 (37.0) and W:81 (41.7); United Kingdom, average of O:72 (39.4) and W:79 (39.7); United States, average of W:72 (42.8) and W:80 (39.9).

24. This project is funded by the Andrew Mellon Foundation, the Tinker Foundation, the Howard Heinz Endowment, the University of Pittsburgh Central Research Small Grant Fund, and the Instituto de Estudios Latinoamericanos. The collaborating institutions in Central America were, for Guatemala, Asociación de Investigación y Estudios Sociales; for El Salvador, Instituto de Estudios Latinoamericanos; for Honduras, Centro de Estudio y Promoción del Desarrollo and Centro de Documentación de Honduras; for Nicaragua, Centro de Estudios Internacionales and the Escuela de Sociología, Universidad Centroamericana; for Costa Rica, Universidad de Costa Rica; and for Panama, Centro de Estudios Latinoamericanos "Justo Arosemena." Collaborating doctoral students in Political Science at the University of Pittsburgh were Ricardo Córdova (El Salvador), Anabelle Conroy (Honduras), Orlando Pérez (Panama), and Andrew Stein (Nicaragua). Collaborating faculty were John Booth, University of North Texas (Nicaragua and Guatemala), and Jon Hurwitz, University of Pittsburgh (Costa Rica).

25. Official census definitions are of little help in defining urban areas, because they include population concentrations so low as barely to make them distinguishable from rural villages. For example, in some countries populations over twenty-five hundred are considered urban when, in fact, these places are at best no more than very small towns. We sought to narrow our definition of urban to include the areas of major population agglomeration. In Guatemala, this meant Guatemala City, Esquintla, Quezaltenango, and other major concentrations. In El Salvador, it meant greater metropolitan San Salvador, including the city of San Salvador (divided into 14 zones) and the eight surrounding municipios: Soyapango, Cuscatancingo, Ciudad Delgado, Mejicanos, Nueva San Salvador, San Marcos, Ilopango, and Antiguo Cuscatlán. In Honduras, it meant the nation's two large metropolitan areas, Tegucigalpa (the capital) and San Pedro Sula. In Nicaragua, this definition included Managua (the capital) and the regional cities of Leon, Granada, and Masaya. In Costa Rica, the

sample covered the greater metropolitan region, incorporating San José (the nation's capital) and the provincial capitals of the *meseta central* (Cartago, Heredia, and Alajuela). The Panama sample was confined to the metropolitan Panama City area.

26. In Central America, census bureaus divide the census maps into small areas designed to be covered by a single census taker. The maps are sufficiently detailed to show all of the dwelling units. In places like Panama City, where there are a large number of apartment buildings, lists are available that show the number of dwelling units within each building. In the larger buildings this sometimes results in more than one census segment per building. In El Salvador census maps completed two years prior to the survey were available, but the census itself had not yet been taken. The maps were not of sufficient detail to show each dwelling unit, but they did show the major streets and landmarks (e.g., churches) and did provide a housing count for each census segment.

References

- Ahluwalia, Montak S. 1976. "Inequality, Poverty, and Development." *Journal of Development Economics* 3:307-42.
- Almond, Gabriel A. 1980. "The Intellectual History of the Civic Culture Concept." In *The Civic Culture Revisited*, ed. Gabriel A. Almond and Sidney Verba. Boston: Little, Brown.
- Almond, Gabriel A., and Sidney Verba. 1963. *The Civic Culture*. Princeton: Princeton University Press.
- Banks, David L. 1986. "The Analysis of Human Rights Data over Time." *Human Rights Quarterly* 8:654-80.
- Barry, Brian. 1978. *Sociologists, Economists, and Democracy*. Chicago: University of Chicago Press.
- Bollen, Kenneth A. 1986. "Political Rights and Political Liberties in Nations: An Evaluation of Human Rights Measures, 1950 to 1984." *Human Rights Quarterly* 8:567-91.
- Bollen, Kenneth A., and Robert W. Jackman. 1985. "Economic and Noneconomic Determinants of Political Democracy in the 1960s." *Research in Political Sociology* 1:27-48.
- Comisión Económica para América Latina. 1983. "Notas sobre la Evolución del Desarrollo Social del Istmo Centroamericano hasta 1980." In *Centroamérica: Indicadores socioeconómicos para el Desarrollo* ed. R. Ramalinga Iyer, San José, Costa Rica: Ediciones Flacso.
- Coppedge, Michael, and Wolfgang H. Reinicke. 1991. "Measuring Polyarchy." In *On Measuring Democracy*, ed. Alex Inkeles. New Brunswick: Transaction.
- Dahl, Robert A. 1971. *Polyarchy*. New Haven: Yale University Press.
- Dietz, Thomas, R. Scott Frey, and Linda Kaloff. 1987. "Estimation with Cross-national Data: Robust and Nonparametric Methods." *American Sociological Review* 52:380-90.
- Gastil, Raymond D. 1986. *Freedom in the World: Political Rights and Civil Liberties, 1985-1986*. Westport, CT: Greenwood.
- Gastil, Raymond D. 1988. *Freedom in the World: Political Rights and Civil Liberties, 1987-1988*. Lanham, MD: University Press of America.
- Gastil, Raymond D. 1991. "The Comparative Survey of Freedom: Experiences and Suggestions." In *On Measuring Democracy*, ed. Alex Inkeles. New Brunswick: Transaction.
- Gibson, James L. 1988. "Political Intolerance and Political Repression during the McCarthy Red Scare." *American Political Science Review* 82:511-29.
- Golden, Miriam. 1993. "The Dynamics of Trade Unionism and National Economic Performance." *American Political Science Review* 87:439-54.
- Higley, John, and Michael G. Burton. 1989. "The Elite Variable in Democratic Transitions and Breakdowns." *American Sociological Review* 54:17-32.
- Huntington, Samuel P. 1984. "Will More Countries Become Democratic?" *Political Science Quarterly* 99:193-218.
- Inglehart, Ronald. 1988. "The Renaissance of Political Culture." *American Political Science Review* 82:1203-30.
- Inglehart, Ronald. 1990. *Culture Shift in Advanced Industrial Society*. Princeton: Princeton University Press.
- Lecaillon, Jacques, Felix Paukert, Christian Morrisson, and Dimitri Germidis. 1984. *Income Distribution and Economic Development*. Geneva: International Labour Office.
- Moon, Bruce E., and William J. Dixon. 1992. "Basic Needs and Growth-Welfare Trade-Offs." *International Studies Quarterly* 36:191-212.
- Muller, Edward N. 1988. "Democracy, Economic Development, and Income Inequality." *American Sociological Review* 53:50-68.
- Paukert, Felix. 1973. "Income Distribution at Different Levels of Development: A Survey of Evidence." *International Labour Review* 108:97-125.
- Powell, G. Bingham, Jr. 1982. *Contemporary Democracies*. Cambridge: Harvard University Press.
- Sawyer, Malcolm. 1976. "Income Distribution in OECD Countries." *OECD Economic Outlook: Occasional Studies* 3:36.
- Schmitter, Philippe C., and Terry Lynn Karl. 1991. "What Democracy Is . . . and Is Not." *Journal of Democracy* 2:75-88.
- Summers, Robert, and Alan Heston. 1988. "A New Set of International Comparisons of Real Product and Price Levels Estimates for 130 Countries, 1950-1985." *Review of Income and Wealth* 34:1-25.
- Taylor, Charles L., and Michael C. Hudson. 1972. *World Handbook of Political and Social Indicators*. 2d ed. New Haven: Yale University Press.
- Taylor, Charles L., and David A. Jodice. 1983. *World Handbook of Political and Social Indicators*. 3d ed. New Haven: Yale University Press.
- Velleman, Paul F., and Roy E. Welsch. 1981. "Efficient Computing of Regression Diagnostics." *American Statistician* 35:234-42.
- World Bank. 1979. *World Development Report 1979*. New York: Oxford University Press.
- World Bank. 1984. *World Development Report 1984*. New York: Oxford University Press.
- World Bank. 1989. *World Development Report 1989*. New York: Oxford University Press.
- World Bank. 1990. *World Development Report 1990*. New York: Oxford University Press.

Edward N. Muller is Professor and Head of the Political Science Department, University of Arizona, Tucson, AZ 85721.

Mitchell A. Seligson is Professor of Political Science, University of Pittsburgh, Pittsburgh, PA 15260.